THE CONDITION OF RUSSIA'S ECONOMY AND THE STABILITY OF THE

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PROSPECTS FOR THE SUSTAINABLE POLITICAL STABILITY OF THE RUSSIAN FEDERATION IN THE THIRD DECADE OF THE 21ST CENTURY IN VIEW **OF THE SYNERGETIC PARADIGM**

ABSTRACT The paper is an attempt to estimate the influence of synergy in the long-term parameter of order in the nature of political processes in the Russian Federation in the third decade of the 21st century. Two interpretations of this synergetic parameter are proposed – one is based on I. Prigogine's idea that every dissipative system experiences periods of deterministic and non-deterministic chaos. It incorporates a combination of time and the population of the state. The other is based on the modified 'structurally-demographic' approach of A. Korotayev and J. Goldstone. We consider the rate of annual growth in the number of urban young people as such a parameter is proposed. We predict that the Russian Federation will enter into the next period of indeterministic chaos due to the synergetic parameter of order in the next 33-40 years from the last point of bifurcation in 1991. Thus, we forecast the imminent onset of the next period of non-deterministic chaos in the Russian Federation in the second half of the third decade of the 21st century. An influence of several factors on the accuracy of the prognosis of political instability is assessed. It is stated that the probability of political instability in the Russian Federation in the years 2025-2030 caused by synergetic and structuraldemographic parameters of order will decreas under the additional influence of open borders and the high demand for jobs in the military services.

> Key words: forecast of political instability, structurally-demographic modelling, synergetic parameter of order, Russian Federation

INTRODUCTION

The contemporary Russian Federation plays an important role in the international system due to the size of the state and high activity of the current political regime. Therefore, the question of forecasting political stability and the instability of the state are becoming vital. Most importantly for the neighboring states.

In general, forecasting the onset of periods of political instability in modern transitive societies and unstable democracies should be divided into three separate sub-tasks¹:

- The prognosis for the formation of an objective socio-economic and political possibility for the appearance of periods of instability (conditions for the onset of "revolutions"). We should agree with J. Goldstone² and A. Korotayev³ that structural and demographic models in this case are of little use.
- 2. The prognosis for a moment/period of the occurrence of a social explosion, detonating the advent of political instability.
- 3. The prognosis for the nature of interaction between government and protesters during social explosion. Solving this problem is possible only with short-term forecasting, and an algorithm proposed by J. Goldstone⁴ seems to be a good basis for this. So far this algorithm has been used to explain occurring processes, but the combination of this algorithm with elements of game theory and Markov chains will help to obtain reliable model prognoses.

The aim of the paper is to propose some suggestions for solving the second – most important – sub-task: to assess the possibility to forecast a moment/period of occurrence of a social explosion, detonating the advent of political instability in the Russian Federation in the third decade of the 21st century. Or, in other words, to estimate prospects of continued political sustainability in the contemporary Russian Federation.

¹ N. Polyvovyy, "Simulation Modeling of Political Instability and Maydan of 2013/2014 in Ukraine", *European Journal of Transformation Studies*, vol. 2, suppl. 1 (2014), at <http://europeourhouse.weebly.com/2014-volume-2-suppl-1.html>.

² J. Goldstone, "Protests in Ukraine, Thailand and Venezuela: What Unites Them?", *Russia-direct*, 21 February 2014, at http://www.russia-direct.org/content/protests-ukraine-thailand-and-venezuela-what-unites-them>.

³ A. Korotayev, J. Zinkina, "Egyptian Revolution: A Demographic Structural Analysis", *Middle East Studies Online Journal*, vol. 2, no. 5 (2011), at http://cliodynamics.ru/download/Korotayev_Zinki-na_Egyptian_Revolution_MESOJ_2011.pdf>.

⁴ J. Goldstone, "Towards a Fourth Generation of Revolutionary Theory", *Annual Review of Political Science*, vol. 4 (2001), pp.139-187.

BACKGROUND OF MODELING AND FORECASTING POLITICAL STABILITY

The most well-known and carefully developed models of social and political processes that allow receiving prognoses about the periods of instability, are the models of structurally-demographic dynamics, represented in the works of J. Goldstone,⁵ P. Turchin,⁶ A. Korotayev, A. Malkov, D. Halturina,⁷ M. Polovyi⁸ etc. These models associate the socio-political development of separate states and their groups with dynamics of certain parameters of demographic development.

At the same time, the events of the Arab Spring in 2012 and Euromaidan in Ukraine in November 2013 – February 2014 showed high inaccuracy of the structural and demographic dynamics' methods in the construction of forecasts for periods of political instability.

Let us note that the existence of serious structural problems in the organization of public administration and in the economic sphere of the abovementioned states were pointed out by many scholars, but no one predicted such a sharp increase in political struggle and such an active civil participation. Habitual additional indicators for the onset of political instability are: the impoverishment of the population, overproduction and lamination of elites, and financial crisis – although demonstrated certain dynamics, but did not alert researchers before the events and did not convince the inevitability of political crisis within the post factum analysis (S. Tsirel,⁹ J. Goldstone,¹⁰ A. Korotayev,¹¹ M. Polovyi).¹² We have analyzed the main reasons for the inadequacy of the model prognoses to the actual events of winter 2013-2014 in Ukraine in the paper.¹³ This forecast failure actualizes the issue of the fundamental ability to forecast political crises in fragile democracies and authoritarian regimes.

- ⁸ M. Polovyi, "Long-term Demographic Factor of Political Unrest in Contemporary States", in A. Taranu (ed.), *Political and Economic Unrest in the Contemporary Era: Proceedings of 6th ACADEMOS Conference 2019 International Political Science Conference, Bucharest, Romania, 20-23 June 2019*, Bucharest 2019, pp. 196-203.
- ⁹ С. Цирель, "К истокам украинских революционных событий 2013-2014 гг.", Полит.ру, 8 June 2014, at ">http://polit.ru/article/2014/06/08/ukraine/>.
- ¹⁰ J. Goldstone, "Protests in Ukraine, Thailand and Venezuela..."
- ¹¹ A. Korotayev, J. Zinkina, "Egyptian Revolution..."; A. Korotayev et al., "A Trap at the Escape from the Trap? Demographic-Structural Factors of Political Instability in Modern Africa and West Asia", *Cliodynamics*, vol. 2, no. 2 (2011).
- ¹² N. Polyvovyy, "Simulation Modeling..."
- ¹³ Ibid.

⁵ Idem, "Population and Security: How Demographic Change Can Lead to Violent Conflict", *Journal of International Affairs*, vol. 56, no. 1 (2002), pp. 3-22.

⁶ P. Turchin, Complex Population Dynamics. A Theoretical/Empirical Synthesis, Princeton 2003; idem, War and Peace and War. The Rise and Fall of Empires, New York 2006.

⁷ A. Korotayev, A. Malkov, D. Khaltourina, *Introduction to Social Macrodynamics. Compact Macromodels of the World System Growth*, Moscow 2006.

METHODOLOGY

To accomplish objectives of the paper we rely on the concept of nonlinearity and chaos in most processes related to human social activities. Formerly, D. Easton¹⁴ pointed to the non-equilibrium nature of the political system and political life in general: "The most important disadvantage of the analysis of equilibrium states, the type of analysis that prevails in political research is that it virtually ignores the ability of systems to cope with the disturbing influence of the environment".

H. Haken¹⁵ and I. Prigogine¹⁶ proved that an adequate way to consider the nonlinearity of social space and identify real effective factors of political processes is the use of synergetic methods specifically designed to simulate nonlinear dynamics.

Thus, in order to make a forecast for a moment/period of the occurrence of a social explosion, in detonating the advent of political instability we have to create a model based on a synergetic paradigm.

When developing this model, it seems productive to suggest that the time of a possible explosion (bifurcation point) is determined by a certain order parameter, which defines the duration of the determined development of a country. We believe that such a complicated social system, as the political process of any country, is periodically chaotic. The development of political process takes place in the form of alternating long periods of deterministic chaos and shorter periods of non-deterministic chaos (so-called bifurcation points).

An important quality of synergetic simulation which makes it possible to answer the question about the emergence of periods of non-deterministic chaos (bifurcation points) may be considered the possibility to ascertain chances for the appearance of chaotic regimes in a long-lasting process, including those that occur "without any significant" external causes, but simply due to the non-linear evolution of the process. Within the synergistic presentation of processes a researcher should expect that under the principle of subordination, the dynamics of various small factors that influence sociopolitical process is determined by the changes of one complicated factor – the order parameter. Moreover, the inverse relationship between the order parameter and components of the state vector leads to the phenomenon of feedback.

So, we propose to move from a consideration of the conditions for the emergence of a social explosion to a certain "objective predetermination", emanating mainly, if not exclusively, from the internal conditions of development of a state mechanism. Ukrainian events of 2013-2014 proved that, ultimately, it is internal conditions and actions of internal forces which lead to a society's willingness "to ignite" and to detonate this readiness in a social and political explosion. In the case of authoritarian regimes, the dubious honor of being the detonator should be given to a power vertical.

¹⁴ D. Easton, *A Systems Analysis of Political Life*, New York 1965.

¹⁵ H. Haken, *The Science of Structure. Synergetics*, Berlin 1984.

¹⁶ I. Prigogine, I. Stengers, Order out of Chaos. Man's New Dialogue with Nature, London 1984; idem, The End of Certainty. Time, Chaos, and the New Laws of Nature, New York 1997.

PROSPECTS FOR THE SUSTAINABLE POLITICAL STABILITY OF RUSSIA FROM THE POINT OF VIEW OF SYNERGETIC PARADIGM

Let's try to look at the "sustainability of the political stability" of Russia from the point of view of the synergetic paradigm. It is commonly known that, according to the synergetic concept, every dissipative system experiences periods of deterministic and nondeterministic chaos.

Non-deterministic chaos is usually described as the "point of bifurcation". In turn, the period of deterministic chaos in the dynamics of social and political systems is usually associated with sustainable, stable development. It is commonly believed that periods of such sustainable development begin and end at bifurcation points. After passing the point of bifurcation and leaving the system on a stable path of development (the period of deterministic chaos), the development of the social system remains chaotic in its essence. But this development is already the most deterministic, that is, defined by the inner essence of a certain parameter of the order of the system. During this period, every actor can also carry out any actions at their discretion, but such chaotic actions, from the point of view of the system as a whole, can no longer lead to a radical change in the trajectory of the development of the socio-political system.

Really, the history of the Russian Empire and subsequently the USSR in the nineteenth and twentieth centuries may serve as a rather successful historical example of such a synergetic interpretation of socio-political processes:

Indeed, the death of King Alexander I and the Decembrist uprising in 1825 has a certain analogy with the point of bifurcation in the development of the Empire, when the choice of the trajectory of its further existence depended on several accidental steps. Under certain circumstances, the line for the continuation of the tradition of autocracy won. And its development could not be prevented by either the reforms of Alexander II, nor the peaceful and armed terrorist resistance of the narodniks. Even the murder of Alexander II only tempered the regime and for some time even stopped "revolutionary fermentation". But the combination of insignificant event, compared with the scale of the country, such as the unsuccessful end of the Russo-Japanese War and Bloody Sunday led to a revolutionary explosion. Consequently, the period of a steady trajectory of the development of the socio-political system of the Russian Empire ended at the beginning of the twentieth century. And it entered in an uncertain period called the point of bifurcation.

The same situation is for the Soviet Union, which developed against all odds (World War II, dissidents resistance, the Cold War, arms race, and so on...) for 70 years and fell into the point of bifurcation when nobody expected it. Or, we can say, it fell when there were no serious causes for such downfall.

Remember that according to the synergetic interpretation, the emergence of a point of bifurcation in the development of the system should testify to the emergence of an inadequately large resonance situation from relatively small disturbances. Indeed, contemporaries and many researchers noticed the "sudden" appearance at that time of many troubles "without any apparent reasons".

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At the same time, from the point of view of one of the founders of synergetics, Ilya Prigogine, the onset of a period of non-deterministic chaos is inevitable in the dynamics of any social system. From this approach, the task of determining the duration of the deterministic development of such a large and influent political subject of the modern world as the Russian Federation becomes interesting.

There are only several such estimations. The first one was given by A. Dobrocheev. A. Dobrocheev proposes to base this assessment on the country's area. He stated that duration of the deterministic circle is proportional to the area of a state.¹⁷ According to A. Dobrocheev's estimates, the duration of the deterministic development (in a synergetic sense) of the Russian Empire / USSR / modern Russian Federation is approximately 80-85 years. How did he calculate this number? Well, he says that since the area of Russia is about 17 million square km, and we have to multiply 50 by 1,7. We receive 85 years of the duration of the period of political stability of Russia on an average scale. Why multiply by 50? This remained without an answer.

According to A. Dobrocheev, such assessment of the duration of the characteristic cycle is well correlated with the cycles of approximately 80 years, which characterize the political development of Russia of the last centuries (1825–1905–1985). And as we see, the same kind of prognosis give us the next date of a point of bifurcation in Russia – about 2065.

At the same time, if we take the basis of these calculations by A. Dobrocheev and calculate the duration of the characteristic cycle of political and economic development for some another states, we can get somewhat illogical results:

By reference to the area of France at 0.64 million square km, the duration of the cycle should be 50 * 0.064 = 3,2 years.

Almost the same calculation is made for Ukraine (50 * 0.06 = 3 years straight).

Poland has to fall into the point of bifurcation every one and a half years with the area of 0.3 million square km, according to such approach.

The worst situation for smaller states as, for example, Estonia – with the area of 45 thousand square km has to fall into bifurcation every 3 month.

Consequently, we have a situation where a significant reduction in the size of the country's territory almost completely reduces the calculations of the duration of the characteristic development cycle, since it is clear that 3 years for a full-fledged political and economic cycle are not enough.

At the same time, there is a rational kernel in this hypothesis.

I propose to focus on the hypothesis of connection between the population and the duration of period of deterministic chaos.

It seems rational to assume that such parameter of order that determines the duration of the period of deterministic development of a state may be corrected by:

- the area of a state (a certain social analogue of the ecological capacity) and
- the "density of state power". A formal (numerical) indicator of a "density of state power" may be the ratio of officials to the population.

¹⁷ О. Доброчеев, "Следы истории", Циклы истории, 2002, at <http://ss.xsp.ru/st/002/index_4.php>.

And we can remember the slow change of this indicator and, consequently, the slow gradual change in the duration of the next period of deterministic development (just as the expected life expectancy of an individual changes from their birth (at the time of their birth, the average life expectancy has one significance) throughout life (when the person turns 20 or 30, or 40, etc., the average life expectancy for the country as a whole also changes somewhat).

It seems obvious that with the growth of the degree of density of power should increase the duration of the period of deterministic development, and thus, the moment of the onset of the next point of bifurcation will drift apart. The adoption of this assumption allows us to explain why the duration of periods of relatively stable (deterministic) development have not yet been estimated. It is because the size of these intervals has slowly changed as has the ratio of the total population and population of the bureaucracy. Consequently, such assumptions allow a logical explanation for the differences between the periods 1825-1917 and 1917-1991 for the Russian Empire and the USSR. Moreover, the adoption of this assumption can explain the relatively greater stability of authoritarian regimes: an additional "consolidation of power" allows for state coercion under a stable political regime without any social and political changes, even if such changes are already objectively necessary.

The other ground for estimation is the case of Ukraine: in the last 30 years Ukraine has three points of bifurcation: in 1991, 2004, 2013/14. So, we can talk about a manifestation in the last three decades of 9-13-year (let's assume 10-11 years on average) periods of deterministic chaos, which are replaced by short bifurcation points, up to 3-4 months. Obviously, in such a reduction of the period of development, the trend shows a much smaller number of people: 52 million people in 1989 and 45 million in 2013. Let's compare this number with the epoch of the late USSR: there were nearly 300 million people.

According to the Ukrainian case we can predict, that the *ceteris paribus* Russian Federation with the current population of 147 million has to come to the next period of indeterministic chaos (point of bifurcation) in 33-40 years from the last point of bifurcation in 1991. Therefore, we forecast the imminent onset of the next period of non-deterministic chaos in the Russian Federation in the second half of the third decade of the 21st century. By parity of reasoning to the Ukrainian case, it is quite possible to await the duration of this period of indeterministic chaos in the Russian Federation for about a year and a half.

Some kind of adjustments to the bifurcation occurrence time in the Russian Federation may be expected due to the abovementioned "density of state power". I would venture to suggest that the more able-bodied citizens in the state are employed by the state military forces, the more strength of the state power, the more powerful it's "density" and the more fragile it will be at the moment of crash.

Let's suggest some corrections of the influence of the deep synergetic parameter of order for the case of contemporary Russian Federation.

As we have stated,¹⁸ the structural-demographic factor remains one of the important features for contemporary unstable democracies and authoritarian regimes. According to the authors and model verified on the demographic data of Ukraine, a sharp increase of the rate of urban youth between 21-25 years of age is the real factor of political instability for such an unstable democracy. Thus, the data of our model confirm the almost thorough certainty of getting modern Ukraine to the phase of political instability in case of over 3% per year growth rate of urban youth.¹⁹ Since an event in the capital city plays a major role in serious political unrest, that can at least move the ruling elite, increased political instability is potentially possible in the case of local increase in the growth rate of young people in the capital. As they say, revolutions are made in the capitals.

We could suggest that the dynamics of the growth rate of urban youth in the Russian Federation could increase or decrease the influence of the abovementioned main parameter of order. Table 1 represents the dynamics of this factor in Russia and in Moscow.

Year	Russian Federation	Moscow	Saint-Petersburg
1991	-1.95	-0.41	1.18
1992	-0.03	0.70	0.24
1993	0.19	1.75	-1.48
1994	3.03	4.35	-1.24
1995	3.29	3.70	-1.70
1996	2.25	6.13	-2.55
1997	1.21	2.78	-2.12
1998	1.56	3.66	-0.73
1999	0.49	1.97	-0.49
2000	1.26	3.99	1.42
2001	1.23	4.06	1.15
2002	2.13	6.13	3.59
2003	1.62	3.04	3.20
2004	2.88	1.99	4.62
2005	3.41	1.19	5.50

Table 1. Retro-forecasted and prognosed values of the growth rate of urban youth in the Russian Federation, youth in Moscow and Saint-Petersburg²⁰

¹⁸ M. Polovyi, "Long-term Demographic Factor...", pp. 196-203.

²⁰ Author's calculation by: "Демография", *Poccmam*, at <https://www.gks.ru/folder/12781#>.

¹⁹ Ibid.

Year	Russian Federation	Moscow	Saint-Petersburg
2006	3.05	-0.78	3.96
2007	1.04	-4.46	0.28
2008	1.10	-2.41	-1.10
2009	-0.83	-3.81	-2.10
2010	-3.52	-5.23	-3.65
2011	-4.48	-4.65	-3.90
2012	-4.83	-4.68	-3.78
2013	-6.73	-6.86	-4.93
2014	-8.46	-8.77	-7.93
2015	-9.59	-9.49	-10.57
2016	-8.53	-7.78	-9.63
2017	-8.10	-6.31	-9.01
2018	-6.43	-3.61	-7.52
2019	-5.22	-1.98	-5.12
2020	-1.77	1.29	-1.44
2021	-2.70	0.25	-2.74
2022	-1.54	-0.41	-1.67
2023	-0.10	0.87	2.44
2024	2.41	2.75	4.63
2025	3.43	3.57	6.25
2026	4.51	4.77	6.69
2027	3.28	4.80	4.73
2028	3.00	4.30	3.12
2029	2.89	4.34	2.93
2030	2.86	4.44	3.41

As we can see from the retrospective part of Table 1, there was a huge potential for protests in 2005-2006 in Russia. Moreover, the data shows that there was potential for protests in Moscow in 2000-2003 and in Saint-Petersburg in 2002-2006. But why did nothing happen with political stability? Why did nothing occur even in Moscow? It was noticed by the authors of the first models, Goldstone and Kortaev, that sometimes random circumstances interfere with the action of our long-acting synergistic factors. Their impact smoothes out the predicted manifestations of instability and aggravation of political struggles. Most often, these random factors are not specially planned

actions. What happened in Moscow in 2000-2003? Nothing special apart from the fact that the average offer of jobs in Moscow in these years was about 106%. That so many jobs were available (moreover, they are highly paid in comparison with the rest of Russia) that the labor market easily absorbed all possible carriers of discontent and protest.

We can see the "demographic" potential for instability in the Russian Federation in 2025-2028 with the continuation of such a threat in Moscow until 2030. The fact that there were not a lot of job offers in Russia after 2014 is a known fact. There is a high probability, however, that in this case the direct forecast of political instability in the second part of 2020 will turn out to be inaccurate as well as the result of influence of the other factor – the continuing increase in the number of state militants. This factor begins to manifest itself after the year 2000. And this factor efficiently smooths out the excess growth in youth population. We are now witnessing an ever-increasing supply of work in different military services in Russia, which covers youth in first order. According to official statistics, in 2018, the total number of military services personnel amounted to 8.5 million people. This is 11% of the working population in Russia. About 29% of the budget was spent on their maintenance in 2018.²¹ In 2005, their number was about 5 million people only.²²

As we can see, the annual growth of militarized organizations was 270 thousand people per year on average. In fact, until 2012 there was slow growth, and in recent years it has been much faster. We can conclude that this increase in staff is replenished by youth. Such an annual increase in the number of militias of 270 thousand will help erode every possible core of protest.

For reference: the annual number of school graduates in Russia in 2005 was 1.7 million and only 1 million in 2018. It means that every fourth school graduate will become a soldier. Interestingly, in the Caucasus for the past 10 years, taking a job in such militarized services has been recorded as the only choice for young people if one wants to stay in their hometown. Otherwise they must consider internal or external migration.

The possibilities of migration gives us the next huge correction for the synergetic forecast of instability in Russia. Let's look at the retro-prognosed and forecasted growth rates of urban youth in 2011-2030 in some East European states (Table 2).

As we can see in Table 2 the growth rates of urban youth show the dangerous situation in literally every East European state that was taken and prognosed from 2012 – 2024. For example, in Estonia we see much more instability in 2018-2019 (according to the simple demographic model of political stability), than in France in time of the yellow vests. However we didn't see such social and political instability in East European countries as, for instance, in Ukraine during the first and the second "Maidans". The main factor that mitigates the impact of high growth in urban youth is the open borders in the EU: the so called "extra people" (especially "extra youth") have the possibility to

²¹ "Сколько силовиков в России?", *Yandex Zen*, 17 September 2019, at <https://zen.yandex.ru/media/lsycheva/skolko-silovikov-v-rossii-5d811776c05c7100aeb60f37>.

²² "Россия – страна силовиков. Занимательная арифметика от социолога Екатерины Шульман", Время и Деньги, 2 June 2017, at https://www.e-vid.ru/index-m-192-p-63-article-40788.htm>.

leave their native country than give in to any internal instability. Therefore, by analogy, we can expect a decrease of the danger of political instability in the Russian Federation caused by synergetic and structural-demographic parameters of order under the influence of open borders; we can compare this effect for potentially dissatisfied elements with the lid removed from a boiling saucepan.

	Bulgaria	Czechia	Estonia	Latvia	Lithuania	Hungary	Slovenia	Slovakia	Poland	Romania
2011	0.5	2.8	1.4	1.0	-1.2	1.0	0.3	2.3	2.8	2.8
2012	1.5	3.7	2.6	1.9	-0.6	0.7	1.3	2.9	3.3	2.7
2013	3.5	4.5	5.9	3.2	0.8	1.4	4.2	3.1	4.9	2.4
2014	4.2	5.0	6.8	5.5	2.7	1.9	4.4	4.0	5.4	2.8
2015	4.9	6.2	7.5	6.2	3.3	2.6	4.4	4.8	5.7	4.4
2016	5.7	6.0	8.0	6.8	3.5	2.8	4.9	4.7	5.7	4.6
2017	6.4	7.3	9.9	8.0	4.1	3.6	6.0	4.7	5.3	5.6
2018	7.4	7.1	10.8	8.7	4.5	4.6	8.1	4.9	5.6	5.9
2019	8.2	7.0	10.6	8.1	4.4	5.3	9.7	4.7	5.4	6.0
2020	7.7	6.5	9.4	7.0	4.6	5.8	9.8	4.7	5.4	5.4
2021	7.5	6.3	7.2	6.0	6.3	6.5	8.5	5.0	5.2	3.1
2022	6.3	4.8	4.7	4.8	6.9	6.1	7.7	4.4	4.5	2.3
2023	2.6	3.6	-0.2	2.9	5.4	4.3	1.3	4.0	3.3	1.2
2024	1.6	2.5	-1.8	-0.2	3.7	3.0	0.5	2.2	2.8	0.9
2025	0.5	0.2	-2.9	-0.8	2.5	1.8	0.4	1.0	1.7	-0.5
2026	-0.9	-0.1	-3.2	-2.1	2.1	1.2	-0.9	0.7	0.5	-0.8
2027	-1.3	-3.5	-4.5	-3.5	1.0	-0.4	-1.9	0.2	-0.5	-1.0
2028	-2.6	-4.2	-4.6	-4.5	0.0	-1.7	-2.4	-0.8	-1.6	-1.0
2029	-2.4	-4.5	-4.1	-4.2	-1.3	-2.0	-3.9	-1.5	-2.7	-1.2
2030	-2.0	-4.5	-3.6	-2.8	-2.4	-1.5	-3.9	-1.2	-2.8	-1.1

 Table 2. Retro- prognosed and forecasted values of the growth rate of urban youth in East European states in 2011-2030²³

²³ Author's calculation by: "National censuses 2011", *European Statistical System*, at https://ec.europa.eu/CensusHub2>.

CONCLUSION

According to every synergetic dissipative system – and the Russian Federation is one of them – each one of them experience periods of deterministic and non-deterministic chaos. An analysis of the "sustainability of political stability" of the Russian Federation in light of the synergetic paradigm shows some approaches to the estimation of the duration of periods of relatively stable political process and to assess duration of periods of one's indeterministic development.

We predict that the *ceteris paribus* Russian Federation has to come to the next period of indeterministic chaos due to the synergetic parameter of order in 33-40 years from the last point of bifurcation in the 1991. Thus, we forecast the imminent onset of the next period of non-deterministic chaos in the Russian Federation in the second half of the third decade of the 21st century. By parity of reasoning to the Ukrainian case, it is quite possible to await the duration of this period of indeterministic chaos in the Russian Federation for about a year and a half.

We can expect a decrease of probability of political instability in the Russian Federation in the second half of the third decade of 21st century caused by synergetic and structural-demographic parameters of order under the additional influence of open borders and high proposition of military service jobs.

It is these factors that worsen the accuracy of the forecast of political instability in the Russian Federation for 2025-2030.

Therefore, a simple synergetic forecast of political instability in the Russian Federation: the more inaccurate, the more open the borders of the state are, the more opportunities it has for the internal employment of "extra people".

BIBLIOGRAPHY

- Akayev A. et al., "Log-Periodic Oscillation Analysis Forecasts the Burst of the 'Gold Bubble' in April-June 2011", *Structure and Dynamics*, vol. 4, no. 3 (2010).
- Easton D., A Systems Analysis of Political Life, New York 1965.
- Goldstone J., "Population and Security: How Demographic Change Can Lead to Violent Conflict", *Journal of International Affairs*, vol. 56, no. 1 (2002).
- Goldstone J., "Protests in Ukraine, Thailand and Venezuela: What Unites Them?", *Russia-direct*, 21 February 2014, at <http://www.russia-direct.org/content/protests-ukraine-thailand-and-venezuela-what-unites-them>.
- Goldstone J., "Towards a Fourth Generation of Revolutionary Theory", *Annual Review of Political Science*, vol. 4 (2001), https://doi.org/10.1146/annurev.polisci.4.1.139.

Haken H., The Science of Structure. Synergetics, Berlin 1984.

Korotayev A. et al., "A Trap at the Escape from the Trap? Demographic-Structural Factors of Political Instability in Modern Africa and West Asia", *Cliodynamics*, vol. 2, no. 2 (2011), https://doi.org/10.21237/C7CLIO22217.

- Korotayev A., Malkov A., Khaltourina D., Introduction to Social Macrodynamics. Compact Macromodels of the World System Growth, Moscow 2006.
- Korotayev A., Zinkina J., "Egyptian Revolution: A Demographic Structural Analysis", Middle East Studies Online Journal, vol. 2, no. 5 (2011), at <http://cliodynamics.ru/download/Korotayev_Zinkina_Egyptian_Revolution_MESOJ_2011.pdf>.

"National censuses 2011", European Statistical System, at <https://ec.europa.eu/CensusHub2>.

- Polovyi M., "Long-term Demographic Factor of Political Unrest in Contemporary States", in A. Taranu (ed.), Political and Economic Unrest in the Contemporary Era: Proceedings of 6th ACADEMOS Conference 2019 International Political Science Conference, Bucharest, Romania, 20-23 June 2019, Bucharest 2019.
- Polyvovyy N., "Simulation Modeling of Political Instability and Maydan of 2013/2014 in Ukraine", *European Journal of Transformation Studies*, vol. 2, suppl. 1 (2014), at http://europeourhouse.weebly.com/2014-volume-2-suppl-1.html.

Polovyi M.A., Політичні процеси: теорія та практика моделювання, Feniks, Odesa. 2011.

- Prigogine I., Stengers I., *The End of Certainty. Time, Chaos, and the New Laws of Nature*, New York 1997.
- Prigogine I., Stengers I., Order out of Chaos. Man's New Dialogue with Nature, London 1984.

Turchin P., Complex Population Dynamics. A Theoretical/Empirical Synthesis, Princeton 2003.

Turchin P., War and Peace and War. The Rise and Fall of Empires, New York 2006.

"Демография", Poccmam, at <https://www.gks.ru/folder/12781#>.

- *Доброчеев О.*, "Следы истории", *Циклы истории*, 2002, at <http://ss.xsp.ru/st/002/index_4. php>.
- "Россия страна силовиков. Занимательная арифметика от социолога Екатерины Шульман", *Время и Деньги*, 2 June 2017, at <https://www.e-vid.ru/index-m-192-p-63-article-40788.htm>.
- "Сколько силовиков в России?", *Yandex Zen*, 17 September 2019, at <https://zen.yandex.ru/ media/lsycheva/skolko-silovikov-v-rossii-5d811776c05c7100aeb60f37>.
- Цирель С., "К истокам украинских революционных событий 2013-2014 гг.", *Полит.ру*, 8 June 2014, at http://polit.ru/article/2014/06/08/ukraine/>.

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