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POST-SOCIALIST TRANSFORMATION OF CENTRAL AND EASTERN EUROPE AT THE TURN OF THE CENTURY: REGIONAL DEVELOPMENT AND ECONOMIC INEQUALITY

The evolution of socio-economic systems is non-linear, it includes both the periods of smooth changes and subsequent abrupt transformational leaps. The overall structure of new prospects opens as early as at the stage of emerging evolutionary processes, and their forecast requires to analyze the historical premises and risks that are closely associated with the change of public attitudes. With the collapse of the Soviet Union, the newly independent states went through a transformational and evolutionary development stage that led them from a regional economy (since they actually had been the regions) to the national economy, while the countries in Central and Eastern Europe experienced a dramatic drift towards the European Union. This paper examines the results of almost 25-year-long transformation of these countries. The new states that emerged following the collapse of the Soviet Union went through three types of transformation. First, there were transformations on the ideological level. The transformations of the second type were purely economic. The third type can be described as institutional (including structural and financial) transformation. It has been demonstrated that one of the important reasons for modest economic performance in the post-Soviet space was the fact that the new states ignored and did not use the principles of regional policy and regional modernization in their state-building practice. A characteristic feature in the socio-economic evolution of Eastern Europe after 1990 was a sharply emphasized process of stratification and social differentiation occurring against the backdrop of insufficiently strong middle class and the polarization of income levels in different regions. The growing polarization of income levels in different regions represents the dominant trend of rising economic inequality.

Keywords: regional development, economic inequality, integrated modernization, economic transformation, new states, clustering, institutional reforms, social differentiation, middle class

Introduction

The slowdown in the pace of growth of living standards in the CIS that began in 2013–2014 can be interpreted as resulting from combination of some extremely unfavorable circumstances, such as sanctions of 2014 and the ensuing currency crisis in Russia, extreme instability of the Ukrainian economy, transition to economic austerity in the hydrocarbon-rich Kazakhstan. However, such assessment would be superficial.

All studies on the economic evolution of post-Soviet space can be divided into three groups.

The first group includes the papers on the transition from a communist economy to capitalism that are based on a hypothesis that the optimal solution was to implement the European path of development in the post-Soviet space [1–5].

The second group of studies [6–9] examines the evolution of the post-Soviet space in a comprehensive way taking into account both the transition period and subsequent integration within the Eurasian space.

The third cluster of papers includes the studies on the prospects of economic integration in the Eurasian space [10–18].

Among all the above-mentioned papers, we did virtually not find any systemic studies analyzing the factor of regional modernization as one of the key elements for modernization at the national level. At the same time, we should mention a number of papers in which the regional development issues have been analyzed in a comprehensive way. First of all, these include studies conducted at the Institute of Economics of the Ural Branch of the Russian Academy of Sciences [19–23].

As demonstrated by the governance practice in modern Russia, the existence of high-quality research results does not guarantee their practical and widespread use. One is compelled to acknowledge

that the regional aspect of development fell off the radar for politicians in the post-Soviet space and we view this fact as a key cause of many economic failures — the politicians have been absorbed with the idea of statehood rather than preoccupied with the development of regions as components of the national economy.

Unlike the CIS, Central and Eastern European countries passed the post-communist transformation period more quickly, and their socio-economic institutions are much better adapted to Western standards. However, the institutional reform alone is not sufficient for successful regional modernization — the continued differences in living standards between the countries and regions put constraints on the growth of the internal market; another negative trend is significantly slowed the pace of urbanization amid the decline and sometimes even extinction of cities [24–27].

1. What Changed for the Better in the Post-Soviet Transformation Period?

The experience of transforming the countries of former Soviet Union into a market economy is unique. Just over two weeks, 15 independent states emerged instead of one huge Soviet Union; most of these states not only had no elaborated strategy and a clear vision of the future, but also faced the economic and humanitarian catastrophe and were on the brink of local armed conflicts [1, 28]. Amid the reigning chaos and internal uncertainty, Western economists proposed a package of reforms (the same for all countries), including privatization of state property, liberalization of prices, financial markets and foreign trade, renunciation of previously adopted social obligations as a condition for achieving the macroeconomic stability.

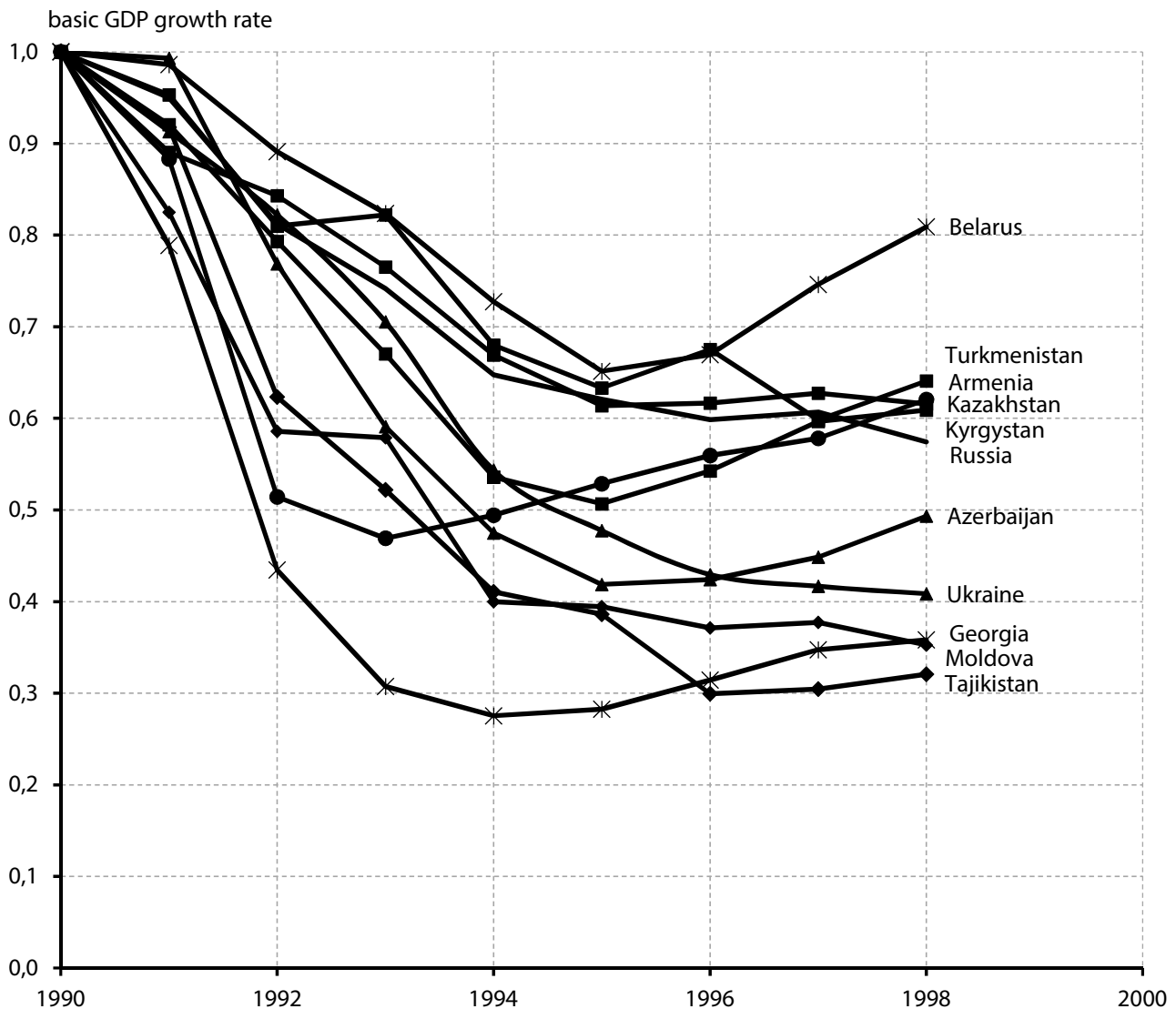


Fig. 1. Baseline growth rate of GDP in the CIS countries and Georgia in 1991–1998

The most "easily" passed transformational recession of the 1990s was in Belarus, where the maximum decline of GDP was only 35 %, while a sustainable recovery began as early as in 1996 (Fig. 1).

This was partly related to the preservation of diversified industry and agricultural focus towards the Russian market. The most dramatic decline (72 %) was registered in Georgia, which was the result of the civil war, conflict in Abkhazia and suicidal break of economic ties with Russia [29]. The deep and protracted recessions reaching 60–70 % and lasting up to 7 years were also observed in Ukraine, Moldova and Tajikistan.

Compared to countries in Eastern Europe, where the maximum recession was on average 15 %, the decline in GDP in the post-Soviet countries was deeper. This was yet another confirmation of distinctive differences between the post-Soviet space and the countries of Europe. For example, in terms of institutional and legislative components, Poland, Hungary and the Czech Republic were much better prepared than the post-Soviet states, as they began to implement the economic reforms noticeably earlier than the 1990s [30, 31].

The transformation period was marked by an uneven decline in different industries. Those that have been lost (and not restored later) include not only knowledge-intensive production facilities, but even the light industry and furniture production. There was a significant decline in the share of manufacturing in Armenia and Kyrgyzstan. This process also affected Azerbaijan, Georgia, Moldova, Tajikistan, Ukraine, and Uzbekistan. By 2014, only Belarus, Kazakhstan and Turkmenistan had managed to partially rebuild or at least maintain the same share of manufacturing in their GDP.

Hyperinflation was a natural economic effect of the collapse of the Soviet Union. In 1992–1994, the average monthly rate of inflation in Russia was 19.7 %; in Belarus, 25.1 %; in Ukraine, 27.5 %. The technical reason for excessive emission of money was the actual competition between the central banks of newly independent states in 1992—first half of 1993. Only with the introduction of national currencies amid the expansion of IMF loans, the CIS countries and Georgia began to show in 1995 the first signs of financial stabilization. The most important result of hyperinflation in 1992–1995 was the increased demand for US dollars.¹

As a result of all this, the West began to view the post-Soviet space as a sales market, source of natural resources and territory for expansion of cash dollars.

The privatization was mainly implemented in the most rapid manner and strictly in the best interest of new elite, while the ordinary people became poorer.² This process of deception became firmly rooted in the minds of people in the new states as a vivid characteristic of capitalism and what was brought to them by the "wild" market economy. Therefore, after almost two decades, the slow pace of privatization observed in such countries, as Belarus and Turkmenistan, look quite reasonable from both a social and purely economic point of view. By 1996, the share of private sector in GDP of these countries was 15–25 %, while in Russia, Ukraine, Armenia, Georgia, the figure was 50–60 % (EBRD data). In Belarus, the slow and inconsistent privatization reforms were reversed by the outcome of the constitutional referendum held in 1996. Currently, the share of private sector in GDP of Belarus is about 30 %, which determines the specific character of Belarusian economic model. A similar model is implemented in Turkmenistan, where the fuel and energy minerals are extracted by state-owned concerns "Turkmenneft" and "Turkmengaz" while in other sectors of the economy the share of private sector is 65 %. The state monopoly on the fuel and energy sector coupled with the political homogeneity, as time has shown, does not prevent Turkmenistan from having the highest (among CIS countries) rate of growth in living standards since the crisis of 2008.

Therefore, the results of privatization process in the post-Soviet space show that the CIS and Georgia (unlike the countries of Central and Eastern Europe and the Baltic states) were not ready for a civilized entry into a market economy in connection with the particular characteristics of their mentality and traditions. The overwhelming majority of people objectively had no culture of entrepreneurship and reasonable (effective) management of private property. In such circumstances, the reform should have been implemented gradually, with a focus on pinpointed large-scale privatization to strategic investors in exchange for real investments. But this did not happen in this way, and today we have what we have. The accelerated privatization only aggravated the collapse of knowledge-intensive industrial sectors and general economic downturn. It is hard to disagree with the assessment made by some Russian economists: "The post-Soviet states still lag far behind the developed world. The most successful of

¹ According to various estimates, in 1992–1996, 250–300 billion dollars in cash were overall imported to the countries in the post-Soviet space.

² This is evidenced by more than twofold increase in the Gini index for 1990–1999 in most post-Soviet states (except Belarus and Kazakhstan).

them are just at the worldwide average level of development. This is the result of an unprecedented de-industrialization resulting from the market transformation and collapse of the Soviet Union" [32, p. 54].

By the end of 1990, the structural changes associated with the transition from a planned to a market economy had been mostly completed. The gap in living standards between developed and developing countries, which had emerged by that time, created the conditions for expansion and movement of individual industries from the developed countries to the periphery. The global aggregate demand began to expand as a result of higher income among the significant part of the population in the fastest growing economies (mainly China and India). This led to increase in prices for energy and metals and, in particular, contributed to the accelerated growth in the economies in those post-Soviet states that were rapidly developing the mining sectors and metallurgy. This allowed to achieve average annual economic growth rate of 7.2 % in 1999–2008, but the highest average annual growth rates were recorded in Azerbaijan (16.3 %), Armenia (11.4 %), Kazakhstan (9.4 %), while the lowest were in Moldova (5.9 %) and Kyrgyzstan (4.9 %).

In general, the results of economic evolution in the post-Soviet space during 1990–2014 allow to clearly cluster the countries into four groups. The first group includes the countries, where the economic development was focused on integration with Russia. These are the current members of the Eurasian Economic Union, including Russia, Belarus, Kazakhstan, Armenia, and Kyrgyzstan. The second group includes the countries that are outside EEU but showed a significant increase in the average standard of living following the rapid development of oil and gas sectors (Azerbaijan and Turkmenistan). The third group of countries includes Ukraine and Georgia, which both had a fairly high standard of living in the Soviet times but could not improve it in the period of post-communist transformation. It is interesting to note that both countries are engaged in the accelerated dialog with NATO, and this reflects their predominantly Euro-Atlantic direction of economic integration. Finally, the fourth group (Uzbekistan, Tajikistan and Moldova) includes the countries with the lowest average standard of living. In terms of economic development, Moldova is closer to Ukraine and Georgia. Uzbekistan made and continues

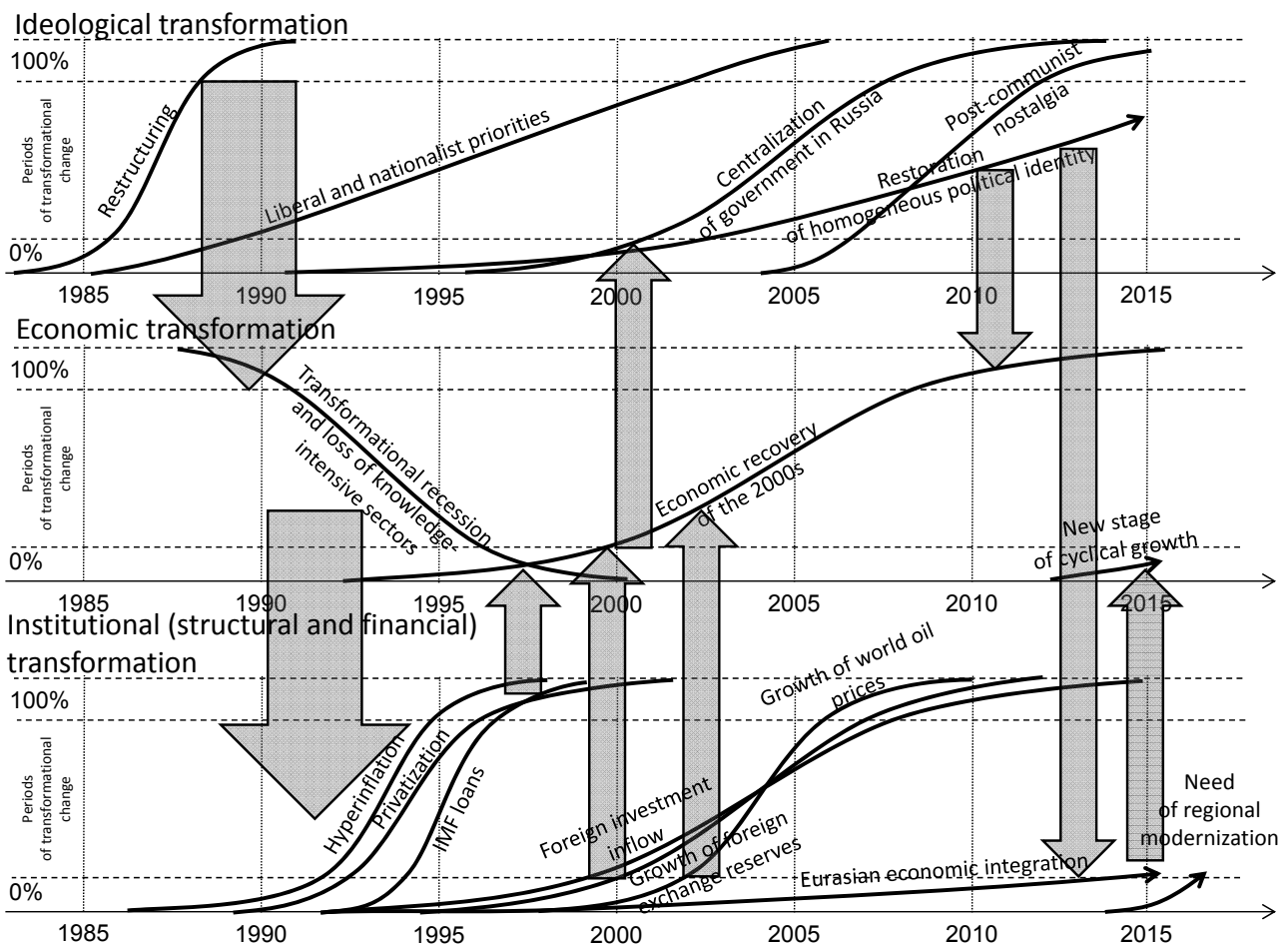


Fig. 2. The structure of evolution of the post-Soviet space

to make a significant leap forward both in terms of its demographics and economic development. The large domestic market enhances these processes and allows it to claim in the future the role of a regional leader. After a devastating civil war, Tajikistan finally has embarked on the path of sustainable development, and we can expect that, in the next decade, the standard of living that existed in 1990 will be restored.

More broadly (Fig. 2), we can acknowledge that the new states formed after the collapse of the Soviet Union went through three types of transformation. First, there were transformations on the ideological level. The transformations of the second type were purely economic. The third type can be described as institutional (including structural and financial) transformation.

2. Regional Development and Economic Inequality

When studying the issue of economic equality of regions in low-income countries with catch-up development model, J. Williamson put forward the hypothesis that the typical pattern of national development can be presented in the form of inverted U-shaped curve, when the early stages of development create interregional disparities, that are then leveled and various regions draw nearer each other in terms of development at the later stages. He came to this conclusion based on the arguments of Myrdal and Hirschman that interregional ties, movements of production factors and the policy of the central government are selective in favor of the development centers in the early stages, while the higher level of income at the national level, in the later stages of development, allows to ensure the reversal of this trend. In high-income countries, the goals of ensuring the growth at the national level and economic convergence of regions are not in conflict [33].

The collapse of the socialist system and the emergence of New Europe at the turn of the 20th and 21st centuries provided extensive empirical data to test this hypothesis. The enlargement of the European Union required considerable financing not only to adapt the legislative and institutional framework in new countries, but also to allocate significant funds for structural, sectoral and regional reforms. To eliminate the distortions in various regions and ensure a smoother entry of ten countries (Poland, Hungary, Czech Republic, Slovakia, Slovenia, Latvia, Lithuania, Estonia, Bulgaria, Romania) into the European Union, a program aimed at restructuring their economies (PHARE program) was adopted in the early 1990s. The regional development was ensured by the financing, provided primarily through infrastructure projects by the European Investment Bank. Overall, in 1991–1995, the amount of provided loans reached 3.45 billion ECU and the grants provided under PHARE reached 5.42 billion ECU; an additional amount of 6.69 billion ECU was provided in 1995–1999 [34]. Later, the volumes of financing were only increasing (Table 1).

Table 1

The volumes of financing provided by EU to 10 countries for structural, sectoral and regional reforms (billion euros)*

Country	Years		
	2004–2006	2007–2013	2014–2020
Czech Republic	3.45	26.3	21.6
Estonia	0.85	3.4	5.9
Hungary	4.34	26.5	21.49
Latvia	1.43	4.5	4.42
Lithuania	2.01	6.7	8.35
Poland	16.01	63.8	82.5
Slovakia	1.19	11.4	15.24
Slovenia	0.8	3.8	20.83
Bulgaria	—	7.46	15.7
Romania	—	18.0	21.4

* Data provided by KPMG (EU Funds in Central and Eastern Europe. Progress Report 2007–2013. Retrieved from: <https://www.kpmg.com/SI/en/IssuesAndInsights/ArticlesPublications/Documents/EU-Funds-in-Central-and-Eastern-Europe.pdf> (date of access: May 12, 2016)) and [35, 36].

One of the reasons of such a policy on the part of EU was substantial differences between the countries and the regional levels of development (Table 2.)

Table 2

GDP per capita (PPP, 1998) in 10 new EU members compared with the average GDP per capita in EU-15 (%)

Translation

Country	Country average	Richest regions	Poorest regions
Czech Republic	65	120	49
Estonia	34	51	22
Hungary	37	55	25
Latvia	26	37	16
Lithuania	29	35	22
Poland	47	70	33
Slovakia	47	105	36
Slovenia	67	84	50
Bulgaria	28	34	25
Romania	32	44	26

* Data provided by [37].

Two decades after the beginning of the reforms, which were aimed, among other things, to smooth the differences in the levels of regional development, the West European experts are somewhat baffled by their outcome [38]. The main conclusions that follow from the results of processing statistical indicators for 190 regions show that the regional differences in Central and Eastern Europe have substantially increased over the past two decades and there is a significant polarization in the regional productivity and income levels. The authors of the study emphasize the complexity of ongoing economic processes when "we have something opposite, the process of regional growth in Central and Eastern Europe does not follow the rule of convergence or monotone (neoclassical) bell curve (Kuznets regional curve). Most likely, the dynamics of convergence, though present, are significantly exposed to the impact of many interrelated causes, especially in the early stage and, afterwards, in the later stages of national development with the increasing importance of agglomeration and, particularly, the impact of market demand. As a result, despite the process of national catch-up growth, regional evolutions are on the whole divergent ..., thus demonstrating an increasing trend of regional polarization in these countries." [38]. Based on the results of the study, the authors came to the conclusion that "the regional growth is a non-linear process that depends on the level of national development and creates divergence and polarization in the later stages of development, despite some individual cases and trends towards convergence."

In our opinion, despite the significant expenditure in the form of various regional development programs, all post-socialist countries display a clearly dominant national trend of sharp income polarization across the society. This trend is evidenced by the results that we obtained by examining the production and institutional functions in individual countries of Central and Eastern Europe.

To analyze the impact of inequality on economic growth, we proposed the following model:

$$\tilde{Y} = \lambda \cdot D \cdot K^{(a+b \cdot G) \cdot G} \cdot (L \cdot A)^{(n+m \cdot G) \cdot G}, \quad (1)$$

where \tilde{Y} is the GDP; K is fixed assets; L is the number of those employed in the economy; A is the technical progress; G is Gini index; D is the trend operator; g, a, b, n, m are the parameters.

The optimal value of Gini is determined by the following ratio:

$$\hat{G} = -\frac{1}{2} \frac{a \ln(K) + n \ln(L \cdot A)}{b \ln(K) + m \ln(L \cdot A)}. \quad (2)$$

The optimal trajectory of GDP is determined by the following formula:

$$\tilde{Y} = \lambda \cdot D \cdot K^{(a+b \cdot \hat{G}) \cdot \hat{G}} \cdot (L \cdot A)^{(n+m \cdot \hat{G}) \cdot \hat{G}}. \quad (3)$$

The calculations based on this model for five countries (Poland, Hungary, Romania, Bulgaria, Latvia) are shown in Fig. 3.

As shown in the Figure, for all countries (except Hungary), the actual Gini coefficient always exceeded its optimal value and was continuously increasing.

As a result, actual values of GDP are lower than those that could have been achieved with optimal values of Gini coefficient (Table 3)

Similar calculations that we prepared for the federal districts of the Russian Federation showed that the higher level of inequality results in even more substantial economic losses (Table 4 and Fig. 4)

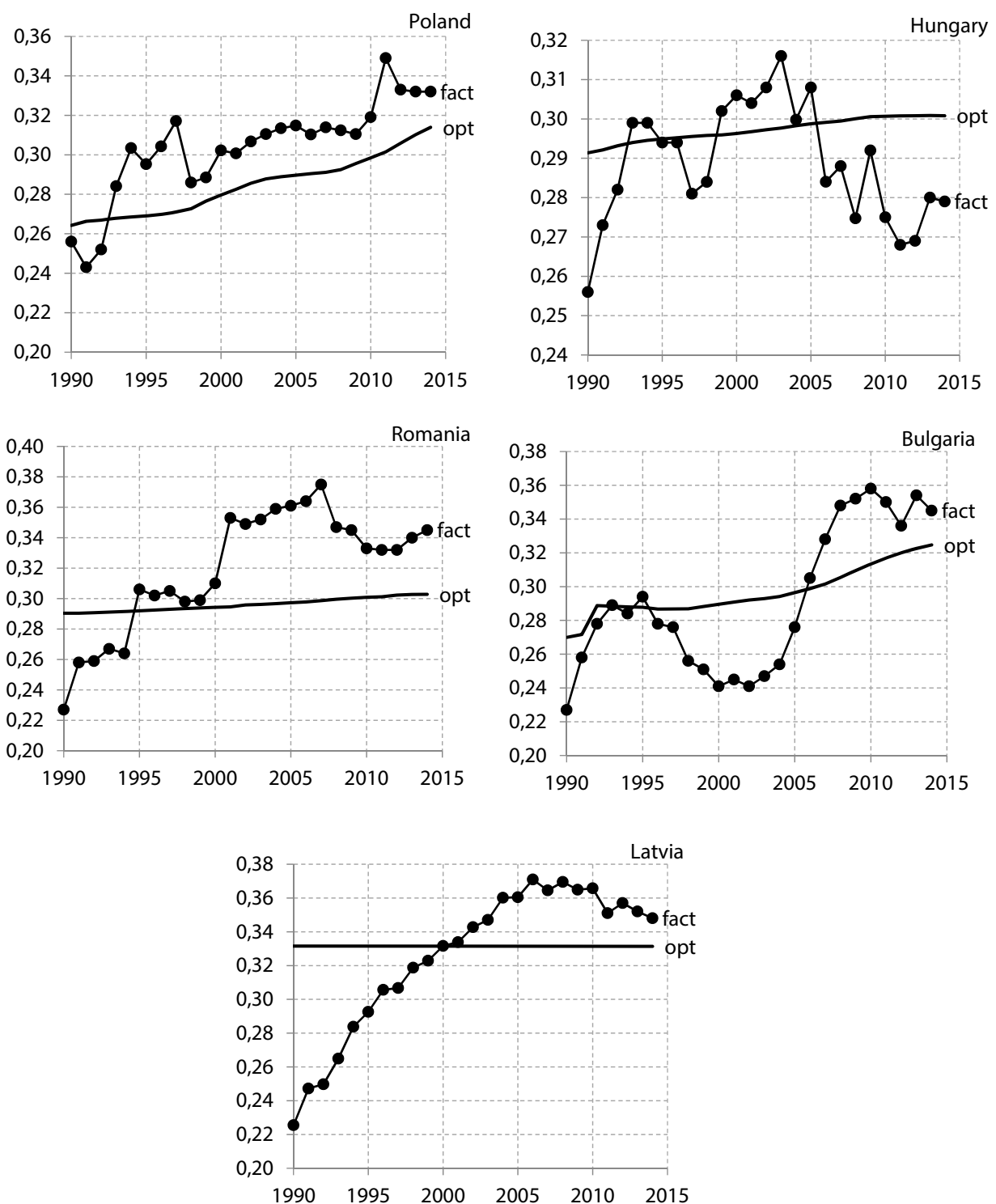


Fig. 3. The dynamics of actual and optimal trajectories of Gini coefficient in individual countries of Central and Eastern Europe

The comparison of results in the two groups of countries reveals that the growing economic inequality is a general trend; this inequality slows down the economic growth, while the absolute extent of inequality is higher in the CIS.

3. A "Third Way" of Regional Modernization?

W. Isard, one of the founders of regional economics as a subject of scientific research, noted that "the general theory of location and spatial economy provides little in itself to solve specific practical problems. Such theory must be supplemented by the applied methods of regional analysis that can be used to assess the basic parameters of the spatial economy and each area in the studied system" [39, p. 17]. A relatively recent monograph published by Chinese scientists [40] emphasizes that the "regional

Average excess of optimal GDP over its actual value (%)

Poland	2.4
Hungary	0.4
Romania	2.8
Bulgaria	1.1
Latvia	4.1
Lithuania	2.8
Estonia	1.9

Table 4

The average optimal values of Gini index and the average excess of optimal GDP over its actual value (%) for federal districts of the Russian Federation

Federal district	Average optimal values of Gini index	Average excess of optimal GDP over its actual value (%)
Central	0.352	6.1
North-Western	0.345	3.2
Southern	0.334	5.9
North-Caucasus	0.323	6.3
Volga	0.332	3.5
Ural	0.353	4.7
Siberian	0.356	3.0
Far Eastern	0.332	4.5

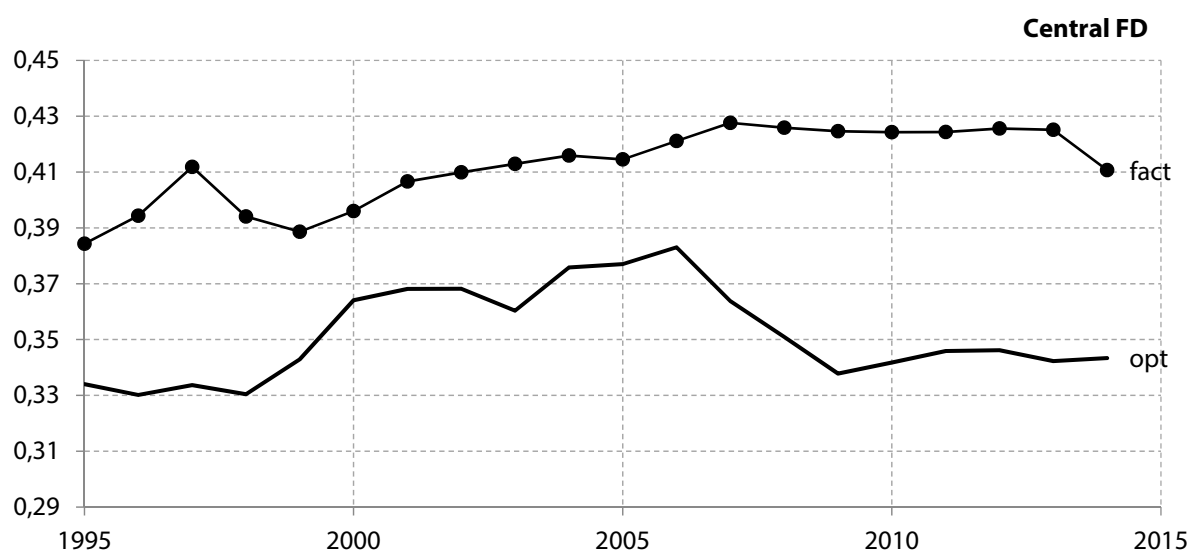


Fig. 4. The dynamics of actual and optimal trajectories of Gini coefficient for the Central Federal District of the Russian Federation

modernization is not an analogue of national modernization in miniature. In a country, the regions can implement the modernization in different ways, and the process of regional modernization is very uneven and can be divided into economic, social and knowledge modernization" [40, p. 105]. The authors came to this conclusion by analyzing different scenarios of industrialization and urbanization in 50 states and 195 counties of the USA. In their analysis of Chinese experience of economic development, the authors rightly noted the need for "a primary modernization with the industrial era, a secondary modernization with the information era, or the knowledge era and the existence of the third state called "integrated modernization, which is understood as the coordinated development of primary and secondary modernization" [40, p. 8]. When describing the goals of regional modernization in China, the authors emphasize the long-term nature of this task with the "following goals for the regional modernization of China in the first half of the 21st century: completing the primary modernization

by 2020; completing the urbanization and modernization and starting full transition to secondary modernization in all administrative units by 2040; reaching the level of moderately developed countries by 2050" [40, p. 110]. The assessment of the outcome of Russian reform made by Chinese scholars in accordance with their index of integrated modernization deserves special attention³). Professor N. Lapshin, who wrote the foreword to the Russian edition rightly noted that "the results of fundamental and applied research conducted by the Chinese experts suggest that, in Russia too, it is important to distinguish two stages of modernization, including the industrial (primary) and information (secondary) modernization, as well as the various phases of their dynamics in the groups of regions (constituent subjects of the Russian Federation) that are different in terms of their economic and socio-cultural levels" [40, p. 11].

It is even more difficult to assess the state of the economic sphere in Russia. Overall, its index of integrated modernization is only 53 %. Within that index, indicators of the service sector have above-the-average values, including the share of those employed in the sector (83 %) and its share in the value added (77 %). However, PPP per capita is very low (36 %) and GNP per capita is catastrophically low (16 %). The growth of these indicators requires structural changes in the economy and a qualitative increase of the share of remuneration of labor in the value added.

The situation in the area of knowledge efficiency in Russia is very bad (49 % of the standard value). On the one hand, it has a 100 % share of students among young people of appropriate ages. On the other hand, the index for the share of R&D financing in relation to GDP is only 45 %, the number of Internet users per 100 people is 31 %, while the number of residents receiving patents (per 1 million people) is 21 %. A positive dynamics of integrated modernization index in Russia is observed in 2000–2006. During this period, the values of index increased from 54 to 59, that is, by 1 point per year. [40, p. 11]

Conclusion

The post-socialist evolution in 1991–2015 was uneven. The new states that emerged following the collapse of the Soviet Union went through three types of transformations. First, there were transformations on the ideological level. The transformations of the second type were purely economic. The third type can be described as institutional (including structural and financial) transformation. The region of post-Soviet space was forced to make a transition to a new way of life, new socio-economic institutions, new rules of the game. The painful nature of this process was caused by hyperinflation and a significant increase in income differentiation. Its key element was the accelerated privatization and formation of a new legal and regulatory framework. These transformations created the conditions for the inflow of foreign investments and laid the first premises for resuming the economic growth. The rise in global energy prices allowed some individual countries to build up their own financial power expressed in the increase of foreign exchange reserves. These financial changes contributed to economic recovery but, as shown by the current economic environment, the growth was replaced by the recession and the prospects of overcoming it look problematic.

The regional aspect of development was virtually ignored across the entire post-Soviet space, and the absence of solid and consistent regional policy became a factor of unsustainable development of all post-Soviet economies.

The analysis of transformations in Eastern Europe during the last quarter of the century shows that the results of this transition, especially the social results, did not coincide with initial expectations of a significant part of the population. The growing economic inequality, high unemployment, emigration as a new social phenomenon — all this is not what people expected at the beginning of reforms. Despite significant regional development programs, the gap in living standards with the Western countries has not been closed — as in the 1990s, it remains substantial. Moreover, in some countries of Eastern Europe, the price paid for the transition to a market economy turned up to be too high.

³ The index of integrated modernization for Russia (59 %) ranks it 37th among 131 countries and 16th in the group of 25 moderately developed countries, in which it is included. Among the three groups of parameters used to calculate this index based on 12 indicators, Russia obtained the highest score for social index (75 %), which is high enough for moderately developed countries. Among its four indicators, the health services exceed by 1.6 times the standard value (100 % or more). The share of urban population is close to the standard value (93 % of the standard). However, there is substantial lag for the life expectancy (83 %) and catastrophically low environmental efficiency, which is measured by the effectiveness of the energy sector, or more specifically, by the ratio of GDP per capita and energy consumption per capita. The low level of this ratio (24 %) is the main obstacle to further improvement of the social index in Russia, and the achievement of its 100 % value is a long-term task that will require to increase the energy efficiency by several times.

The uneven pace of reform led to the clusterization of Eastern Europe by creating a European "periphery of the periphery." A characteristic feature in the socio-economic evolution of Eastern Europe after 1990 was a sharply emphasized process of stratification and social differentiation occurring against the backdrop of insufficiently strong middle class and polarization of income levels between different regions. Similar processes are also typical of the CIS countries.

The Chinese experience accumulated in the form of some regional modernization measures, such as establishing a national government authority for regional development; preparation by the regions of their own modernization strategy supported by the real sources of financing; establishing research centers for regional modernization; publishing regular reports on regional modernization requires further understanding and use in the government practices.

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