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The journal PUBLIC ADMINISTRATION ISSUES has been published at the National Research University Higher School of Economics (HSE) since 2007 in Moscow, Russian Federation

The mission of the journal is to create a modern platform of full value for discussion, exchange of international and national experience and specific knowledge among professionals in the field of Public Administration; for working out and further correcting the development strategy of public and municipal administration.

The editorial policy is to provide a very clear emphasis on the specific subject along with the focusing on the interconnection of the properly public administration problems with the relative economic, legal, political science and managerial problems, including interaction of the state and civil society.

The following key issues are addressed:

- The theory and practices of the public administration:
- Legal aspects of the state and municipal administration;
- The analyses of experts;
- Discussions;
- Case Studies:
- The training and the improvement of specialists in public administration.

The journal is meant for analysts and researchers, workers in the public and municipal administration, for academic purposes and for a wider readership interested in current status and development of the system of public and municipal administration in the Russian Federation and abroad.

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INTRODUCTION BY THE GUEST EDITOR

This is the second Special Issue of our Journal (the first, No 5, was published in 2016) produced with the cooperation of the Kennan Institute of the Wilson Center. This issue consists mainly of articles prepared by scholars on the basis of research projects undertaken during their stays at the Kennan Institute. We appreciate the mutual cooperation with our colleagues despite a difficult period of political turbulence between the Russian Federation and the USA. Indeed, academics can stand on the fixed ground of objective analysis of governance processes and show that we are not so far from each other in our analytics.

The broad spectrum of research that has been produced by scholars, mostly from Kennan projects but also from our colleagues that have decided to join the Special Issue, can be roughly distributed among subjects that have recently been in high demand in the research field of public administration, public policy and public affairs.

First of all is the problem of governance of innovations: how to better manage scientific research and how to evaluate the impact of military R&D complexities on the acceptance of innovations in the civil sector. The rich analysis of data from Russia and Armenia not only clarifies the present situation in this field and shows the real picture of innovative development – and not just in these countries – but also produces conclusions as to how innovative development can be operated on the level of pure science and through investment into break-out technologies.

Regional development is the second issue and is one that has attracted a lot of attention from scholars in public administration. It covers a variety of levels and sub-sets of the problems: from analysis of the relations between Federal centers and Regions in Federal states regarding the prospects of its asymmetry, and the controversial picture of intergovernmental relations of Regions inside Russia, to municipal attractiveness distribution and its foundations – the problems of safety in big cities. It is a mosaic that shows the essence of regional development in its different forms and trends.

The NPG concept also is at the heart of contemporary interests of public administration scholars, and in this Special Issue some successful practices for advocating the public interest and its protection against the dominance of corporative and bureaucratic interests are discussed. At the epoch of the extremely strong lobbying of corporate interests it is, definitely, the key problem of governance for many countries, especially for so-called "developed democracies".

Finally, we welcome the publications by our colleagues – economists who have the interests and abilities in order to research those problems bordering the economy, public administration, public governance, and public affairs. State policy, which should protect competition, avoid monopoly prices and set anti-trust barriers, is the common ground for both economists and for public administration scholars.

Once again, I extend my utmost appreciation to all the authors, to the Kennan Institute of the Wilson Center for their willingness to take part in this Special Issue, and to the NRU-HSE who have constantly supported international collaborative publications and research.

Alexey G. Barabashev

SCIENCE AND INNOVATION POLICY OF THE RUSSIAN GOVERNMENT: A VARIETY OF INSTRUMENTS WITH UNCERTAIN OUTCOMES?

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Abstract

This paper explores the state and pace of the development of science and innovation policy in Russia with the goal of finding an explanation for its relatively slow progress. We argue that this slow pace can be explained by three major factors. First, instruments of science and innovation policy are government-centered as manifested in excessive, hands-on government involvement. This is a reflection of the vertically organized Russian innovation system having weak horizontal linkages. Second, the government policy is poorly balanced. While in some areas there is a policy mix, in others, necessary instruments are lacking. This is a result of a growing asymmetry of information under the conditions of weak horizontal linkages. Third, in recent years, changes in economic conditions and international relations started to affect Russia's innovation system. Measures undertaken in response to economic sanctions produced signals that conflict with the science and innovation policy. We illustrate our position by analyzing (1) policy instruments aimed at linking research and commercialization and supporting the improvement of the scientific and technological workforce, and (2) new regulations, which appeared during economic sanctions and are related to the work of foreign science foundations in Russia.

We link our interpretations to theoretical studies of science and innovation policy and a policy mix. The Russian case confirms the theoretical models that describe hierarchical systems in which government dominates and asymmetry of information becomes a persistent problem. Government, as a principal, tries to find new forms of a pursuing agent to implement tasks. In Russia, the lack of monitoring leads to new instruments being added while the existing ones remain uncorrected. As a result, a policy mix becomes more complex and its outcomes are difficult to predict.

Keywords: science policy; innovation policy; government; Russia; policy mix; instruments.

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Science policy is a part of innovation policy while at the same time both policies maintain certain autonomy. Science contributes not only to economic growth through technological novelties but also impacts culture, education, and society in a broader context. In turn, innovations may appear not only as a result of scientific research. Here we define science policy as a government policy aimed at the funding, conduct and dissemination of scientific research. Innovation policy is a government policy fostering the use of research and development to produce new and competitive products and processes.

In terms of instruments, science and innovation policy are interconnected. There are of course matters of pure science policy like grant funding of fundamental research or the organization of scientific work. At the same time, the problem of cooperation between scientific organizations, universities and companies is at the intersection of science and innovation policy. In this paper, we concentrate on policy measures introduced in Russia that may be considered as a part of both science and innovation policy. These are instruments fostering knowledge transfer from science to business, and a policy on human resources in research and development (R&D). We also look at how an external environment, such as economic sanctions, is affecting science and innovation policy in Russia.

The Russian government has been actively pursuing science and innovation policy during the post-Soviet period and has applied a policy mix. Russia, especially in recent years, has demonstrated a moderate success in scientific research, but the state of the country's technological innovations is weak. Science policy measures have produced several visible outcomes, including a growing number of Russian publications in highly cited journals and a larger share of highly cited papers published by Russian researchers without foreign co-authors. Yet, the Russian scientific system remains in a turbulent state. Leaders of research institutions and societies increasingly mention "stagnation" and "failure" while describing the current situation in Russian science, which is vocabulary of the early 90s, a period of severe crisis (Dezhina, 2017). This decadent mood can partly be seen as a reaction to the government drive in its science and innovation policy accompanied by certain ignorance of ongoing problems. The response to this push is growing evidence of professional-ethics/ integrity issues inside the Russian scientific community, including plagiarism in research theses, manipulations of authors' affiliations, and unscrupulous calculations of citations indexes (using a Russian science citation index). Often, these problems develop in response to insufficiently thought-through or poorly implemented science policy measures that lead to a misguided perception of government objectives.

We argue that a slow pace of innovative development in Russia may be explained by several factors. First, instruments of science and innovation policy are government-centered in terms of excessive, hands-on government involvement. This is a reflection of a vertically organized Russian innovation system with weak horizontal linkages. Second, government policy is poorly balanced. While in some areas there is a policy mix, in others the necessary instruments are lacking. This is a result of a growing asymmetry of information under the conditions of weak horizontal linkages. Third, in recent years, changing economic conditions and international relations has started to affect the Russian innovation system. Measures undertaken in response to economic sanctions produced signals that conflict with the science and innovation policy.

The paper is organized as follows. First, we describe theoretical approaches to a study of government science and innovation policy. Second, we analyze the current state of the Russian innovation system using quantitative statistical indicators. Third, we discuss the government policy instruments which are aimed at strengthening the research and commercialization results, developing the horizontal linkages in the system, and improving the quality of the scientific workforce. We consider areas in which the number of instruments is adequate and even excessive, and those in which government policy could be more active. Fourth, we analyze an external context influencing science and innovation policy. Finally, we make conclusions about the state of the government science and innovative policy in Russia.

Theoretical background: science and innovation policy through the lens of the principal-agent theory and policy mix

A theoretical framework for studying government science and innovation policy is underdeveloped. One of the most noticeable concepts for analysis of relationships between government and other actors in the process of implementing science and innovation policy is the principal-agent theory. The principal-agent literature that explores this concept in application to government science and innovation policy treats government as a principal, who disposes a number of resources without sufficient understanding of the interests of the resources' recipients. Guston (1996) and Van der Meulen (1998) analyzed the relationship between government and science as a principal-agent game. Van der Muelen saw this relationship as misbalanced, wherein "one actor, the principal, transfers resources to other actors, the agents, which they should use to realize the objectives of the principal which the principal himself cannot realize". Agents may have their own interests that may only partially overlap with those of the principal. For a principal, a major problem is the information asymmetry between the principal and agent. Therefore, government as a principal "needs the agent, who accepts ... resources and is willing to further the interests of the principal" (Braun et al, 2003).

Caswill (1998) described two opportunities that give the principal-agent theory as a basis for the analysis of science policy. First, it could enable social science policy-makers to better understand their roles, institutional positions and interests. Second, this approach may be the basis of a new science policy agenda, which helps to explain the structures and operations of resource allocation systems both inside and outside the academic science system.

This theory has been verified through the analysis of particular instruments, such as funding agencies as intermediates between policy-makers and scientists (Braun et al, 2003). Each of the parties has certain options. The Principal may trust or monitor. An Agent may comply or not comply with government policy. Each choice creates an incentive for at least one of the two actors to change the status quo. Theoretical studies search for stabilizing arrangements and factors that make parties cooperate and still maintain their disparate identities.

Another theoretical approach defining the role of the government is a "systems of innovation" concept (classical works on this topic were written by R. Nelson (1993), C. Freeman (1995), and B.A. Lundvall (1992)). It also implies an asym-

metry of information (Chaminade and Edquist, 2010) and focuses the attention on interactions in an innovation process and networks among major stakeholders (government, companies, universities, financial institutes, etc.). Based on this approach, analysis may reveal areas with a greater degree of uncertainty and risk, in which government should conduct its science and innovation policy. This approach also gives the basis for assumptions that innovation policy is closely connected with educational, economic and other policies (Kuhlmann, 2003). Moreover, according to Martin (2016), there is a growing need for R&D policies to be integrated with industrial, environment and regional policies. In turn, Weiss (2005) underlines that science and technology policies are interconnected with international affairs and affect each other. He claims that their interconnection is so important that it should be recognized as an independent sub-discipline. He sees science and technology as social processes that respond to a variety of economic, social, cultural and political influences. They operate in politicized contexts and are influenced by international affairs. This influence may be reflected in national priorities and relative budget allocations for different scientific and technological fields, the pace of international migration of scientists, and their freedom to communicate and attend meetings outside the country (Skolnikoff, 1993).

These theoretical frameworks underpin umerous empirical studies of government science and innovation policy. For the current study of inter-relations between science and innovation policy the concept of a policy mix is especially appropriate. The term "policy mix" was transferred to science and innovation policy vocabulary in the 2000s. It implies a focus on the interaction and interdependence between different policies as they affect the extent to which independent policy outcomes are achieved. Even though the term emerged in the literature of the 60s, its meaning remains ambiguous (Flanagan et al, 2011). Borrás and Edquist (2013) give the following definition of policy mix: "the specific combination of innovation-related policy instruments which interact explicitly or implicitly in influencing innovation intensities". They underline that there is no ideal combination of policy instruments that would fit all purposes. Moreover, each country has its unique science and innovation policy and therefore the approach 'one-size-fits-all" is irrelevant.

Martin (2016) points out that there are many studies of individual policy instruments but scarce data exist on the analysis of policy mix with regard to science policy. The same is true for innovation policy: according to Witt (2003), innovation policy studies have tended to focus on the analysis of individual policy instruments, or on easily understood combinations of non-interacting instruments. In addition, formal or informal mechanisms for evaluating and governing the wider policy mix affecting innovation are largely absent (Flanagan et al, 2011).

Borrás and Edquist (2013) suggest the classification of policy mix regarding innovation policy. According to them, government may use three types of instruments: regulatory, financial and soft. Regulatory instruments include, for example, competition regulations, intellectual property rights laws, etc. Financial instruments are usually at the center of innovation policy (block support of research, competitive research funding, and tax exemptions). Finally, soft instruments include standardization, public-private partnerships and voluntary agreements. Soft instruments, such as public-private partnerships are increasingly used in innovation policy.

Borrás (2009) and Flanagan et al (2011) characterize the evolution of a policy mix as both "widening" – the introduction of new and more sophisticated policy instruments – and "deepening" – an expansion of the realm of action for innovation policy. An interesting observation from Flanagan et al (2010) is that it is easier to create new mechanisms than to remove those that have become institutionalized (p. 25). This means that new instruments may conflict with previous ones and, perhaps, old instruments should be corrected before adding new ones.

Another important factor in the analysis of a policy mix is path-dependency. New policy schemes may reproduce existing institutions as possible and rational. Thus, based on the example of the Soviet Union, Chulkov (2014) shows that in centralized economies there is strong information asymmetry between the principal and the agent since the principal cannot identify the true productivity level of the agent.

A policy mix in Russian science and innovation policy has been studied mainly by Russian scholars and there are few systemic works on this subject. Notable large studies include Ivanova, Egorov, Radosevic (2008), who conducted an analysis of the Russian innovation policy mix based on methodology used in the European Union. An analysis by Gokhberg et al (2011) was focused on a science policy mix during the economic crisis of 2008. Dezhina (2008) analyzed the pace of development of science and innovation policy instruments in the post-Soviet period, pointing out a high level of centralization in decision-making and the practice of adopting foreign policy measures, which is unlikely to succeed. Ivanova et al (2012) focused on priority setting in science and innovation policy and comparisons with developed innovative countries. These studies show that while Russia has a large palette of instruments, altogether they do not ensure innovative development even though several successful cases are in place. A major impediment is the disconnection of major actors at a horizontal level.

R&D and innovation activity in Russia

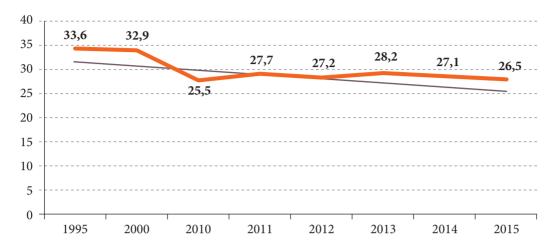
The most common indicator reflecting the state of science and technology is expenditures on R&D as a percentage of gross domestic product (GDP). For Russia, this indicator is just over 1%, compared to 2.03% in 1990 (TSISN, 1997), before the breakup of the Soviet Union. Currently, these expenditures exhibit a negative dynamic, decreasing from 1.19% in 2014 to 1.13% in 2015; budget cuts that started in 2014 are likely to continue this unfortunate trend. In technologically developed countries, the expenditures on R&D vary from 4.29% (Korea) to 1.7% (UK) (HSE, 2017b)¹.

However, the volume of funding per se does not appear to be the only problem. Russia is distinct in another feature – a very low level of business enterprise expenditures on R&D (BERD). The government budget allocations represent about 70% of the total expenditures on R&D, whereas in developed countries, the partitioning of government and BERD shares is almost the opposite. Overall, BERD in Russia keep diminishing over time (picture 1).

¹ Data are for 2015 or latest year available.

Picture 1

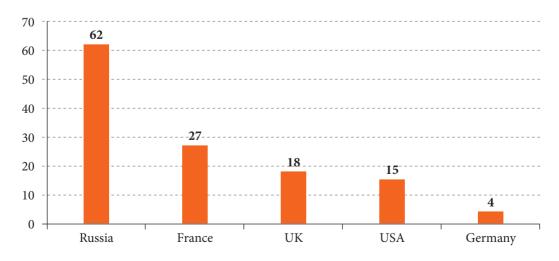
Business Enterprise Expenditures on R&D in Russia
(% of total expenditures on R&D)



Sources: (HSE, 2016); (HSE, 2017b).

Moreover, "pure" BERD are even lower – the combined direct and indirect government support for business R&D in Russia is 62%, compared to 27% in France, 15% in USA, and 4% in Germany (Picture 2). These data indicate that the Russian science and innovation activities area is highly dependent on federal funding and even in the private sector R&D for technological innovations are mostly government-supported.

Picture 2
Government Support for R&D in the Business Sector,
2014 or latest year available (% to the total BERD)



Source: (OECD, 2016).

These data reveal a heavy reliance of the system on the federal budget. One of its outcomes is the phenomenon of "budget innovators", when the substitution of private funding by public financing is occurring.

Meanwhile the government funding of R&D in Russia is rather modest in absolute terms, being insufficient for effectively boosting innovations. The proportion of innovative enterprises conducting technological innovations remains small – just over 8% of all enterprises. This contrasts with the situation in technologically developed countries where the share of innovative companies varies from 52.9% (Belgium) to 26.4% (Israel) (HSE, 2017a)².

Companies prefer to purchase new technologies (typically, abroad) rather than develop their own. This leads to the country having a technological dependence. Overall, Russia is mostly dependent on high-tech imports, exporting only some "niche" products. The volume of exports is modest – US\$1.65 billion versus US\$45.6 billion in UK or US\$71.4 billion in Germany (HSE, 2017b). The country is least dependent on the import of nuclear technologies (in this area export is higher than import), and most dependent on the import of medical equipment (imports from countries that introduced sanctions is 92%), pharmaceuticals (over 90%), machinery and equipment (60%) (Gnidchenko et al, 2016). The technological dependence is also confirmed by patent statistics. The number of patent applications in Russia is a factor of 20.5 lower than in China, 14 in the U.S., and 1.5 in Germany (HSE, 2017b)³.

The latest (2016–2017) World Economic Forum Global Competitiveness Report shows that the Russian innovation system persistently suffers from low levels of industrial spending on R&D, government procurement of advanced technological products, and weak university-industry collaboration in R&D (Table 1).

Table 1

Major difficulties in promoting innovation in Russia
(score 1–7 (best))

Indicator	Score				
indicator	2015–2016	2016–2017			
Company spending on R&D	3.2	3.3			
Government procurement of advanced tech products	3.3	3.3			
University-industry collaboration in R&D	3.6	3.7			
Capacity for innovation	3.8	4.0			
Quality of scientific research institutions	4.0	4.2			
Availability of scientists and engineers	4.1	4.1			

Sources: (World Economic Forum Global Competitiveness Report, 2016); (World Economic Forum Global Competitiveness Report, 2017).

² Data are for 2015 or latest year available.

³ Data are for 2015.

Government measures to link science and industry

The focus of Russian science and innovation policy related to encouraging transfer of knowledge kept changing abruptly during the post-Soviet period. In the early 1990s, during a severe economic crisis, the government concentrated on "preserving" science and creating technical infrastructure, such as technology parks and incubators. The assumption behind this activity was that the availability of technical infrastructure would boost the commercialization of research results and increase the economic demand for science.

From the mid-2000s, the emphasis shifted to the establishment of various funding institutions aimed at supporting technological innovations. The first Government Fund supporting R&D at small innovative enterprises was created in 1994; in the mid-2000s, several new "institutes for development" were established. These are government-funded organizations with a different agenda focused on technological innovations. Examples are the Russian Venture Company (established in 2006), RUSNANO (initially it was a State Corporation established in 2007 with the goal to develop "nanotechnology industry" in Russia), the Russian Fund for Technological Development (reconfigured at the end of the 2000s, with an agenda to provide low interest loans to companies for R&D and technology development). The assumption was that a combination of financial and infrastructural support would ensure that all stages of innovative development – from idea to new technology or product – would be covered by targeted government support. This ideology received the unofficial name "innovation lift", with an envisioned image of development that moves through the stages just like in a lift, from stage one, where an idea is born, to the last stage production and sales.

Despite the creation of almost every element of an innovative infrastructure, the system was stumbling and R&D remained loosely connected to technological innovations. The gap between the research and commercial applications became evident. At the beginning of the 2010s, the government realized that horizontal linkages in the innovation system were missing and readjusted its focus to mechanisms for stimulating and strengthening the cooperation between universities and industry. Among the most significant measures introduced in 2010 were technology platforms, programs for innovative development of large state companies, and matching grants for industry-university research cooperation.

Technology platforms represent a non-financial tool for connecting major actors of an innovation system (industry, research institutes, universities) with the overall goal of developing commercially viable technologies. These platforms create a so-called "communication ground" by helping all the parties involved to identify and negotiate promising joint projects. The idea of technology platforms has been adapted from the European Union experience. A total of 35 platforms were established in Russia of which, by 2017, only about 20% were functioning. The major reason for such a modest outcome has been the inability of these platforms to connect different stakeholders and the orientation towards federal support and federal technological priorities (Zudin, Kuzyk, Simachev, 2017), thus reducing the interest of private companies to cooperate (Dezhina, 2014a).

Another new-to-Russia instrument for promoting links between industry and universities was in the form of subsidies distributed competitively to industrial enterprises to fund complex high-tech projects performed together with universities (Government Resolution, 2010). This was the first policy mechanism conceptually close to matching the grants used by governments in many other countries to support corporate research and development. The impact of this instrument was assessed in 2012–2013 using a number of face-to-face interviews with the university and company project leaders. The assessment showed that these companies and universities are in a positive conflict while working together. Some of this friction was related to the typical differences in mentalities and values for businessmen and scientists. These issues, however, have not led to the termination of projects (Dezhina, Simachev, 2013) and mutual understanding improved as the projects kept progressing. The survey revealed the following positive effects of the matching grants:

- increased commitment of university research teams towards solving the scientific and technological problems of companies, and strengthened motivation of university researchers to cooperate, especially among younger scientists;
- improvement of student training due to their involvement in research projects;
- modernization of educational programs in line with industrial needs;
- expansion of research cooperation, formation of consortia that included a company and several universities.

Still, this program, even while being one of the most effective, has a low disseminating potential. This is again government funding spent on R&D in companies' interests. When stimuli for competition are low, this incentive may also lead to the substitution of private money by public funding.

A separate measure was directed towards large state corporations with the goal of making them more innovative. A special program called the "Program for innovative development of large state companies" was initiated in 2010. The government was using this program to "push" companies towards innovations. The companies participating in this program had to set out their plans for innovative development, increase R&D expenditures, and improve their technological base. After 4 years of functioning, the first evaluation of this program was conducted (Gershman et al, 2015). It demonstrated that the majority of companies preferred incremental innovations, with 69% of them having conducted R&D that could be regarded as original only within that company, and only 34% stated that they had undertaken R&D novel for the world market. Overall companies were oriented toward state procurement. Officials now admit that the program itself and attempts to restructure it did not yield promising results because the political impulse became less oppressive when economic situation in the country had worsened (Medovnikov, 2017). As the companies were *forced* to cooperate with universities, without having a genuine need for doing so, the cooperation in many ways turned out to be too formal, and did not sufficiently strengthen the industry-university linkages.

The most recent policy trend is "picking winners" in the form of support to medium-size technological companies that may give a boost to the entire innovation system, thus making Russia more visible internationally. The pace of development of such companies is rather impressive. Some of them have 20% annual gains growth. In order to help these companies to grow even faster and turn into trans-national companies, the government started, in 2016, a pilot program called "Support of private high-tech companies-leaders till 2020" ("National Champions"). It is modeled, as are many other Russian initiatives, on the foreign experience. The approach is to provide individual support to companies (mostly in nonmonetary forms, such as informational support and consulting; simplifying export procedures and such) (HSE, PWC, Fund for Industrial Development, 2016).

In 2016, a survey of 155 fast-growing medium-size technological companies was conducted to analyze intensity, directions, forms, problems and prospects of their cooperation with higher education institutions (Dezhina, Medovnikov, Rozmirovich, 2017). It showed that during the previous 5 years, 80% of the surveyed companies had collaborated with universities on joint R&D projects. These companies are prepared to invest moderate funds in exploratory research conducted by university specialists (including graduate students) but such contracts are irregular. Overall, "open innovations" are unpopular among these companies, who prefer to implement their own in-house R&D.

Companies were asked about their preferred policy instruments the government should use to facilitate industry-university cooperation. Almost all of the measures mentioned are financial, with 76% believing that the government should fund joint R&D projects. Two other popular instruments are related to the support of personnel or students: 59% of respondents think that the government should co-fund university graduates recently hired by a company and 56% believe that the government should support fellowships for students trained by industry. Only 8% of the surveyed companies consider government support unessential for their plans to interact with universities.

This overview of policy mix shows that the government's push was at the core of most actions, and policy instruments were encouraging all actors to look for budget support. The phenomenon of "budget innovators" became visible from the sides, science and industry alike.

Support of Scientific and Technological Talent

The quality of the workforce is crucial for the effectiveness of science and innovation activities. It also influences the level of demand for science in the economy and society. After the breakup of the Soviet Union, the number of researchers in the country decreased sharply due to severe budgetary cuts and in the absence of other sources of support. In many cases, these were irreversible losses, the consequences of which are felt to this day. There is a dearth of "middle-aged" Russian scientists (40–60 years old) due to emigration or moves to other economic sectors. Young researchers do not stay in scientific research for long and therefore this "generation gap" does not narrow.

In Russian human resources, policy in science and technology was inconsistent. The Government for years used various policy instruments to temporarily support young researchers (usually defined as younger than 39). Various

types of grant competitions (including Presidential) exist, both personal and for research teams, but it does not change the situation dramatically. Moreover, recent surveys show that emigration moods among young scientists are increasing. The scientific brain drain from Russia remains an important problem, as these outflows were never counterbalanced with comparable inflows of scientists from abroad. Even young scientists that work in modern labs consider leaving to go abroad because they do not see clear prospects for their career in Russian science (Dushina, Nikolaenko, Evsikova, 2016). Thus, according to the survey conducted in the institutes of the Siberian branch of the Russian Academy of Sciences, about 40% of young researchers do not see their career prospects in Russia (Aseev, 2016). They also refer to worsening economic conditions for scientific research, such as difficulties in obtaining travel funds to attend international conferences and in importing supplies and equipment, as well as other financial limitations.

The government approach towards attracting and retaining young scientists is based on selective temporary support of scientific projects conducted by young scientists, which is not enough. The young should be looking at prospects of becoming heads of laboratories, getting permanent positions at universities, and other kinds of stability besides short-term grant support. Measures to retain young people in science should be a part of every stage of career development starting from graduate school. Postdoctoral positions are important as an instrument for selecting those who are capable of continuing research careers. A postdoctoral status should be combined with measures to enhance various types of mobility. Then, programs supporting the establishment of new laboratories chaired by young scientists should be widened. At present, only one out of ten young specialists is satisfied with his/her scientific career (Saprykina, 2017).

Instead, the government emphasizes attracting Russian-speaking researchers from abroad. At the end of the first decade of the this century, the Russian government developed initiatives for engineering a "reverse influx" of talent – that is, to attract Russian-speaking scientists from other countries, all with a view to seeing the research diaspora as a potential source capable of better representing Russian science in the global scientific community (Dezhina, 2011). This approach involved, firstly, the creation of a special program attracting members of the Russian scientific diaspora to participate in and/or lead research conducted by Russian universities. Under this program, 160 laboratories have been created with about half of them chaired by the Diaspora scientists. Secondly, the Russian-speaking diaspora was invited to peer-review Russian government projects and programs.

Government attention to Diaspora is practical, on the one hand, and not clearly articulated, on the other. In particular, it is not defined as to which representatives of Diaspora are welcome. As a result, the outcomes are mixed.

Researchers who have the experience of working in Western laboratories brought their expertise in organization and management of research to Russia along with their professional knowledge, which helped to make Russia more visible on an international landscape due to the increased publication record in international peer-reviewed journals. The Russian-speaking diaspora actively promotes scientific cooperation, for example, providing assistance to universities in opening modern labs using federal funds (Russkogovoryashchie uche-

nye, 2015). The survey conducted in 2015 among 150 representatives of the Russian-speaking academic diaspora has shown that those of its members who actively interact with Russia are politically loyal and focused on furthering cooperation (Dezhina, 2015).

At the same time there is anecdotal evidence of "negative selection" of returnees. Scientists, who did not manage to secure good positions abroad or those who work under temporary appointments, are most active in collaborating with Russia and returning on temporary or permanent positions⁴.

Despite the mixed results of working with Diaspora, the government is considering a new project that could be inspired by the successful Chinese experience: to attract 15000 scientists to the country within 5 years (Vishnevetskaya, 2016). It is not clear what stands behind this number and why exactly so many scientists should come. The question also remains whether they should return temporarily or permanently and what policy instruments will be used to retain them in Russia.

Alongside the external movement of researchers, internal, inter-sectoral mobility – that is, scientists moving from the academy to industry, and vice versa – is also important for both knowledge transfer and for creating the demand for science. Russian intersectoral mobility has two characteristics – first, its level or intensity is extremely low (Elsevier, 2011); and second, Russian researchers tend to move within the government sector – from universities to research institutes and vice versa. An exchange of human resources between companies and universities and/or research institutes is insignificant and is not encouraged by any policy measures. Instead, Russian policy towards internal mobility so far has been focused on the issue of regional diversity. This is a slightly misleading direction because economic factors hamper the geographic mobility of researchers (Moscow and St.-Petersburg where the concentration of the top-level labs is the highest are too expensive to live in.)

In countries with developed scientific complexes, intersectoral mobility is promoted and stimulated primarily through measures aimed at linking universities and business (Dezhina, 2014b) In these countries, there has been a gradual transition from the use of direct measures (for instance, targeted grants) to indirect ones related to the regulation of the consulting and entrepreneurial activities of professors, various types of joint initiatives and, *inter alia*, training. Support of intersectoral mobility is of vital importance in the system with weak horizontal linkages. It would also improve the quality of the workforce in the longer-term.

External Factors: Sanctions and Economic Conditions

Economic sanctions, which came in force in 2014, should be separated from domestic economic problems, even though they are interconnected. Economic problems associated with the decline of the ruble also started in 2014 and have led to more expensive imports of scientific equipment and supplies.

 $^{^4\,}$ This was one of the findings which resulted from the personal interviews with Russian researchers working abroad, conducted by the author in 2016–2017.

A 'milestone' countdown for the influence of sanctions began with the adoption of the *Law on undesirable foreign organisations* in May 2015 (Federal Law 129, 2015). Combined with the by then already existing *Law on foreign agents* (Federal Law 121, 2012), it triggered the destruction of the system of non-governmental support of science through not-for-profit foundations and contributed to overall changes in the academic atmosphere in Russia.

According to the Law on undesirable foreign organisations, recognising an organisation as an undesirable foreign one means a ban on its activities. This status is assigned to organisations whose activity poses a threat to the constitutional order, the defence capability or the security of Russia. Often these are organisations which fund non-governmental organisations (NGOs) that are recognised as undesirable, with the latter subsequently being recognised as "foreign agents" (Peremitin, 2015).

Russian science, which had already had a shortage of non-governmental foundations, has seen the forced exodus of organisations which for many years had supported research and training programmes, both in natural and social sciences. The laws resulted in the closure of several American foundations that supported research and education in Russia – such as the Russian branch of the MacArthur Foundation (Muhametshina, 2015), the U.S. Russia Foundation⁵, IREX, and CRDF Global Moscow office.

The MacArthur Foundation and the U.S. Russia Foundation ended up on the same 'stop-list'. As a result, the management of these organizations took the decision in 2015 to terminate their work in Russia. The MacArthur Foundation had launched its programmes in Russia back in 1992 and supported both individual researchers in social sciences and Russian universities (including, for example, the National Research University "Higher School of Economics"). The U.S. Russia Foundation ran the EURECA Program, aimed at the development of technology commercialization skills in Russian universities and the training of U.S. and Russian students.

In 2016, IREX closed its programs in Russia⁶, followed in 2017 by CRDF Global, known for its very successful joint program with the Ministry of Education and Science conducted in 1998–2013 on the establishment of research and educational centers in Russian universities.

The closure of those foundations was a sound decision by their management, because once an organisation is qualified as a "foreign agent", its day-to-day activities become severely impeded: it becomes virtually impossible to work with public institutions, but it is exactly public institutions that constitute the bulk of research and education organisations in Russia. The same situation applies to "undesirable organisations" – receiving grants from them becomes a risky business.

The reason why the foundations that for so many years have supported education and science, and whose activities have repeatedly been praised by Russian authorities, ended up as undesired foreign agents lies in politics and has nothing to do with their support of science.

⁵ https://en.wikipedia.org/wiki/U.S._Russia_Foundation

⁶ http://www.ntv.ru/novosti/1624710/

Then, equipment and reagents, imported mainly from countries that have imposed sanctions, became increasingly scarce, while their costs spiked because of the decline of the rouble exchange rate. Many foreign companies, including European ones, started to curtail the supply of scientific equipment (Gerden, 2015) and materials, fearing that they could be used for military purposes (e.g. components for lasers).

Some universities and research organisations on their own reacted to the external pressure in a somewhat strange manner by reducing the number of business trips to western countries and by monitoring publications in the foreign scientific press not only to identify those entitled to bonuses for being published in toprated journals. Special departments supervising interactions with foreigners are being resurrected at universities and research institutes (Gerden, 2015).

At the same time, it should be underlined that no formal restrictions on the employment of foreign scientists and engineers have been issued by the federal authorities, and official documents and official speeches continued to be filled with calls for internationalisation. It has been repeatedly emphasised that science "does not have borders", and therefore international scientific cooperation should be the basis for development. Thus, the 5-100⁷ Project is aimed at encouraging universities to publish their research papers abroad, participate in international activities and recruit foreign specialists.

Overall, foreign affairs and economic factors turned out to be in conflict with the intentions expressed through science and innovation policy and aimed at the development of international scientific and technological cooperation.

Conclusions

As theoretical studies show, instruments for science and innovation policy are not universal and vary considerably among countries and therefore the "one-size-fits-all" approach is irrelevant. The Russian case is indeed unique and important for understanding the complexity of these policies in developing economies with strong past-dependency.

The analysis of the current state of science and innovation policy in Russia shows that despite the high level of government activities and the introduction of a policy mix, the well-functioning innovation system is still absent. The Russian innovation system is mostly government-supported and regulated. This is one reflection of path-dependency. New policy schemes continually reproduce existing institutions. This is one of the reasons why Russia has a slow pace in innovative development. Business enterprise expenditures on R&D remain stagnant and technological companies are still expecting the government to fund their R&D activities. Business in Russia is not driven by competition and therefore technological innovations are not at the core of companies' development strategies.

⁷ Project 5-100 aims at increasing the competitiveness of Russian universities at the international level. The goal of 5-100 Project is to maximize the competitive position of a group of leading Russian universities in the global research and education market. (From: http://5top100.ru/).

The Russian case confirms theoretical models regarding the functioning of hierarchical systems, in which government dominates and asymmetry of information becomes a persistent problem. Government as a principal tries to find new forms of pursuing the agent to implement tasks that it considers important and necessary for scientific and technological development. At the same time, the Russian government does not pay enough attention to the evaluation of its science and innovation policy outcomes. Adding new instruments is not accompanied by the correction of existing ones because of the lack of monitoring. As a result, the asymmetry of information is not decreasing. In hierarchical systems, there is an illusion that since everything is under control, decision-making may be situation-based. The demand for such evaluations becomes low and, in the end, the probability of wrong decisions increases.

At the same time, Russia follows a general trend in the development of policy instruments. In Russia, as in developed countries elsewhere, soft instruments, such as public-private partnerships, are increasingly used in innovation policy. In the area of business-university interactions, the government has applied several instruments, both financial and communicational, in order to facilitate the development of horizontal linkages. However, due to the vertically-organized innovation system, in which both companies and universities are seeking federal support, these instruments were ineffective in boosting cooperation. The same is confirmed by the data from medium-size technological companies. These companies believe that the government may help with facilitating university-industry cooperation by using financial instruments aimed at easing the burden of funding joint R&D activities and educational training. In a way, the government stimulated the widening of a phenomenon of "budget innovators" by substituting private funding with public.

Quality of human resources is another direction of science and innovation policy to which the governments pays increasing attention. Improvement of qualitative characteristics of the scientific and technological workforce continues to be a challenge for the Russian government. Measures aimed at supporting young scientists and at cooperation with Diaspora are very reasonable; however, these measures should be complemented by indirect instruments stimulating intersectoral mobility and cooperation with industry.

The sanctions contributed to a complexity of the situation in the Russian innovation system by causing signals that contradict official science and innovation policy. While the latter are promoting international cooperation, the reaction of the government to economic sanctions has led to the termination of foreign foundations' activities in Russia and, more generally, to a reduction in foreign funding for Russian scientific and technological development, and to difficulties with the transfer of best practices. The sanctions and the changes in economic conditions made it more difficult for research institutes and universities to implement their international activities. In a way, science and innovation policies, with their appeal to scientists and engineers to cooperate internationally, turned out to be more advanced than economic policy.

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THE IMPACT OF MILITARY R&D ON THE INNOVATIVE DEVELOPMENT OF THE CIVILIAN SECTOR

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Abstract

The main route of economic development on an innovative basis implies the efficient implementation of scientific research and development activities (R&D) in a country. However, if economists generally agree that R&D expenses contribute to the technological development of the economy and improve the sectorial structure of industry in favor of highly technological, value adding industries, then the contradictions between scientific viewpoints in debates on the impact of military R&D expenses are of a more acute character. Even in cases where empirical researches reveal the positive interdependence between military R&D expenses and the most important indicators of economic development, the issues regarding their benefit to broad layers of society always remain disputable. The article summarizes analyses of the impact of military R&D on the economy conducted at different times, and coordinates the conclusions drawn. The main directions of impact of military R&D on the economy are presented: security effect, aggregate demand growth effect, aggregate supply growth effect, positive spillover effect, negative spillover effect, and crowding-out effect. In addition, the dynamics of military R&D in Armenia have been studied and certain judgments evaluating their peculiarities are presented.

Keywords: military R&D; economic growth; security effect; spillover effect; crowding-out effect; external costs.

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Introduction

The main route of economic development on an innovative basis implies the efficient implementation of scientific research and development activities (R&D) in a country, which in its turn depends on the amount and reasonableness of fi-

nancing allocated to these activities; large R&D expenses can be afforded primarily by developed economies. A closed chain is created, which has led to a situation in the global economy where at the initial stages of technological lifecycles the main manufacturers are developed countries. However, the experience of certain countries (Israel (Broude et al., 2013), South Korea (Weitz, 2013), and Singapore (Kuah and Bernard, 2004)) indicates that the efficiency of R&D expenses can enable countries with small open economies to overcome the technological gap with developed economies and identify new backbones for economic development.

Many countries incur military R&D expenses aimed at increasing their military and defense capabilities through technological improvement. Of course, the initial motivation for creating such expenses is not the economic development of the country or the receipt of economic benefits. However, it can lead to both significant positive spillover effects as a result of the application of scientific achievements gained in civilian industries, and also to unforeseen negative spillover effects, most often in the form of external costs, which can become a reason for structural disproportion in the economy, causing formidable problems. There are certain exceptions, but one example of how the negative influence of military R&D expenses on the economy can serve the underproduction of consumer goods was the result of the militarization of the USSR economy, which led to the gradual aggravation of social problems and finally the collapse of the USSR.

Under the conditions of effective development regularities of the market economy, where the confidentiality level of R&D activities carried out in the military sphere has been significantly reduced, the state monopoly in the production of military-industrial products has been partially abolished, the role of private enterprises in the global arms market has become more significant, technology transfer pipelines between different sectors have become more transparent and unobstructed, and the probability of positive spillover effects from government spending allocated to military R&D has been considerably increased. Also, the existence of a clearly developed dual purpose production development strategy can allow for minimizing the probability of unforeseen negative effects. Therefore, importance is attached to assessment of the impact of military R&D expenses on the economy, not only in terms of the identification of spillover effects but also, in the context of their analysis, as an essential factor of the innovative development of the country.

The study of military R&D expenses impact on the innovative development of the economy and particularly on the civilian sector requires analyses in the following areas:

- the study of possible changes in the general productive capacity of the economy as a result of development and the introduction of new technologies,
- the impact of military innovations on the development of civilian industries;
- the assessment of possible differences in the productivity rate conditioned by different funding sources (own, attracted and state);
- the impact of the general conditions of the economic development and the existence of an industrial base on the efficiency of military R&D expenses;
- the comparative assessment of the efficiency of military and civilian R&D financed by the state.

The main *objective* of the article is to coordinate the existing empirical and theoretical researches on the impact of military R&D on the economy, aimed at identifying certain regular occurrences of this impact, as well as to present the dynamics of military R&D in Armenia and the peculiarities of their influence on the economy.

Theoretical and empirical substantiations of the impact of military R&D

The issues related to the impact of scientific and technical progress on the economy and to the management of expenses incurred on R&D became the subject of active discussions in economic research in the middle of the last century, when Solow in his article "A Contribution to the Theory of Economic Growth" suggested viewing knowledge as an independent factor affecting economic growth (Solow, 1956), and in the article "Technical Change and the Aggregate Production Function" published in 1957, he had already presented certain instruments of macroeconomic analysis that treat technological progress as the most important factor of economic growth (Solow, 1957). However, if economists generally agree that R&D expenses contribute to the technological development of the economy, improve the sectorial structure of industry in favor of highly technological, value adding industries, and the main contradictions arise only during analysis of the results of empirical researches conducted for the establishment of these realities, the contradictions between scientific viewpoints in the debates on the impact of military R&D expenses are of more acute character. Even in cases where the empirical researches reveal a positive interdependence between military R&D expenses and the most important indicators of economic development, the issues of their benefit to broad layers of society always remain disputable. However, the fact is that during the second half of the 20th century, as a result of research and development activities carried out for military purposes, revolutionary technological innovations such as satellite communication, jet engines, semi-conductors, nuclear energy, the space industry, the Internet, etc. have been achieved (Naughton, 2016).

With respect to this issue, the main argument-alternative in scientific debates is that innovations and greater results in economic development based thereon can be achieved if the R&D expenses prevail in civilian industry and are made on the initiative of private entrepreneurs pursuing commercial interests. The researches that evidence the truthfulness of this viewpoint are few in number in economic literature due to the limited amount of data on military R&D published by various countries, as well as by the imperfections in the methodological and conceptual approaches to the assessment of spillover effects. One such research (Leonard, 1971) has revealed that in the USA in the 1960s the activity shown in the research sphere (measured by R&D expenses incurred by the companies) had a positive significant correlation with sales volume, assets, net income and other indicators of 16 industrial enterprises, however, when the state R&D expenses were also included, the correlation failed to be significant. After excluding from the research those industrial sectors consuming 5/6 of the state funds, namely, the aircraft industry, rocket engineering and the production of electric appliances, the significant correlation was recovered. This has allowed us to conclude that industrial growth is slowed down as a result of the reallocation of R&D expenses incurred for defense or space industry purposes. Another research, conducted on four industrial sectors in Canada (aerospace, shipbuilding, electronics and chemical industries) and based on 1961–1985 data (Poole and Bernard, 1992) drew the conclusion that military innovations had a significant negative impact on the growth of total factor productivity, especially in the aerospace and electronics industries, and that this negative impact had a weaker impression on the shipbuilding and chemical sectors. Later, during the study on the impact of R&D activities on productivity growth conducted for 16 OECD countries, the authors (Guellec and Pottelsberghe, 2001) identified that state funding in general had a negative effect on R&D activities carried out in the private sector, and only military-related expenses had a significant negative impact on multi-factor productivity levels, whereas the state funding of civilian R&D had a positive impact on innovations and business revival in the private sector.

Similarly, Moretti et al. (2016) used a unique dataset that contains detailed information on defense-related government funded R&D, non-defense related government funded R&D, private R&D, output, employment and salaries in 26 industries in every OECD country over a 23 year period, to look at how government funding R&D impacted on privately performed R&D and its ultimate effect on productivity growth. In this study, defense R&D expenditures are used as an instrumental variable. They found strong evidence of *crowding in*: increases in government funded R&D generated by increases in defense R&D translate into significant increases in privately funded R&D expenditures, with the most reliable estimates of the long run elasticity between 0.2 and 0.5. On average, \$1 of additional public funds for R&D translates into \$2.4 to \$5.9 of extra R&D funded by the private sector. Defense related R&D is responsible for an important portion of private R&D investment in some industries. For example, in the US "aerospace and other transport equipment" industry, defense related R&D amounted to \$36.9bn in 2003 (2016 prices). The study also indicates that cross-country differences in defense R&D might play an important role in determining cross-country differences in overall private sector R&D investment. For example, if Germany increased its defense R&D as a fraction of GDP to the level of the US, privately funded R&D would increase by 44%.

As for the "crowding-out" effect of military R&D in civilian industries arising as a result of financing military R&D, the empirical researches (particularly, Buck et al., (1993)) overall have not managed to identify any clear long-term relationship between military and civilian R&D, therefore they are unable to prove the existence of any crowding-out effect. However, certain researchers (e.g. Hartley, (2006)) believe that in the military sphere the R&D activities have obvious alternative expenses, since often limited high-quality scientific human resources and assets are used on monopolistic conditions that otherwise could be used for civilian research and development activities. In contrast, many studies exist (for example in the USA, Chakrabarti et al., (1993), and Israel's example, Peled, (2001)), which prove that military R&D contributes to the growth of production output in civilian industries, and therefore, also supports economic growth conditioned by technological changes, the basis of which are the licenses for the use of military R&D results.

Some studies have analyzed in more detail the considered relationship from the point of view of the differences between types of countries. Fredericksen and Looney (1985, 1989) found that military spending had a negative influence on growth for "resource constrained" developing countries, but positive for "resource unconstrained" and that this impact is a more positive for countries that have an indigenous arms industry. The link between the arms trade, military spending and growth is also examined in the study by Yakovlev (2007), which revealed a negative impact of military expenditure on growth across a sample of developed and developing countries, but this negative impact reduced the more the country was a net exporter of arms.

Morales-Ramos considers the existence of such contradictory conclusions natural (Morales-Ramos, 2002), being of the opinion that the efficiency of military R&D and the demonstration of their impact vary from country to country, which considerably complicates the identification of general regularities. The analysis conducted for Great Britain allowed him to conclude that the indirect crowding-out effects, in substance, did not exceed the direct positive spillover effects, so it could be assumed that the net impact of military R&D expenses on economic growth is positive.

The influence of military R&D expenses on the economy definitely cannot be limited to just crowding-out or side effects, it is quite important to take into account such factors as a high level of national security, which increases the utility of households (security effect) and the possibility of the development of generalpurpose technologies by means of military R&D, which in economic literature is known as a spin-off effect. In this context, it can be stated that the impact of R&D on economic growth implies substantial uncertainties. Particularly, if the reduction in expenses for military R&D occurs when their starting level is considerably high, it would have a positive impact on economic growth, whereas in the case of a low starting level in military R&D expenses, the impact would be negative. In fact, such a level of military R&D expenses exists, which maximizes economic growth due to the positive spillover effect and the spin-off effect, and at the same time, there is such a level of military R&D expenses that maximizes the welfare function of households owing to the security effect. The difference between these two critical levels is almost always conditional upon the security effect: if it is low, the level of R&D maximizing the welfare of households will be lower than the level of R&D maximizing economic growth (Chu and Lai, 2009).

Investigation of the causal relationship between military spending and social welfare expenditures is also very important because there is a trade-off between military expenditures and other major government spending. An empirical study (Lin et al., 2015) based on the panel data of 29 OECD countries from 1988 to 2005, revealed a positive trade-off between military spending and two types of social welfare expenditures (i.e. education and health spending). The authors found that the reasons may be that OECD countries are more supportive of social welfare programs; therefore, when military spending is increased (e.g. military personnel and conscripts), the government may raise health and education spending as well.

A particularly interesting study is the comparatively new Schmid (2017) analysis using negative binominal and zero-inflated negative binominal regression

models for assessing the impact of the rate at which defense-funded knowledge diffuses into subsequent innovations on the overall innovation system. The most remarkable finding of study is that there is no statistically significant difference in the rates at which military and civilian technologies diffuse. This finding contradicts the prevailing scientific view that the modern defense sector features restrict the diffusion of technologies developed therein.

Summarizing the results of the existing researches and conclusions drawn thereon, the following main directions of impact of military R&D on the innovative development of the economy shall be distinguished:

- Security effect, which on the one hand ensures the existence of a secure and reliable environment for economic activity in the country, thus contributing to the growth of domestic and foreign investments and business revival, and on the other hand, implies the growth of the public utility function, since one of the key public benefits included therein, namely national security and defense ability, is improved significantly in quality owing to technological progress.
- Aggregate demand growth effect, the impact mechanism of which is indirectly linked to a change in the public welfare function: when it grows, the consumer expenses of households are increased.
- Aggregate supply growth effect, which is possible to achieve due to productivity growth and the reduction of production costs in the economy as a result of technological progress.
- Positive spillover effect, when military technologies are transferred to other industry sectors and contribute to general technological progress in the economy.
 Three options demonstrating positive externalities can be distinguished:
 - Spin-off effect, when technologies developed as a result of military R&D, having met as a priority the military and defense requirements, are later transferred (through the sale of patents and licenses) to civilian industries;
 - Spin-in effect, when the country's R&D expenses are directed mainly to the development of civilian technologies by private companies, however these companies also fulfil state orders for military and defense needs or on their own initiative (although based on a license issued by the government) produce military products, the realization of which is arranged on commercial terms;
 - Spin-on effect, in cases whereby military R&D make it possible to also develop general-purpose technologies, so that enterprises producing military products are always able to switch to the production of civilian products (conversion).
- Crowding-out effect, the impact of which is negative due to the attraction
 of high-quality human resources and assets from civilian industries, resulting
 in worsening (or in losing the possibility to improve) productivity in those
 industries and other economic indicators.
- Negative spillover effect, which is demonstrated by excess resource expenses since under the conditions of state-guaranteed sales of manufactured products and a considerable amount of state funding, the main burden is carried by society, which does not always act as a consumer of the products produced by the R&D activities. This issue is more common in those countries which,

being in no danger of taking part themselves in a military emergency, carry out significant R&D for the production of advanced weapons, which are mainly exported.

It is obvious that analysis of the impact of military R&D in each of the directions stated above is impossible, purely due to the fact that a number of key factors exist that are not subject to quantitative measurement. Such factors include, for example, society's perception of defense or the moral and psychological position of society with respect to the production of weapons, which can often be decisive in the decision-making process of economic entities at the micro level. In addition, it is not always possible to distinguish between the boundaries of these effects and the possibilities of their multiplicative impact. Therefore, the analytical models always assume a considerable degree of scientific abstraction and consequently imply contradictions in their conclusions.

Dynamics of military R&D expenses in Armenia and peculiarities of their impact on the economy

As a rule, the development of mechanisms for the growth of the military industry and more effective use of government spending allocated to defense is typical, especially of those countries which are in a certain critical situation (war, frozen conflict, military embargo, blockade, etc.). Such examples are numerous: Israel (Schein, 2017), Turkey (Bağcı & Kurç, 2016), Brazil, and Egypt (Brauer, 2002) on which an arms import embargo was imposed for various reasons and which began to develop domestic arms production. Armenia is beyond the scope of this pattern. Being in a frozen conflict zone and also experiencing a bilateral blockade by neighboring Azerbaijan and Turkey, Armenia, in fact, has not undertaken any significant measures for the development of its military industry forced by national security requirements. In particular, necessary attention has not been focused on military R&D and its potential benefits. First, it should be stated that a breakdown of the amount of financing for research and development activities within the total defense expenses, under the laws on the RA state budget, have been available since 2008 (relevant statistical data is presented in Table).

Table

Dynamics of financing of R&D in the military sphere
in 2008–2016, in bln. AMD

Expenses	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total defense expenses	125.4	149.6	135.7	146.2	154.5	182.7	194.1	199.0	207.3
Research and development activities in the military sphere	0.8	1.0	1.0	1.1	1.2	1.4	1.5	1.6	1.6
Share in total defense expenses, %	0.6	0.6	0.7	0.8	0.8	0.7	0.8	0.8	0.8

Source: Laws on the RA state budget, 2008–2016 http://www.parliament.am/legislation.php?sel=alpha<ype= 3&lang=arm

Prior to that, funds allocated for defense were presented in two subgroups in the state budget – "military needs" and "other defense needs". Given the fact that in 1995–2007 the expenses of the second subgroup amounted to 5%-7% of total defense expenses, and following the dynamics of the financing of R&D in subsequent years, which fluctuated within the range of 0.6%-0.8% of the total defense expenses, we can insist on the incompatibility of the 1995–2016 data. At the same time, the lack of quarterly or semi-annual data in the available statistical information makes the results of econometric statistical researches unreliable. Besides, in cases whereby we decide to rely on the research insisting that military R&D expenses that are low by an absolute indicator have an almost zero impact on the overall development of economy (Pieroni, 2009), the examination of the realities of the impact of military R&D expenses on the economy of Armenia is significantly complicated. Therefore, we have tried to build up our estimates primarily based on logical judgments.

Thus, any negative impact of military R&D on the Armenian economy can be excluded due to the existence of significant unrealized production capabilities and free manufacturing resources in the economy. Under such conditions, there is no sufficiently large real sector in order to demonstrate any crowding-out effect. There are few civilian research activities carried out in the country (the state funding of which makes up only about 0.25% of GDP) with a rather low level of commercialization of the results. Therefore, military R&D, the prioritized necessity of which is dictated by the urgent solution of the security issues of the country, can serve as a successful precondition for technological progress in the country, by including other technology-based industry sectors (chemicals, machinery engineering, information technology, etc.) in its technological processes.

At the same time, ensuring the possible security effect is of high importance for Armenia in current geopolitical conditions. Based on various estimates, as a result of the economic blockade, Armenia loses 30%–40% of potential direct foreign investment, and what is more problematic, local investors also avoid investing in the real sector, often preferring to invest in other countries (Avetisyan et al., 2015). Sure enough, these circumstances are to some extent conditioned by the security issues of the country.

Perhaps the only direction of any negative impact of military R&D expenses on the economy of Armenia is the growth of the additional tax burden for society, since ultimately the state budget financing is provided at the expense of the taxpayers. A heavier tax burden leads to a reduced net income for individuals and private corporations, leaving less money for saving and for private investment. Regardless of the financing measure, increased defense spending is likely to limit the amount of funds available for private investment, which is critical, particularly in developing countries due to their shortage of capital resources (Uk Heo, Min Ye, 2016). Although the situation is quite different if the country has its indigenous defense industry. Thus, by investing in the defense industry, such as the purchase of military equipment or R&D expenditure, the government effectively uses taxpayers' money, since a significant part of this quickly returns to the state budget as taxes. Studies have shown that of the 100 currency units allocated for defense, 43 units are returned to the budget by tax payments (Lavrinov, 2007).

However, if we take into account all the possible direct and indirect benefits of efficient R&D expenses in the long-term, for example, the domestic production of arms and ammunition at the initial stage of their technological lifecycle, and opportunities for the manufacture of innovative civilian products owing to technology transfer, such use of state funding appears more acceptable than the expenses incurred for the import of arms which are at the final stage of their technological lifecycle.

5. Conclusions

The impact on the economy of R&D carried out for defense and military purposes is multi-vector, and these impact vectors often imply adverse effects on the overall economy and its individual phenomena, and in some cases these vectors play the role of accelerator to each other. This significantly complicates the task of assessing the impact on the economy and leads to contradictory conclusions since analytical models usually involve a considerable degree of scientific abstraction. However, researches conducted in this area have allowed for distinguishing some regularities in interconnection between military R&D and economic growth. These are:

- security effect;
- aggregate demand growth effect;
- aggregate supply growth effect;
- positive spillover effect (including spin-off, spin-in and spin-on effects);
- crowding-out effect,
- negative spillover effect.

The peculiarities of demonstration of the above stated effects in the economy of Armenia are linked to significant complications due to the limited amount of information available and its incompatibility, as well as considerably lower absolute indicators of military R&D expenses, which pre-suppose that these expenses could not have any material impact on economic indicators. However, based on certain estimative judgments we have concluded that under the present conditions of economic development in Armenia the possibility of any negative impact of military R&D can be excluded, except for perhaps the additional tax burden borne by society. This burden, however, appears to be much lower if we consider that as a potential result of these activities, locally produced arms and ammunition can replace the import of arms which are at the final stage of their technological lifecycle.

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INTERGOVERNMENTAL RELATIONS IN RUSSIA: STILL A PENDULUM?¹

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Abstract

This paper studies political, economic and administrative aspects of intergovernmental relations in Russia since the beginning of the 1990s. We distinguish three stages in the development of Russian federalism, which differ from previous classifications available in the literature – the pendulum of (de)centralization (1991–2003), critical crossroad with the radical shift back to the centralization path (2003–2005), and the era of further pervasive centralization and transformation to the de facto unitary state (2005-present). At the latest (third) stage, we identify two mechanisms of centralization – linear and non-linear, which differ in their design but similarly contribute to the general trend, and provide several supporting examples of both of them.

Keywords: federalism, intergovernmental relations, political economy, Russian regions.

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Introduction

Federalism, which in the widest sense means the assignment of powers, responsibilities and financial resources between different levels of government

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in a federal state, and intergovernmental relations are equally popular research topics for experts in public administration, economists and political scientists. Nevertheless, researchers, who consider the economic and fiscal foundations of federalism in theoretical or empirical studies², often ignore the political and administrative aspects of this phenomenon. Conversely, political scientists prefer to study federalism as a purely political concept³, without going into the details of the assignment of financial resources between different levels of government and respective administrative procedures. Still, the task of combining the politics and economics of intergovernmental fiscal relations and studying the political economy of federalism is becoming highly relevant nowadays.

Russian federalism has been the subject of numerous articles by academic researchers and experts from international organizations since the collapse of the USSR and the beginning of spontaneous political, administrative and economic decentralization. Early steps to reform fiscal federalism and the stage of formalizing intergovernmental relations were considered by Zhuravskaya (2000, 2010), Lavrov, Litwack, Sutherland (2001), Alexeev and Kurlyandskaya (2003), Pascal (2003), Lavrov and Klimanov (2004), Shleifer (2005), Martinez-Vazquez, Timofeev and Boex (2006), and Freinkman and Plekhanov (2009). A complete monograph on the economic aspects of intergovernmental fiscal relations in Russia belongs to the team of authors of the World Bank (De Silva et al., 2009). The relationship between intergovernmental transfers and electoral behavior in Russian regions was considered in the articles of Treisman (1996), Popov (2004), Jarocinska (2010), and Yakovlev, Marques and Nazrullaeva (2016). The political aspects of Russian federalism were the subject of articles by Golosov (2004), Slider (2005), Stoner-Weiss (2005), Gel'man (2006), and Gel'man & Ryzhenkov (2011).

In this study, we examine the political economy of intergovernmental fiscal relations in Russia since the early 1990s, with a particular emphasis on the latest stage of federalism development. We also try to answer the question on whether the pendulum of (de)centralization is still moving and, if so, whether the political and economic centralization trends of Russian federalism coincide.

We argue that the pendulum of Russian federalism (from Soviet-style centralization to decentralization in the early and mid-1990s and the recentralization of the early 2000s) transformed into a new state. In our viewpoint, a long and steady period of centralization has begun since the beginning of the 2000s without a return to decentralization.

We identify two different types of centralization mechanisms in this latest period – linear and non-linear (stepwise). The latter can take various forms, but its long-term trend is still linear.

² Tiebout (1956), Musgrave (1959), and Oates (1972) developed the modern theory of fiscal federalism. The extensive review of early studies can be found in Oates (1999). Weingast (2009, 2014) and Inman and Rubinfeld (2014) summarize the second-generation theory of fiscal federalism, as well as the newest theoretical and empirical studies on this topic.

³ The political science of federalism is the main subject of the classic monographs of Riker (1964) and Elazar (1987). The modern approach to the politics of federalism can be found in the works of Bednar (2009, 2011, and 2014).

Intergovernmental relations in Russia at the stage of fiscal federalism formation (1991 – early 2000s)

With the collapse of the Soviet Union and the beginning of the formation of a new Russian statehood, macroeconomic instability and low tax collection have become one of the biggest problems of the federal government. In order to deal with the revenue gap, which was quite high in comparison with other transition economies, the federal government significantly reduced overall public expenditure and transferred a number of expenditure responsibilities to subnational governments. The share of regional and local (municipal) government spending in the consolidated budget of the Russian Federation increased dramatically from 23.7% in 1992 to 43.8% in 1994 (23.4% – expenditure of regional governments, 20.4% – expenditure of local governments) (De Silva, Kurlyandskaya, 2006, p. 8). Such a spontaneous expenditure decentralization required the additional revenue sources of subnational governments. In order to achieve a political compromise, the federal government implemented the system of shared taxes – regional governments received a particular, usually quite high, share of federal taxes (personal income tax, corporate profit tax, VAT, mineral resource taxes).

Political and administrative aspects

On March 31, 1992, the federal government and the regions (all except Tatarstan and Chechnya) signed the Federal Treaty on the division of powers and responsibilities. It consisted of three separate agreements between the federal government and the three types of region republic; krai, oblast and federal citie; autonomous oblast and autonomous district). Several strong regions started negotiating towards bilateral agreements with the federal center that could provide them with enhanced powers and other favorable political and economic conditions (De Silva et al., 2009).

The Constitution of the Russian Federation of December 12, 1993, adopted as a result of a national referendum, enshrined a symmetrical federation. According to Article 5, "in relations with federal bodies of state authority, all the subjects of the Russian Federation shall be equal among themselves." Nevertheless, the Constitution also "recognized the possibility of an asymmetric configuration of intergovernmental relations" (Martinez-Vazquez, Timofeev, Boex, 2006, p. 6) in that its Article 11 allowed not only the Constitution and the Federal Treaty but also *other treaties* to fix the division of powers among the Russian Federation and the regions. The second section of the Constitution declared its supremacy over the norms of the Federal Treaty. Hence, since then Russia has *de-jure* become a constitutional, not a contractual, federation.

The regions and the federal government used these *other treaties* extensively throughout the 1990s. Until 1995, the federal center signed bilateral treaties almost entirely with ethnic republics (e.g., Tatarstan, Bashkortostan, Kabardino-Balkar Republic) in order to assign additional powers to them and even discuss issues regarding the mutual delegation of authority. After 1995, it started to extend this practice to other types of region (Martinez-Vazquez, Boex, 2001). By 1998, forty-six regions had a treaty with the federal government, which contributed to the increased asymmetry both among the regions (in favor of ethnic republics and

wealthy regions) and between the federal center and subnational governments. After 2000, the attitude of the federal government towards treaties changed dramatically. Federal Law 119 of June 24, 1999, established the priority of the federal laws over the treaties. In 2001–2002, the federal government and the regions signed 28 bilateral or tripartite acts on the termination of treaties. In the latest stage of Russian federalism development, the practice of individual delimitation of powers using treaties came to nothing, and only a few regions, mainly ethnic republics and donor regions, have had similar agreements in recent years.

Table 1
Intergovernmental relations in Russia: main stages since 1991

Stage	Pendulum of (de)centralization		
Years	1991-2003	2003–2005	2005-present
Political aspects	 Spontaneous political decentralization in the early 1990s, Adoption of the Federal Treaty, the Constitution and bilateral federal-regional treaties, By 1997, all regional governors elected by popular vote, Federation Council comprised of regional governors and heads of regional legislatures (until 2000), Establishment of seven federal districts 	 Abolition of regional governors' elections in 2004 and establishment of additional rights of the President to dismiss governors and regional legislatures, Change in the procedure of State Duma elections that undermined the political power of regions, De-facto nationalization of local self-government; Mergers of regions 	- Return of regional governors' elections, but with significant restrictions and filters, - Establishment of a half-party system at all levels of government, - Crowding out of subnational economic incentives by political incentives, - Loss of independence of regions and municipalities, and intimidation policies against regional and local officials
Economic	 Spontaneous economic decentralization in 1992–1994, Introduction of numerous regional and local taxes that contradicted the federal legislation, Formalization and unification of tax and budget systems since the mid-1990s, Start of fiscal recentralization after the crisis of 1998 	 Adoption of and significant amendments to federal laws regulating powers and responsibilities of subnational governments, Radical decrease in tax autonomy of regions and municipalities 	 Further redistribution of taxes in favor of the federal center, Strengthening the dependence of regions and municipalities on transfers, Quasi-decentralization of (mandatory) expenditure responsibilities
Results	The pendulum was moving from Soviet centralization to chaotic decentralization of the early 1990s and back to recentralization at the beginning of 2000s	The paradigm of intergovernmental relations and its administrative mechanisms overcame a critical shift: only one "veto player" stayed in the game – the federal government	New state of the system of intergovernmental relations with unstable centralized equilibrium and the continuing search for the optimal state

A spontaneous transfer of institutional, administrative, and economic resources to the regions occurred in 1991–1998. As noted by Gel'man (2006), the decentralization of the 1990s was anything but a consequence of the conscious policy of the federal center. The factors that influenced this spontaneous decentralization included the ethnic model of federalism created in the Soviet period, the uneven socio-economic development of the territories, the outburst of ethnopolitical conflicts; weakening of the administrative capacity of the federal center (Stoner-Weiss, 1999; Ross, 2002). As a result, the federal government lost its control over regional political processes, and regional elites, especially from wealthy and ethnic regions, became a "veto group" in intergovernmental relations.

A prominent example of political decentralization was the establishment of regional elections. In 1991, citizens elected the heads of regions (governor, mayors, and presidents) in Moscow, St. Petersburg and six ethnic republics, while Chechnya held the unrecognized elections of their president. Federal Law 192 of December 5, 1995, required the regions to organize the governors' elections by the end of 1996 (in those regions, where governors were still not elected by popular vote), which finally strengthened regional political independence. Every region had complied with this requirement by 1997. Since 1996, regions have held governors' elections 143 times. During the period from 1991 to 2001, only in 10 of the 186 cases did the heads of regions not take part in the elections. In 118 cases, the former governor or a member of his team won the election. Of the 58 cases where the incumbent or his protégé lost the election, in nine cases they even failed to come in second place (Enikolopov et al., 2002, p. 8). Despite the possible arguments about state capture by regional (business) elites and nontransparent electoral procedures, we can argue that competitive elections took place in the majority of regions throughout the 1990s.

A robust and powerful Federation Council, an upper chamber of the Federal Assembly (Russian parliament), was another example of the spontaneous decentralization of the early and mid-1990s. With the adoption of Federal Law 192, only heads of the regional executive and legislative bodies (governors and speakers of regional parliaments) could become members of the Council. On the one hand, this raised the status of the parliament; on the other hand, it was a weakness since new members were preoccupied in their regions and could not regularly attend Council sessions (Ross, 2010). In the 1990s, the Federation Council often voted in favour of overcoming the presidential veto and acted as a "filter" for the laws adopted by the State Duma. However, it had become weaker by the end of the 1990s and failed to use its right of legislative initiative (see Ross (2010) for an extensive discussion).

A significant decrease in the role of the Federation Council followed the adoption of Federal Law 113 on August 5, 2000. Instead of the heads of the regional executive and legislative bodies, the regions had to delegate new permanent members of the Council. It turned out that these new delegates often had little to do with the region they represented. As noted by Ross (2010), 75–80% of new the senators' appointments were recommended by the presidential administration; 45% of them were Moscow-based and did not spend much time in the regions that appointed them.

The Presidential Decree 849 issued on May 13, 2000, introduced seven federal districts (*federalnyye okruga*) that further undermined the status of the governor and introduced a new element of control into intergovernmental relations.

Economic aspects

Federal Law 2118-1 of December 27, 1991, determined which taxes were collected at all levels of the budget system and their distribution among levels of the government. In 1994, all of the regions received equal powers regarding taxation⁴, they were assigned equal sharing rates from federal taxes, but these sharing arrangements changed annually.

According to the Presidential Decree 2268 of December 22, 1993, the regional and local authorities were entitled to impose taxes not included in Federal Law 2118-1. As a result, the approximate number of regional and local taxes reached 200 by 1996 (Lavrov, 1999, p. 38). New taxes and fees aimed at subsidizing certain sectors of the economy emerged in many regions. Charges for the import of goods to and export from the region became widespread. This practice was especially distinctive in the case of alcohol products. The Republic of Mordovia introduced a 10% sales tax on all excisable goods imported into the region. Oryol and Sverdlovsk oblasts set fees for the import of food products. Such activities of regional governments were contrary to Article 74 of the Constitution, which prohibits the introduction of any restrictions on the movement of goods and services within the country.

Bilateral treaties between the federal government and the regions signed in 1994–1997 also contained the fiscal policy agreements and special tax privileges for several ethnic republics and the better-off regions. For instance, the republics of Tatarstan and Bashkortostan, and St. Petersburg could keep up to 100% of some federal taxes collected in the region; the Udmurt Republic, Khabarovsk Krai, and Irkutsk oblast had individual agreements over intergovernmental transfers; other regions could receive compensation for federal mandates, use federal taxes to cover federal expenditures in the region, have agreements over tax-sharing rates, and get other fiscal powers (OECD, 2000).

Insufficient clarity in the division of tax revenues between the federal government, regions, and municipalities in the 1990s was present because revenues from regulated (shared) taxes accounted for about 30% of regional budget revenues and 40% of local revenues. Tax rates and sharing rules for these taxes (which included VAT, personal income tax, excises, mineral tax, etc.) were set annually by the higher level of government (OECD, 2000). The distribution of tax revenues between the municipalities was entirely at the discretion of the regional governments. Only a few regions (including the Nizhny Novgorod, Novgorod, and Novosibirsk Oblasts) signed (and fulfilled) long-term agreements on the sharing of revenues with local governments (Enikolopov et al., 2002). The fiscal incentives of municipalities were arguably quite weak in the 1990s due to the lack of predictability of tax revenues and no guarantee that they would increase in the case of local efforts to raise the tax potential (Zhuravskaya, 2000; Alexeev, Kurlyandskaya, 2003; critical discussion – Shishkin, 2013).

 $^{^{\}scriptscriptstyle 4}~$ By the Federal Law 9 "On the Federal Budget for 1994" of 1.07.1994

The Presidential Decree 1214 of August 18, 1996, ordered the regional authorities to abolish taxes and fees that are not provided for in federal legislation from January 1, 1997. The Komi Republic, the Altai Krai, Vladimir, Volgograd and Irkutsk Oblasts attempted to challenge this decision in the Constitutional Court of the Russian Federation, but without success (Lavrov, 1999). Only with the adoption of the Tax Code (Federal Laws 146 and 117 of 31.07.1998 and 05.08.2000), and the Budget Code (Federal Laws 145 of 31.07.1998) and subsequent changes in the legislation, a closed list of federal, regional and local taxes and fees was established, which fixed the distribution of taxes between different levels of government (see Table 2).

Table 2 Federal, regional and local taxes in Russia in 1998 and 2017

Federal taxes	Regional taxes	Local taxes
Value added tax ⁵	Enterprise property tax	Land tax
Excises	Transport tax	Personal property tax
Enterprise profit tax	Gambling tax	Advertising tax
Personal income tax	Sales tax	Inheritance tax
Customs duties	Road tax	Local license fees
Mineral tax	Regional license fees	Trade fee for Moscow and St. Petersburg
Water tax	Tax on housing maintenance	
Fee for the right to use objects of fauna and water biological resources		
Tax on the use of subsoil		
The tax on the reproduction of the raw materials base		
Tax on additional income from hydrocarbon extraction		
Contributions to state off-budget funds		
Forest tax		
Tax on capital gains		
Environmental tax		
Federal license fees		

Source: Lavrov (1999) and Tax Code of the Russian Federation (ed. 2017)

From 1998 to 2005, an active redistribution of revenues between the levels of the budget system took place (see Table 3). In 1999, the federal government's share of personal income tax collections increased from 0% to 24%, which can

⁵ Taxes highlighted in bold are being currently collected at respective levels of government.

be explained by the severe economic crisis of 1998 and the necessity to compensate the dramatic fall of federal budget revenues. After 2001, this share fell to 0% again, and the personal income tax accumulated in the consolidated regional budgets. The distribution of the enterprise profit tax started to change in 1999, and from then the share of regions grew steadily. In 2001 the tax rate attributed to the federal budget was 11%, regional budgets - 19%, and municipal budgets - 5%. In 2002, the maximum profit tax rate fell from 35% to 24%, and the distribution among different levels of government changed accordingly (federal budget - 7.5%, regional budgets - 14.5%, and municipal budgets - 2%). At the same time, the ability of the regions to change the rate of this tax was significantly limited (it could be reduced by no more than 4%). The share of value added tax (VAT), which went to the federal budget, increased from 75% before 1998 to 85% in 1999-2000 and 100% after 2001. Centralization of natural resource rents started in 2002 when the federal share of the tax on the production of hydrocarbons increased from 40% to 80% (later on, this tendency continued with the newly introduced mineral tax – *NDPI*). As a result of these changes, the tax revenues of the "average" region decreased by 21% (De Silva & Kurlyandskaya, 2006).

Overall, regions and municipalities became more dependent on the federal government after 1998, and their share of revenues in the consolidated budget of the Russian Federation decreased from 57% in 1998 to 46% in 2000 and 38% in 2002–2003 (see Figure 2). We believe that this was the beginning of the linear centralization of tax revenues in the federal budget. Another tendency during this time was a decrease in the diversification of regional tax revenues due to the transfer of all receipts from VAT to the federal level and the abolition of the tax on housing maintenance as well as some other taxes (see Table 2). Since the early 2000s, two major taxes (personal income tax, enterprise profit tax), for which the federal center determined tax rates and bases, have comprised almost 70% of regional budgets.

In the 1990s, not only the federal government experienced budget deficits, but also many regions did, thus making the instrument of intergovernmental fiscal transfers vital for the whole budget system. The federal government provided unconditional transfers (*dotacii*) from the Federal Fund for Financial Support of Regions established in 1994 to cover the gap between current expenditures and revenues of regional budgets (gap-filling transfers). Initially, there was no formula-based allocation of these transfers⁶, which did not stimulate regions to develop their tax potential. The practice of providing additional transfers called *mutual settlements*, an umbrella category that the federal government used to finance regional investment programs, to compensate regional governments for carrying out federal government mandates⁷, or to provide emergency aid (De Silva et al., 2009), became widespread. During the mid-1990s, mutual settlements were the largest type of intergovernmental transfers to regions and municipalities – their

⁶ Formula-based allocation that used fiscal capacity index and the index of expenditure needs was introduced in 2001, and then changed in 2005.

⁷ The inability of the federal government to compensate for all such mandates created the famous problem of "unfunded mandates" that was critical in the mid-late 1990s and has become relevant again nowadays.

share in total transfers was 35–40% in 1995–1998. As the OECD research team points out, "such settlements usually represent the result of bilateral negotiations and political lobbying" (OECD, 2000, p. 135). The federal government stopped using mutual settlements only after 2001, when the current system of transfers that consists of unconditional transfers, subsidies, subventions, and "other transfers" emerged. In general, the share of transfers in subnational budget revenues fluctuated a lot during the 1990s (around approximately 15% – see Figure 4). It rose during the 1998 crisis as well as after the centralization of VAT in 2001, but, on average, was much lower that at the latest stages of fiscal federalism development. Notably, the dependence of local governments on the region have been higher than the dependence of the region on the federal government almost the entire time since the early 1990s. In the late 1990s the share of transfers in local revenues was around 30% (OECD, 2000).

Results of this stage

The actions of the federal government during the transition period were, in most cases, a reaction to the centrifugal tendencies and turbulence of the political situation. Ultimately, it was reflected in spontaneous political decentralization in the early 1990s and the emergence of influential regional centers with popularly elected governors. After 2000, with the abolition of many federal-regional treaties, changes in the structure of the Federation Council, and the creation of federal districts, this tendency reversed.

Intergovernmental fiscal relations between the federal center and the regions fluctuated a lot during this period⁸: from the spontaneous decentralization of the early 1990s through to the formalization of the institutional environment of the late 1990s to the return of centralization tendencies, which reached their culmination at the critical stage of 2003–2005. Hence, we can consider this period as a synchronous pendulum motion of political and economic (de)centralization, which transformed into a new state at the latest stage of fiscal federalism development.

The critical crossroad in the development of intergovernmental relations – transition to the centralized state (2003–2005)

We believe that the critical turning point in the development of modern Russian federalism was the period from 2003 to 2005. Before 2003, according to some researchers (Shleifer, 2005, Zhuravskaya, 2007), it was still possible to reform federalism in the Chinese style (by combining political centralization with significant economic decentralization and extensive fiscal autonomy of subnational authorities), but after 2005 it became evident that a robust and stable trend towards political and economic centralization had started.

⁸ Some researchers referred to this period as an example of "state-corroding federalism" (Cai, Treisman, 2004) since the powerful regional elites protected local firms from paying federal taxes, thus reducing overall welfare. See the review of empirical literature on state capture and state-corroding federalism in Russia in Zhuravskaya (2010).

Table 3

Sharing rates for the main taxes between different levels of government in Russia (1994–2017), %

	2017	3	17	0	0	85	15	100	0	0	100	0	0	0	100	0	
, ,	2011	2	18	0	0	70	30	100	0	0	100	0	0	0	100	0	
,	2005	6,5	17,5	0	0	70	30	100	0	0	100 - g 95 - o	0 - g 5 - o	0	0	100	0	
	2004	7,5	14,5	2	0	50	50	100	0	0	100 – g 95 – o	0 - g = 5 - 0	0	0	50	50	
	2003	7,5	14,5	2	0	50	50	100	0	0	100 – g 86 – o	0 - g = 14 - 0	0	0	50	50	
2	2002	7,5	14,5	2	0	50	50	100	0	0	08	20	0	0	50	50	
	2001	11	19	5	П	8	66	100	0	0	40	30	30	0	50	50	
	2000	11	Ç	61	16	0.4	40	85	<u>.</u>	CI	40	30	30	0	50	50	
	1999	11	10	19	24	75	9/	85		CI	40	30	30	0	50	50	
	1998	13	,	77	0	001	100	75		C7	40	30	30	0	50	50	
	1996	13	5	77	10	8	06	75	r C	C 7	40	30	30	0	50	50	
	1994	13	ć	77	0	100	100	75	Ċ	C7	ı	I	1	0	50	50	
,		Щ	R	J	Щ	R	T	Щ	2	П	Щ	R	П	ഥ	~	Г	
	Tax	Enterprise profit tax1			Personal income tax ²			Value added tax			Mineral tax³			Enterprise property tax			

1 for enterprise profit tax, tax rates are shown (their sum gives a marginal tax rate of this tax)

² in the early 2000s, regional governments could establish additional sharing rates for the personal income tax with municipalities as an alternative to unconditional transfers – therefore, actual sharing rates differed from the 50/50 rule

³ before 2003 – tax on the production of hydrocarbons (oil & gas), after 2003 – separate types of the mineral tax for oil and gas

Source: De Silva, Kurlyandskaya (2006), Freinkman, Plekhanov (2009), Tax and Budget Codes of the Russian Federation

The governing ideology of the federal government began to dominate over utilitarian and self-governing ideologies (see Gel'man (2006) for a discussion of these ideologies) as a result of transformations that occurred in 2003–2005. Some researchers adhere to a slightly different periodization of this stage in the development of intergovernmental fiscal relations – Gel'man (2006) believes that centralization trends had already begun in 1998 and reached a peak in 2005. Ross (2010) notes that the critical point was during the period of "2003–2006, when the number of laws was adopted that have severely weakened the powers and competencies of the regions, and transformed Russia into a quasi-unitary state". World Bank experts suggest that the period of fiscal recentralization started in 2005, although some centralizing tendencies were present from the beginning of the 2000s onwards (De Silva et al., 2009).

This section presents the most important aspects of centralization undertaken by the federal government between 2003 and 2005, which the authors of this article consider to be the key to the subsequent development of intergovernmental fiscal relations in Russia.

Political and administrative aspects

In 2003, a key federal law regulating the powers of local self-government (Federal Law 1319) was adopted, while the federal law regulating the powers of Russian regions on subjects of joint competence (Federal Law 18410) was significantly amended. Federal Law 131 was adopted despite protests from representatives of municipalities and left-wing parties of the State Duma; in fact, it meant the nationalization of local self-government (Gel'man, 2006). This law presupposed the division of municipalities into several levels, mandatory inter-municipal equalization, shifting the responsibility for solving issues of local importance to municipalities without providing them with the necessary resources to implement the powers. The adoption of this law and its entry into force in 2006 was the first step towards reducing the political and fiscal autonomy of municipalities.

In 2004, two additional federal laws were adopted that redistributed a considerable number of powers between the levels of government (Federal Law 122 of 22.08.2004 and Federal Law 159 of 11.12.2004). These laws transferred several powers from the joint jurisdiction of the federal government and the regions to the sole competence of the federal center (Ross, 2010). In particular, they reduced the powers of regions in the fields of natural resources, timber, and water.

In addition, in 2004, under the pretext of the need to strengthen the power vertical in the fight against terrorism, direct regional governors' elections were abolished, and a new procedure for their appointment was introduced (Federal Law 159 of 11.12.2004, Presidential Decree 1603 of 27.12.2004). This measure contributed to the gradual replacement of many regional leaders elected in the early 1990s by the new executives loyal to the federal center and often having

 $^{^9~}$ Federal Law 131 "On the General Principles of Organizing Local Self-Government in the Russian Federation" of 06.10.2003

¹⁰ Federal Law 184 "On the General Principles of Organizing Legislative (Representative) and Executive Bodies of State Power of the Subjects of the Russian Federation" of 06.10.1999

no relation to the region entrusted to them, and also undermined the accountability of regional officials to citizens.

In 2005, the procedure for State Duma elections was changed (Federal Law 51 of May 18, 2005). Instead of the mixed system with single-member districts of the 1990s, a proportional electoral system was introduced and the threshold for eligibility to win seats was raised to 7%, which led to an increase in the control of the lower chamber of the Federal Assembly and a decrease in the role and representation of regions. The redistribution of powers between different levels of government also continued: by Federal Law 199 of 31.12.2005, the regions received more than 100 additional powers, but most of them were either regulated by the federal government or were unfunded mandates as the regions did not have enough financial resources to implement them fully.

As a result of strengthening the role of the regional bodies of federal ministries and services, the number of federal executive officers in the regions grew from 467,000 in 2001 to 577,000 in 2003 and 786,000 in 2006¹¹. This is significantly (2.5–3 times) higher than the number of officials of regional executive bodies.

Another tendency of this critical period was the beginning of the merging of regions in Siberia and Far East of Russia. Perm and Kamchatka Krais emerged in 2005, while Krasnoyarsk Krai became much larger due to the territorial changes in 2005–2007¹². As a result, the number of autonomous districts significantly decreased after this reform, while relatively wealthy regions had to acquire poor neighboring territories, thus becoming more dependent on federal transfers and less politically independent since the elected governors of merging regions were appointed by the new procedure.

Economic aspects

Political centralization was accompanied by further formalization of intergovernmental fiscal relations and a significant decrease in the autonomy of subnational authorities due to a reduction in the revenue base and the emergence of new powers (outlined in Federal Laws 184 and 131) that were binding for the regions.

The most important change in intergovernmental fiscal relations was the abolition of the norm that the tax revenues of regional budgets must not be less than 50 percent of the consolidated budget revenues of the Russian Federation (Article 48 of the Budget Code abolished by Federal Law 120 of 20.08.2004). Furthermore, the number of regional and local taxes was significantly reduced in the new editions of the Tax Code and the Budget Code. Federal Law 120 and Federal Law 95 of 29.07.2004 abolished several regional taxes (road tax, sales tax – partially returned in 2015 for Moscow and St. Petersburg, tax on real estate, and regional license fees) and local taxes (advertising tax, inheritance tax, and local license fees). After these changes, only three regional taxes (property tax, gambling tax and transport tax) and two local taxes (personal property tax and land tax) remained in Russia.

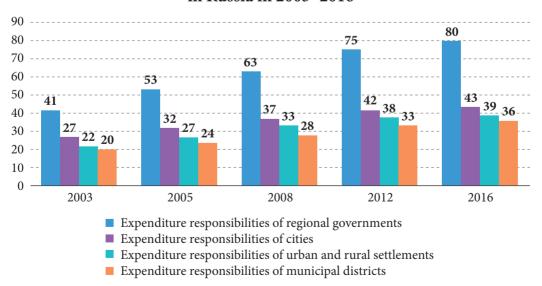
¹¹ Statistical database "Labor and Employment in Russia" by Rosstat (http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1139916801766)

¹² Later on Irkutsk oblast (2006) and Zabaykalsky Krai (2007) became part of this enlargement reform

New Articles 56 and 61 of the Budget Code fixed the shares of federal taxes that regional and local budgets retained. In addition, the policy of natural resource rents concentration in the federal budget continued. In 2003, the regional share of mineral tax (gas) was reduced from 20% to 0%, in 2003–2004, the regional share of mineral tax (oil) fell from 20% to 14%, and then to 5%. These measures particularly hit Russia's oil and gas regions, which traditionally were donor regions (some of them lost this status either in this period or later with the further centralization of the mineral tax and due to other changes in the tax system). In 2005, the municipal shares of the profit tax and corporate property tax fell sharply (from 8% to 0% and from 50% to 0%, respectively).

We can conclude that in 2003–2005 municipalities were the party most affected by the changes in the tax system, while the regions did not yet become completely dependent on the federal center – however, the share of intergovernmental transfers grew to 15% (see Figure 4) and the share of subnational revenues in consolidated budget revenues fell from almost 40% to 32% (see Figure 3). Nevertheless, due to the abolition of the 50/50 norm, the economic foundations for equal interaction between the federal government and the regions were destroyed, which subsequently (especially during the crisis of 2008–2009) led to a significant increase in the dependence of regional budgets on federal transfers and other assistance. Following the adoption of Federal Law 131 and the significant amendments to Federal Law 184, the federal center forced regions and municipalities to finance and execute the responsibilities specified in these laws as a priority (see the increase of these responsibilities in Figure 1). This trend was accompanied by an increase in the number of regulations and mandatory requirements of the sectoral legislation, which, being unfunded mandates, also became a burden for regional and local budgets.

Figure 1
Expenditure responsibilities of subnational governments in Russia in 2003–2016



Source: Federal Laws 131 and 184

Results of this stage

After passing this crossroad, the mechanism of transformation of intergovernmental relations fundamentally changed. Before 2003, changing the fiscal system and introducing political innovations that affected subnational governments required a compromise among the three principal actors (federal government, regions and legislative power). On the contrary, after 2005, the federal executive and legislative bodies began to represent a monolithic block, while the role of the regions significantly decreased; therefore, the number of "veto" players fell to one. Almost all further transformations of intergovernmental fiscal relations took place without regards to the opinion of regions and municipalities and were an example of top-down policy.

Pervasive centralization: Development of intergovernmental relations since 2005

Since 2005, more than a decade of the further development of Russian federalism has passed. It is possible to distinguish particular decisions on changing budgets and tax legislation, accompanied by the implementation of government programs, as well as certain shifts in the political and administrative aspects of intergovernmental relations. All of these various decisions have occurred consequentially or simultaneously, but their vector was unidirectional, with the predominance of centralization for the sake of the declared stability of public finance and retaining political control over the lower levels of government.

Under the new conditions, issues regarding the distribution of powers, revenue sources, allocation of transfers, and the creation of incentives for the growth of tax potential receive a different institutional background, with the increasing authoritarian tendencies and dominating "power vertical" that assigns control functions to the federal government, which transfers major expenditure responsibilities to the lower levels of government.

Economic incentives have lost their importance in comparison with political incentives during this period since taking into account the opinion of voters becomes much less important for the governor than the attitude of those who appointed him to this post. Accordingly, regions and municipalities have a strong dependence on transfers or newly emerged unfunded mandates.

Meanwhile, as rightly noted by Enikolopov et al. (2002, p. 9), in such a huge country with heterogeneous regions, it is a combination of economic decentralization and limited political centralization that can induce the correct incentives for increasing the tax potential and economic development of the regions.

Political and administrative aspects

By the beginning of this latest period, the federal government successfully created the well-functioning "power vertical." Further political centralization (or preservation of the status quo) has taken various forms, including some quasi-decentralization steps such as the further increase in the number of subna-

 $^{^{\}scriptscriptstyle 13}$ See Gel'man & Ryzhenkov (2011) for an extensive discussion of the "power vertical" and subnational governance in the mid-2000s.

tional expenditure responsibilities regulated from the center. The federal government adopted a number of unilateral decisions on the "monetization of benefits", the (unsuccessful) implementation of the administrative reform, while the subnational authorities acquired the role of "responsible executors" of certain powers, financed and controlled by the federal center (Gaidar Institute, 2006).

The year 2005 became the point of the final reverse to centralization: the law on the actual abolition of the regional governors' elections came into force, and a series of appointments under the new scheme was carried out. There was a significant change in the composition of the governors' corps – "old" governors continued to be replaced by the representatives of the federal center in the most powerful regions (Moscow, Sverdlovsk, Samara and Chelyabinsk oblasts) in the period 2007–2010.

The political reform proclaimed in 2011 was aimed at returning the competition to Russian politics by resuming the governors' elections, stimulating the emergence of new parties and thereby expanding the representation in government. As part of this reform, there was a return of the governors' elections in 2012. Still, these elections were of a substantially different order – without real political competition and with the use of so-called municipal filters, which meant the need to support a candidate with 5–10 percent of deputies of representative bodies of municipalities and (or) elected heads of municipalities of a respective region (Federal Law 40 of 2.05.2012). The municipal filter proved to be a convenient tool for manipulation and control for incumbent governors and the ruling party. By 2013, legislative assemblies had already received the right to decide whether to hold governors' elections or not.14 This political transformation is an example of a non-linear type of centralization – 7 years after the sudden abolition of governors' elections they were returned with significant restrictions. Therefore, this new equilibrium was much more favorable for the federal center than the initial state of direct and free governors' elections. Moreover, since 2015 a new tendency has begun – under various pretexts, the president has started to regularly remove governors from their office, thus undermining the whole idea of the return of direct elections.

In 2014, the mixed electoral procedure for electing the State Duma was returned, but in practice, it even further reduced the chances for oppositional parties to get into parliament since the ruling party with its huge financial and administrative resources and strong regional branches easily won the absolute majority of singlemember districts in 2016 elections. The amendments to Federal Law 131 (by Federal Law 136 of 27.05.2014) introduced the new types of municipalities – urban districts with an intra-urban division and intra-urban areas, which can presumably undermine the independence of the major cities. However, until now, these new districts have only emerged in three large cities – Chelyabinsk, Samara, and Makhachkala – but the risk of changing the status of other large cities still exists.

In 2014, there were new amendments to the Constitution concerning the formation of the Federation Council (Federal Constitutional Law 2 of 05.02.2014, and Federal Constitutional Law 11 of 21.07.2014) that introduced the so-called pre-

¹⁴ Several North-Caucasian republics (Dagestan, Ingushetia, North Ossetia, Karachay-Cherkessia) as well as Khanty-Mansi and Yamalo-Nenets autonomous okrugs replaced the direct governors' elections by appointing them through the regional parliaments.

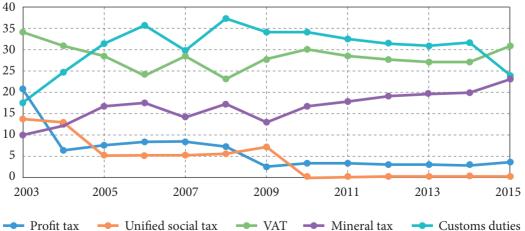
sidential quota of senators (no more than 10%), appointed and dismissed by the president. Although these amendments were discussed much less than previous changes that extended the terms of the president and the State Duma, they contributed to the further reduction of the role and representation of regions in the Federal Assembly.

Economic and fiscal aspects

During the mid-late 2000s, the federal government adopted a number of government and state programs related to the economic aspects of intergovernmental relations. They included, inter alia, the Program of Fiscal Federalism Development in 2002–2005, the Concept for Increasing the Efficiency of Intergovernmental Relations and Improving Subnational Finance Management in 2006-2008, the Concept of Intergovernmental Relations and Organization of the Budgetary Process in the Regions and municipalities for the period until 2013, the Government Program for Improving the Efficiency of Budget Expenditures for the period until 2012. The crucial issue of these programs and concepts is that they constantly stressed the need to implement a clear and stable delimitation of tax and expenditure responsibilities between different levels of government. However, this goal, as well as many other ambitious aims of these programs, have not been achieved by now. The list of such aims included the necessity to strengthen regional fiscal autonomy, create incentives for increasing subnational revenues, improve the efficiency of subnational budget expenditures, and increase the transparency of regional and local budgets. The detailed analysis of these programs and results of their implementation can be found in Oding, Savulkin & Yushkov (2016).

The fiscal innovations of the mid-2000s described in the previous paragraph significantly affected the structure of the Russian federal budget: oil and gas rents now constitute more than 50% of federal budget revenues, a significant share of which belongs to the mineral tax (~23% in 2015), and customs duties (~25% in 2015) (see Figure 2).

Figure 2
Structure of federal budget revenues, 2003–2015, %



Source: Russian Ministry of Finance and Federal Treasury.

In the middle of the 2000s, the structure of federal budget revenues, which was relatively diversified and corresponded to good international practices at the beginning of the 2000s, changed drastically. It became precarious for the stability and sustainability of the budget system in the face of worsening energy prices on global markets since the regions depend on federal transfers, which could potentially decrease in the event of price shocks.

The structure of regional revenues was quite stable during this period – personal income tax and enterprise profit tax have remained the primary taxes for regional budgets comprising more than 70% of revenues. However, after 2009 the regional share of mineral tax (oil) decreased from 5% to 0%, which again affected several resource-rich donor regions. This tax centralization trend has continued recently as from 2017 the maximum regional rate of the enterprise profit tax has decreased from 18% to 17%.

At the same time, the regional share of an excise tax on gasoline dropped from 88% to 61.7% in 2017 and 57.4% in 2018. Municipalities during this period have become much more dependent on transfers from the higher levels of government, while their own revenues had dropped to 40% of total revenues by 2015. The main reason was again the allocation of tax revenues – in 2009, the municipal share of simplified tax for individual entrepreneurs decreased from 10% to 0% (100% of these tax collections were assigned to the regional budget); before 2012, 70% of personal income tax collections went to regional budgets with 30% to municipal, in 2012–2013 this share changed to 80%/20%, and after 2013 it became 85%/15%.

As a result of these changes, the (almost) equal allocation of revenues between the federal budget and consolidated regional budgets which had existed in the early 2000s had turned into a proportion of 70/30 in favor of the federal center by 2012 (see Figure 3). The concentration of revenues in the federal budget throughout the 2000–2010s was another example of linear centralization.

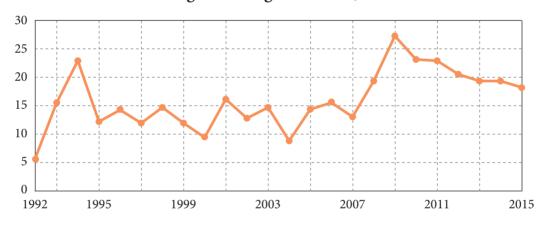
Figure 3
Share of subnational revenues in consolidated budget of the Russian Federation (excl. extrabudgetary funds and IGT), %



Source: Russian Ministry of Finance and Federal Treasury.

The share of intergovernmental transfers in total revenues of consolidated regional budgets was less than 10% in 2004, but by 2008 it had increased to 19.5% (see Figure 4). During the financial and economic crisis of 2009–2010, in order to maintain the stability of subnational budgets, the federal center increased the volume of financial support to the regions to 27.3% of the revenues of their consolidated budgets. In subsequent years, the share of transfers was somewhat reduced (to 23.1% in 2010–2011, 20.8% in 2012 and 19.4% in 2013–2014), but it remained at almost a fifth of the subnational budget revenues. The dynamics of transfers represents a non-linear type of centralization. As we can see from the figure, the average level of transfers in consolidated regional budget revenues was about 15% in 1996–2006, but after the shock the equilibrium share shifted towards 19–20%, which represents the increased dependence of regions on transfers.

Figure 4
Share of intergovernmental transfers in consolidated regional budget revenues, %



Source: Russian Ministry of Finance and Federal Treasury.

After 2005, the federal government attempted to increase the transparency of intergovernmental fiscal relations. In 2005, the allocation principle of equalization transfers from the Federal Fund for Financial Support of Regions (FFSR) used in 2001–2004 changed. Other transfers (subsidies and subventions) started to be allocated from the Federal Fund for Co-Financing of Expenditures and Federal Compensation Fund according to the formulas approved by government resolutions. After 2008, the size of the equalization fund was determined based on the minimal fiscal capacity requirement that all regions should meet after equalization (see additional discussion on intergovernmental design in the 2000s in De Silva et al. (2009)). However, recent changes demonstrate that the transparency and predictability of intergovernmental transfers are exposed to significant risk. Federal Law 104 of 7.05.2013 abolished the Federal Fund for the Co-Financing of Expenditures and the Federal Compensation Fund, while the methodology for the allocation of equalization transfers changed significantly in 2016. Despite some positive transformations, the distinctive characteristic of the Russian-style inter-

governmental design is that the significant share of transfers is allocated without any clear economic foundation and is not formula-based.¹⁵

Additional fiscal measures implemented by the federal government since 2005 that influenced subnational governments included the adoption of the three-year federal budget¹⁶ (which was the implementation of the mediumterm budget framework) and the use of program-based budgeting, the introduction of the concept of a consolidated group of taxpayers (Federal Law 321 of 16.11.2011), the implementation of the registers of expenditure responsibilities at regional and local levels, and other novelties. All of these were mostly technical and did not change the ongoing centralization trend; thus, we do not consider them in detail in this article.

Results of this stage

The results of this stage include the new equilibrium of intergovernmental design, which assumes the centralization of power and financial resources at the top level of government, with simultaneous decentralization of expenditure responsibilities to the regional level. The regions try to copy this design and implement it within themselves, obliging municipalities to conduct certain policies without having enough of their own revenue sources. At the heart of the current system of intergovernmental relations is the desire of the federal government to exercise control over subnational governments and reduce potential risks, thereby creating a stable asymmetric federation. However, it does not eliminate the possibility of the emergence of new risks and imbalances in the entire system due to a decrease in the quantity and quality of public services, a lack of incentives for increasing the tax potential and growth, and preserving the inefficient structure of the economy in regions and municipalities.

Conclusion

Since the beginning of the 1990s, Russian federalism has undergone three major periods in its development and several dramatic shifts from one trend to another. The first period (1991 – early 2000s) was a synchronous pendulum motion of political and economic (de)centralization – from the Soviet centralized system through spontaneous and radical decentralization and the subsequent formalization of an institutional environment to recentralization tendencies from the end of the 1990s. The second period was a critical crossroad (2003–2005) when decision-makers considered several options for the design of intergovernmental relations. However, ultimately, it became a turning point back to the centralized state. The federal government severely undermined the autonomy of regions as well as the political and economic foundations of local self-government. The third period (2005-present) has become a continuation of the pervasive centralization started after passing the critical crossroad and a further step against the funda-

¹⁵ A detailed discussion on the use of intergovernmental transfers at the latest stage of fiscal federalism development can be found in Yushkov, Oding & Savulkin (2016).

¹⁶ During the crises of 2009 and 2015, the federal government adopted the one-year budgets. However, in both cases, it returned to the three-year budget planning almost straight away (in 2011 and 2016).

mental principles of federalism. The detailed analysis of the political economy of intergovernmental relations in Russia shows that since the early 2000s the trend towards centralization has assumed two distinct types:

- Linear centralization straightforward and systematic activities of the federal government to centralize a particular function or responsibility previously attributed to subnational governments; consolidation takes place until the federal center reaches its desired outcome, which then remains at its steady-state level for a long time. Examples of this type include the centralization of natural resource rents (in particular, mineral tax on oil and gas), the increase in the number of (mandatory) expenditure responsibilities of subnational governments that are not matched with sufficient financial resources, and the simultaneous decrease of subnational tax autonomy and the self-generated revenues of regions and municipalities.
- Non-linear (stepwise) centralization usually an abrupt centralizing response by the federal government to exogenous shocks. After the recovery from the shock, the federal center can take quasi-decentralization measures, but the new equilibrium is more centralized and less beneficial for subnational governments than the initial state. One example of this type is the abolition of direct regional governors' elections in 2004 in response to terrorist threats (at least, the federal government articulated this reason) and the subsequent return of the elections 8 years later with significant restrictions and filters. Another example is the sharp increase of the dependence of regional governments on federal transfers in 2009 (the share of transfers in regional revenues was up to 27% at the peak of crisis) with the subsequent decrease to 20%, which is much higher that the initial steady state (10–15%), but with the worsened structure of transfers (a higher share of conditional grants, which imply higher accountability to the federal center).

The decisions and actions of the federal center since the early 2000s have led to a decrease in the independence of regions and, in particular, municipalities. The design of intergovernmental relations is fundamentally different from the initially declared and formalized intentions of the Russian government to build a federal state that creates conditions for the improvement of regional tax potential and the efficient provision of public services. As a result, currently the Russian Federation can be considered as either a vertically asymmetric federation or a de-facto unitary state.

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ATTRACTIVENESS OF MUNICIPALITIES FOR THE POPULATION IN 2010–2016

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Abstract

The work examines the main trend in changes to Local Self-Government in recent years. During this time, changes in municipal government were aimed at reducing the total number of municipal formations and outstripping the growth in the number of city districts. This growth is realized in three ways. From 2010 to 2016 only 509 out of 2328 municipal formations (21.9%) increased in population, by 5.7%. The remaining 78.1% of municipal formations experienced a loss in population. There are 220 city districts and 289 municipal districts among those municipal formations which with a population growth in 2010–2016. These municipalities are presented below.

The main hypothesis of population growth in some municipalities and its decline in others is based on the uneven distribution of central places in the settlement system that ensure the availability of goods and services for the entire population that gravitates towards them. This circumstance is due to the fact that the municipal system in Russia inherits all the features of the pre-existing administrative-territorial division. Therefore, it weakly meets the requirements of the location of production, meeting the needs of the population in goods and services, as well as the whole complex of market relations. The basis for calculations is the "Municipal Russia" database.

Keywords: local self-government; municipal formations; two levels of municipal formations, city districts; municipal districts; urban settlement; rural settlement; the population.

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Municipalities are the ultimate agents of spatial development and the entire regional economy as a whole. The population, households, production, engineering and social infrastructure are located on their territory. Both economic growth and demographic development are taken into account in the assessment of the regional economy.

Therefore the attractiveness of a particular municipality for the population can serve as a good indicator of affairs at the local level.

The current system of Local Self-Government was formed by the time the last census of the population was conducted in 2010. There are two levels of municipal formations. The first level is a city district (gorodskoy okrug) and municipal district (munitsipal'nyii raion). The second leve is urban and rural settlements (gorodskie i selskie poselenia)¹.

This article considers movement of the population only in the municipalities of the first level.

According to the last census, there were 2,341 municipalities of the first level in 2010 including 516 city districts and 1825 municipal districts². As a result of various transformations there were 552 city districts and 1776 municipal districts by the beginning of 2016. The total number of such municipal formations was reduced to 2328. These changes led to the number of municipal urban and rural settlements at the settlement level decreasing by 1091 units.

We can say that in 2010–2016 changes in municipal government were aimed at reducing the total number of municipal formations and outstripping the growth in the number of city districts. This growth is realized in three ways, namely by combining municipal districts and city districts or by dividing municipal formations into municipal districts and city districts, or by changing the status of an urban settlement in connection with giving it the status of city districts. The transformation of municipal formations is carried out by the laws of the subjects (regional authorities) of the Russian Federation.

The leader of such transformations is Magadan region. All of the areas here are converted into city districts. There is still one municipal district plus 18 newly formed units of city districts in Sakhalin region. Five municipal districts and 68 units of city districts were created in the Sverdlovsk region. It should be noted that in the past three years similar transformations have been gaining increasing strength in the Moscow region. There were 29 municipal districts and 39 city districts there by the beginning of this year.

In contrast, the Republic of Bashkortostan has 54 municipal districts and 9 city districts. The Republic of Tatarstan has 43 municipal districts and 2 city districts. The Altai krai has 59 municipal districts and 10 city districts. The Krasnodar krai has 37 municipal districts and 7 city districts³. As we can see, the prevalence of municipal districts in the territorial structure of the regions remains.

From 2010 to 2016 only 509 out of 2328 municipal formations (21.9%) increased in population, by 5.7%. The remaining 78.1% of municipal formations reduced in population, the population movement in this category is not considered futher in this study.

¹ State Duma of the Russian Federation. Federal Law N131-FZ of October 6, 2003. On General Principles of the Organization of Local Self-Government in the Russian Federation. Available at: http://www.consultant.ru/document/cons_doc_LAW_148889/ (accessed: 25 March, 2017).

² All-Russia Population Census of 2010. Volume 1. Population size and accommodation. – M: FSGS, 2012, p. 310.

³ Database "The Municipal Russia". Authors and rights holders: Patsiorkovskiy V.V., Kolennikova O.A., Simagin Yu.A. Number of state registration: RU 2014620760 of 27.05.2014.

Of course, the 509 municipal formations are incomparably greater in number and better for the territorial organization of the country than a dozen agglomerations. "We must create in the territory of Russia, maybe 10–15 metropolitan cities, which will be comparable in the East with Asian cities, in Europe – with western cities," said A. Kudrin⁴. Similar thoughts were expressed by the current head of the Bank of Russia even earlier⁵.

The problem is that no one knows whether this is too much, too little or just enough to increase the coherence of the country's territory, and its spatial and socio-economic development. Therefore the study of the movement of the population in such municipal formations is very important. We need to know their placement and their coverage as a supporting framework for resettlement and the entire inhabited territory of the country.

Among the municipal formations which attracted people in 2010–2016, were 220 city districts and 289 municipal districts. The latter circumstance can be regarded as a known benefit. After all, municipal districts provide an assortment of small towns and rural areas, as well as the location of the rural population. At the same time it is testament to the flaws in the proposals on population concentration in several megacities.

Such proposals are based on considerations of economic development and increased economic growth. "We, at the expense of the concentration of the population, get those effects that give high labor productivity, added value, GDP growth and create a different quality of life",6 wrote Director General of the Institute "Giprogor".

Meanwhile, under modern conditions, the balanced and sustainable functioning of populated areas and settlement systems can hardly be achieved along the path to realizing the territorial strategy of exclusively economic development. Such approaches are based on outdated scientific assumptions related to the separation of a person from his natural origin and a limited understanding of the trends taking place. What they have brought is well known.

In particular for our country today all transforming activities should be minimized without a solution to the tasks associated with the expanded reproduction of the population and the consequences of the formation of a new technological structure. The advantages and disadvantages of the main categories of populated areas (large, medium, small towns and rural settlements) are meaningful only with respect to the whole that makes up the rural-urban continuum (the settlement system).

The rural-urban continuum has developed in a natural, historical way for a long period of time (Patsiorkovskiy, 2010). It is hardly right to destroy it cor-

⁴ Kudrin vypisal Rossii retsept ozdorovlenia cherez megapolisy [Kudrin has written to Russia the recipe for recovery through megacities]. Available at: https://utro.ru/articles/2017/01/15/1312332.shtml (accessed: 20 March, 2017).

⁵ Nabiullina: RF nuzhny proekty modernizatsii dla 12 gorodov-millionnikov [RF is needed for modernization projects for 12 megacities]. Available at: http://news.mail.ru/politics/7546478/ (accessed: 20 April, 2017).

⁶ Agglomeration – the general plan of the disintegration of Russia? Available at: https://regnum.ru/news/polit/2210111.html (accessed: 20 March, 2017).

rectly from considerations of efficiency, the location of productive forces, economic functions and even a very important geopolitical significance.

It is a mistake to correct the settlement system from the traditionally narrow positions of rational distribution of production and economic functions. Moreover, these must be expanded to take into account the role of various components of the settlement system in the reproduction of the population. Under conditions of a low birth rate, it is impossible to pursue a socio-economic policy aimed at concentrating the population in large cities. The effectiveness of such measures from the standpoint of economic growth is very doubtful. There are lot of risks associated with the depopulation and destruction of the settlement system.

Population reproduction is primarily associated with rural areas and small towns, while large cities by definition are long way from solving this problem. This fact has long been fixed in science and practice. "The inability of the urban population to their own reproduction is a biological consequence of a combination of factors contained in a complex of urban life, and the decline in fertility in general can be considered one of the most important signs of urbanization in the Western world" (Wirth, 2005). However this could not be taken into account until the reproduction of the population was extended. People were viewed as an unlimited resource of labor and for various kinds of mobilization initiatives.

Today, after several years of tremendous efforts aimed at demographic development in our country, the total fertility rate in the city is 1.6 children (per woman of fertile age) while in the village it is 2.3 children⁷. For a better understanding of this it is appropriate to bear in mind that these figures indicate that the village has already approached the expanded reproduction of the population, while in the city the birth rate is still significantly lower than the level of replacement of generations. Unfortunately, three quarters of the population live in the city just now. This circumstance serves as a severe limitation of the prospects for solving demographic problems.

An analysis of population reproduction at the micro level shows that in the territorial context there are a significant number of family households in our country that can be considered as growth points for achieving the goals of demographic development. The key words here are large families, rural areas and small towns. In other words, we need to keep in mind the municipal districts. Under the appropriate demographic policy, such growth points could be the Republics of Bashkortostan, Dagestan, Chechnya, Tyva, Chuvashia, Altai, Krasnodar, Stavropol krai, Orenburg and Tambov regions.

All the municipal formations, which increased in population, were distributed according to the Federal Districts as follows (Table 1).

From the data given in this table, it can be seen that only the Central, Volga and Siberian Federal Districts retain the similarities of city and municipal districts

⁷ Demographicheskii Yezhegodnik 2015. Moscow: FSGS, 2015. Available at: http://www.gks.ru/bgd/regl/B15_16/Main.htm (accessed: 20 March, 2017).

in their scale. For other Federal Districts the city districts dominate in the North-West, Ural and Far East while in the South and North-Caucasian Federal Districts municipal districts prevail.

Table 1
Distribution of municipalities with a growing population in 2010–2016 by Federal Districts

Municipal Districts		Cit	y districts	F. 11 District.	
%	Number (unity)	%	Number (unity)	Federal Districts	
19,0	55	22,2	49	Central	
5,9	17	11,3	25	North-West	
12,5	36	6,3	14	South	
21,5	62	9,5	21	North-Caucasian	
16,3	47	14,9	33	Povolzhsky (Volga)	
6,2	18	16,7	37	Ural	
16,3	47	13,1	28	Siberian	
2,4	7	5,9	13	Far East	
100,0	289	100,0	220	Total	

Source: Database "The Municipal Russia". Authors and rights holders: Patsiorkovskiy V.V., Kolennikova O.A., Simagin Yu.A. Number of state registration: RU 2014620760 of 27.05.2014.

Given the high proportion of the Central and Volga Federal Districts in the structure of the municipal formations with a growing population, we can confidently talk about the attractiveness of these regions for the urban and rural population. Having minimum attractiveness is typical for the Far East Federal District. There are only isolated cases of municipal formations that retain attractiveness for the population in that area.

Proceeding from the fact, that many cities form the support frame of the settlement system, further attention will be paid to the consideration of changes in the population of the city districts. It is preliminarily appropriate to note that in contrast to many municipal districts, low fertility is characteristic of all city districts. Population growth in city districts is possible due to migration mobility. All city districts grew up with the population divided into three groups: attracted up to one percent of the population, attracted from one to 5.7% (the national average) and attracted more than 5.7% of the population. Their distribution by Federal Districts is shown in Table 2.

The data Table 2 allows us to see the peculiarities of the attractiveness of various groups of city districts in the Federal Districts. For example, in the city districts group with a minimum population growth there are 30 city districts with slightly more than half of these concentrated in the Central and Volga Federal Districts.

Table 2
The distribution of the three groups of city districts with the growing population in 2010–2016 by the Federal Districts

	FD				
Total	The largest increase	Average Increase	Minimal increase	FD	
49	23	18	8	Central	
25	10	12	3	North-West	
14	7	3	4	South	
21	9	11	1	North-Caucasian	
33	5	20	8	Povolzhsky (Volga)	
37	15	18	4	Ural	
27	13	13	1	Siberian	
13	10	2	1	Far East	
220	94	97	30	Total	

Source: Database "The Municipal Russia". Authors and rights holders: Patsiorkovskiy V.V., Kolennikova O.A., Simagin Yu.A. Number of state registration: RU 2014620760 of 27.05.2014.

There are 97 city districts which had an average population growth. These were distributed almost uniformly around the Federal Districts, except for the South and Far East Federal Districts. In the group which showed the highest population growth there are 94 city districts. Their distribution has a certain slant to prevail in favor of the Central District and a shortage in the Volga and Southern Federal Districts.

In the Far East, North-Caucasian and Siberian Federal Districts only one city districts from each had a minimal population growth. Accordingly they were: Petropavlovsk-Kamchatsky (Kamchatka krai), Lermontov (Stavropol krai) and Novokuznetsk (Kemerovo region). In economic geography terms, these are three completely different cities.

Petropavlovsk-Kamchatsky is a large city. This is a regional center in an extremely remote and poorly urbanized area. It pulls the population from its surrounding territory. In 2010–2016 all other municipal formations of the Kamchatka krai lost some of their population (with the exception of those located on faraway islands in the Bering Sea – the Aleutian municipal district). Even the Elizovskiy municipal district lost some of its population. This contradicts the tendency for population growth in the suburbs of large cities.

This increase in the population is realized at the expense of regional migration. With its help, the population concentrates in the regional center. The limits of growth in this case are determined by the population of the region. For the Kamchatka krai it is noted that this circumstance has an important significance.

In contrast, Lermontov is a small city in the resort zone of the Caucasian mineral waters. It is close to a number of other more developed cities. In this group of city districts only Zheleznovodsk barely appreciably lost some popula-

tion in the observed period. At the same time, Essentuki, Kislovodsk and Pyatigorsk showed significant attractiveness. Moreover, a similar attractiveness was shown by the Predgorny municipal district surrounding these cities. Such a population growth is realized due to interregional migration. It serves as a good indicator of the formation of an agglomeration in a given area.

The main problem associated with agglomerations in Russia is as follows: "Conurbations exist de facto as a natural stage of urban growth but they are not de jure as legal entities recognized by law. Hence all the problems: several interconnected settlements long existing as a single organism are constantly stuck in legislation, in which there is no concept of agglomeration". Therefore the problem here is not the gathering of the entire population in the agglomerations. It is necessary to promote their formation where they have already appeared, as well as to appear where there is an urgent need for them.

Finally, Novokuznetsk is a large industrial center in one of the most highly urbanized areas of the country. All the nearest city districts (Belovo, Osinniki, Prokopyevsk, etc.) as well as the Novokuznetsk municipal district lost some of their population during the observed period. Taking into account the fact that Novokuznetsk is a multidisciplinary center, there is more reasun to understand migration of the population in that area.

In addition, Novokuznetsk is the center of one of the largest agglomerations. Therefore it is hardly correct to believe that its growth has an attributing character. Here this territory with population of more than one million people is involved in economic circulation⁹. Increasing the connectivity in it can contribute to the socio-economic development of a huge region.

The three examples discussed above show that in recent years a similar trend of low yet still attractive for the population. Higher attractiveness has at its source two reasons. One of these is caused by the previously mentioned administrative-territorial transformations. Examples of such an increase exceeding as a rule 20% of the initial population size are the city districts of Balashikha (Moscow region), Anapa (Krasnodar krai), Magas (Republic of Ingushetia), and Koltsovo (Novosibirsk region). During the observed period such transformations were absent in the Far East, Volga and Ural Federal Districts. Basically they were implemented in these regions until 2010. In this text there is no possibility to dwell on their description.

As a moderate attraction based on certain internal reasons it is possible to give examples of the following city districts: Belgorod (Belgorod region), Pskov (Pskov region), Kaspiisk (Republic of Dagestan), Yoshkar-Ola (Republic of Mari El), Nizhnevartovsk (Khanty-Mansi Autonomous District-Yugra), Abakan (Republic of Khakassia), and Artem (Primorsky krai). In this case we deliberately took one city district in each Federal District and excluded the very large cities (with more than one million inhabitants). All of the largest cities, with the

⁸ Aliev, Sh. Kaspiiskii megapolis. Available at: http://kavpolit.com/articles/kaspijskij_megapolis-6126/ (accessed: 22 April, 2017).

⁹ Aglomeratsii Rossii. Available at: https://ru.wikipedia.org/wiki/Aglomeratsii_Rossii (accessed: 29 April, 2017).

exception of Volgograd, increased in population in the period under review. Incidentally, their place in the settlement system and the significance to the socioeconomic development of the country are well described in literature and hardly need additional comments.

Belgorod, during the observed period, increased in population by 8.6%. Moreover the Belgorod municipal district population rose by 6.9%. In addition, the neighboring (in the direction of Starooskolsky city district) Korchansky municipal district displayed a similar population growth trend. The urban and rural populations grew in both municipal districts. It is quite possible that this circumstance indicates that the Belgorod and Starooskol'sko-Gubkin agglomerations tend to form a three-nuclear conurbation. This can reliably link the entire region and become a very significant component of the population's enormous territory.

In Belgorod it is believed that: "The development of the agglomeration should not proceed from the goal of growing the urban area by uniting the regional lands in a single municipal formation. The real meaning of the agglomeration is to create a stable economic development zone, comfortable conditions for citizens' living, the formation of business and attracting investments. Thus, it is planned to develop the Belgorod agglomeration not on the basis of absorbing a new space but by improving the transport infrastructure" (Morozova, 2014).

This development vector has a huge conserved resource at the moment. It is connected with the events in Ukraine. On the one hand, attempts to destroy the historically established connectivity of the Belgorod and Kharkov agglomerations could lead to a huge flow of population. On the other hand, the successful cessation of the crisis in the neighboring country and a return to traditional economic ties would strengthen the tendency for an even more powerful and attractive conurbation in the region.

In the North-West Federal District many city districts representing regional and republican centers showed an increase in population during the observed period. Notable among these are: Arkhangelsk, Kaliningrad, Novgorod, Petrozavodsk, Pskov, Syktyvkar and Vologda. Along with these regional centers, some the cities of regional subordination have also increased in population (Cherepovets, Kostomuksha, Kotlas, Mirniy, Zelenograd, etc.).

For example, the city district Pskov increased its population by 2.4%. This is in a region in which the population decline was one of the first in the country to begin many years ago. The situation here is very similar to the situation in the Kamchatka krai, which has already been described. The difference is that the Pskov city district of the Pskov municipal district has increased its population. All the other municipal formations of the region lost some population in the observed period. In other words, here the population is concentrated in the center and its suburbs.

This means that there is a growing trend in individual housing construction and life on the land in the manor household. Of course, this trend alone cannot reverse the demographic crisis that has engulfed the region. At the same time it can be attractive for migrants from other regions of the country. Unfortunately

the Pskov city district as well as its regional partner, the Great Lukie city district, are far too weak and lagging behind in their development to start the formation of an agglomeration that could determine the integrity of and offer positive changes to the whole region.

In the main part of the regions of the South Federal District only one or two city districts had any population growth in the observed period. In contrast, the largest increase was in the number of city districts in Krasnodar krai (Anapa, Armavir, Gelendzhik, Goryachy Klyuch, Krasnodar, Novorossiysk, and Sochi). The unconditional leaders in terms of enhancing their role in the settlement system and population are Krasnodar and Sochi. It is quite clear that in the near future the regional center will gain a million inhabitants. Thanks to the modernization of the transport infrastructure. Sochi will complete the formation of an agglomeration that pulls in all the settlements of the Black Sea coast from Adler to Tuapse.

In the North Caucasus Federal District, 9 city districts in the Republic of Dagestan increased in population in 2010–2016. Among them it is appropriate to note the following city districts: Buinaksk, Dagestan Ogni, Derbent, Izberbash, Kaspiisk, Kizilyurt. Makhachkala, Khasavyurt and Yuzhno-Sukhokumsk.

Makhachkala's city district, during the observed period, increased in population by 2.8%. This city district continues to be the undisputed leader in settling the rapidly growing population of the republic and forming the Makhachkala-Kaspiiskaia agglomeration. "For Makhachkala this is now a vital necessity. The city actually merged with nearby settlements and without a single management of this large territory the capital of Dagestan can finally plunge into chaos" 10.

In almost every region of the Volga Federal District, two or three city districts increased in population in the observed period. This includes all of the regional capitals. Five of them are the large cities-millionaires. Therefore it can be hardly any surprises outside of the established settlement system. Competing with Kazan, Nizhny Novgorod, Perm, Samara and Ufa is difficult today and will continue to be in the near future.

It should be noted that under certain circumstances the Saratov city district may enter the club of millionaires. Saratov "together with Engels and other settlements forms an agglomeration of 1.15–1.2 million people. There are proposals to unite Saratov and Engels in a single millionaire city"¹¹. Other regional centers such as Cheboksary, Izhevsk, Kirov, Orenburg, Penza, Saransk, Ulyanovsk and Yoshkar-Ola will continue their development.

The Urals Federal District has already established a settlement support skeleton. Chelyabinsk, Kurgan, Tyumen, and Yekaterinburg are supported by the second echelon of large cities (Magnitogorsk, Nizhny Tagil, Nizhnevartovsk, Surgut, etc.). Many of these cities are centers of already formed (Ekaterinburg, Chelyabinsk) and currently forming Magnitogorsk, and Nizhny Tagil agglomerations.

¹⁰ Aliev, Sh. Kaspijskij megapolis. Available at: http://kavpolit.com/articles/kaspijskij_megapolis-6126/ (accessed: 22 April, 2017).

¹¹ Saratov. Available at: https://ru.wikipedia.org/wiki/Saratov (accessed: 23 April, 2017).

Many city districts in the Chelyabinsk, Sverdlovsk and Tyumen regions have increased their population. In this regard the absolute leader is the Sverdlovsk region. It has 14 city districts (Aramil, Berezovsky, Yekaterinburg, etc.) which have increased in population. The peculiarity of such a rapid increase in some city districts of Sverdlovsk region is that almost all of them are satellite cities of Yekaterinburg. In fact, these processes testify to the development and growth of the attractiveness of all of the Ekaterinburg agglomeration. It is pertinent to draw attention to the fact that more than 50 city districts of the Sverdlovsk region were losing population during this period. All of them were outside of the Yekaterinburg agglomeration.

During the period under review, the tendency towards population concentration in regional centers prevailed in the Siberian Federal District. It most consistently manifested itself in the Republic of Buryatia, Irkutsk, Omsk and Tomsk regions. In them only regional centers increased their population.

In other regions, in addition to regional centers, the population more often increased only in one more city district, as was the case in the Republic of Altai (city district Kosh-Agachsky), the Republic of Tyva (city district AK-Dovurak), the Republic of Khakassia (city district Chernogorsk), the Trans-Baikal krai (city district Aginskoye), and Kemerovo region (city district Novokuznetsk). And in only three regions, namely the Altai, Krasnoyarsk krai and the Novosibirsk region, 4–5 city districts showed the tendency of population growth (city district Berdsk, Belokurikha, Norilsk, etc.).

In recent years Krasnoyarsk is the third city in Siberia to become a millionaire city. This circumstance as noted above indicates a slow but positive movement to strengthen the settlement system in the Siberian Federal District.

The state of affairs in the Republic of Buryatia and the Trans-Baikal Krai is rather complicated. Once in the Siberian Federal District they lost the right to any support associated with the development of the Far East. Today and even more so for the future, the mastery of this vast territory along the narrow strip of the Trans-Siberian Railway creates a lot of problems in regards to socio-economic movement to the Far East.

In 2010–2016, the same trend prevailed in the Far East Federal District. The population tended toward regional centers. Outside of other regional centers in this vast territory, only six city districts showed an increase in population. To this group belong the city districts Artem and Ussuriisk (Primorsky krai), Uglegorsk (Amur region), Anivsky, South Kuril (Sakhalin region), and Pevek (Chukotka Autonomous district). The attractiveness of the above mentioned city districts for the population is extremely important.

The problem is that there are very few of them offering some sort of habitable appearance to this distant extremity of our country. This remark is even more justified with regard to the problematic successes of the zones of advanced development formed in this Federal District. All of them ultimately imply the use of skilled labor and favorable living conditions for the population.

It seems that at the moment the "Far Eastern hectare" is the most interesting undertaking for the development of this territory. In any case, the availability of land for an individual homestead dwelling should be provided for

a wide range of reproducibly capable and economically active family households throughout the domain of any settlement. Today it is possible just in one chosen region.

Therefore we can only welcome the consideration of the draft law that began in the State Duma providing for the granting, free of charge, to all desiring Russians, of land plots of up to 25 acers, which may only be used for their intended purpose¹². In similar fashion, there is another Duma initiative to pay off the mortgage loans of young families at the expense of the state, if such families have children. "And the birth of each subsequent child will further reduce the payment"¹³. Such initiatives can contribute not only to solving demographic problems but also to territorial development.

Conclusions

An analysis of the population movement of municipalities shows that in regards to Russia the assumptions adopted in the theory of central places are only partially true. The above examples allow us to say that this theory works in the main strip of the settlement from Belgorod and Sochi to Krasnoyarsk. At the same time, it is poorly suited to the situation in areas where there are virtually no settlements capable of performing the function of central places.

The main hypothesis of population growth in some municipalities and its decline in others is based on the uneven distribution of central places in the settlement system that ensure the availability of goods and services for the entire population that gravitates towards them.

In general, the growth trend of a central high-level hierarchy dominates today. The population trends primarily towards the agglomerations. Here, it can count on raising the standard of living, which is connected with the availability of jobs, goods and services. This circumstance is due to the fact that the municipal system in Russia inherits all the features of the pre-existing administrative-territorial division. Therefore, it weakly meets the requirements of the location of production, meeting the needs of the population in goods and services, as well as the whole complex of market relations.

In recent years, one of the main problems of municipal development has been the transformation of municipal districts into city districts. There are two possibilities to change this trend. One is to stop such transformation. Because it destroys the foundations of Local Self-Government. Another possibility is to amend the 131-FZ, which allows municipal settlements to be preserved in city districts. Of course, this option is more complicated and takes time. The main problem here is that municipal settlements are an important part of Local Self-Government. Without them, it becomes meaningless. In ac-

¹² Neratov D. Rossianam mogut razdat zemli besplatno [Russians will be given the land for free]. Available at: http://www.utro.ru/main/ (accessed: 20 April, 2017).

¹³ Rossianam predlozhili proshchenie dolga po ipoteke za rozhdenie detei [Russians were offered a forgiveness of the mortgage debt for the birth of children]. Rossiiskaia gazeta, 27 March, 2016. Available at: http://lenta.ru/news/2016/03/27/need_more_babies/ (accessed: 25 April, 2017).

cordance with the law, the boundaries of the settlement – the primary unit of Local Self-Government – are set to take into account pedestrian accessibility during the working day, there and back, for residents of all the populated items included in the composition of the settlement¹⁴. There is an urgent need for the disaggregation of large municipal formations and an increase in the number of municipal settlements.

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¹⁴ State Duma of the Russian Federation. Federal Law N131-FZ of 06 October, 2003. On General Principles of the Organization of Local Self-Government in the Russian Federation. Art. 11, par. 1, p. 11. Available at: http://www.consultant.ru/document/cons_doc_LAW_148889/ (accessed: 25 March, 2017). See also: Kolennikova, Patsiorkovskiy & Simagin, 2015, p. 195.

ENHANCED COOPERATION IN FEDERAL STATES: DEMOCRACY THROUGH ASYMMETRY

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Abstract

The article focuses on a comparative analysis of the cooperation mechanisms of a federal center and constituent units based on the constitutional principle of flexibility. Cooperation mechanisms in Switzerland, Canada, the USA and the Russian Federation are studied in detail with the purpose of identifying enhanced cooperation forms and revealing the principle of flexibility influence on these forms. It is determined that enhanced cooperation, based on the treaties between a federal center and constituent units, inevitably leads to asymmetry within the federal system. The hypothesis of the article is that implementation of the principle of flexibility in the form of enhanced cooperation between a federal center and constituent units ensure democratic change and effectiveness of federations. Asymmetric federation as a pluralistic form ensures democratic rights, minorities' rights, representation and participation. It represents a tool for achieving "unity in diversity".

Keywords: federalism; asymmetry; enhanced cooperation; principle of flexibility; democracy.

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Introduction

There are some federal states in existence which recognize the principle of flexibility being understood as the possibility for a number of constituent units of federations to cooperate in certain fields based on agreements among them or in other forms, sometimes with the participation of a federal center. In our previous articles, we referred to it as enhanced cooperation within federal settings (Shaikhutdinova, 2016, p. 138).

In the present article, we shall explore how the principle of flexibility being a constitutional principle in a number of modern federations is implemented and assess its consequences for the theory and practices of federalism (Goudappel, Conlan, Van Wissen, 2002). There exist federal states, which recognize the principle of flexibility being understood as a possibility for a number of constituent units of federations to cooperate in certain fields based on agreements among them or in other forms, sometimes with participation of a federal center. They are referred to as an enhanced cooperation within federal settings.

The main goal is to study how the asymmetry as a result of enhanced cooperation within federal settings leads to democratic change and promotes the effectiveness of federations.

The thesis that federalism fosters democracy has already been proven by many researchers (Elazar, 1987; Fleiner, 2005; Farukshin, 2003; Diamond, 1961). Federalism has a strong predisposition for democracy (Elazar, 1995, p. 13). Our assumption is that asymmetric federalism, which gives rise to the particular group interests, rights and liberties, including national minorities, enhances those sides of democracy, which symmetric federalism, due to its equality attitude, is incapable of achieving.

Case studies

For our case studies in this research, we take examples from Switzerland, Canada, the USA and the Russian Federation.

Switzerland. The existing Swiss federal system is unconceivable without intergovernmental cooperation in its various forms, including institutions and agreements among the constituent units, sometimes with the participation of the federal center. Article 48 of the Swiss Constitution states that the cantons may enter into agreements with each other and establish common organizations and institutions. The Confederation may participate in such organizations or institutions within the scope of its powers (the Constitution of Switzerland, 1999).

Strong intergovernmental cooperation is the consequence of the centripetal character of the Swiss federation and its origin from the former independent sovereign entities, now cantons. The intergovernmental institutions and relations are closely linked to, or even derive from, one of the distinctive features of Swiss federalism, namely the close co-operation existing between the sub-national entities (the cantons) and also between the cantons and the centre (the Confederation) (López – Basaguren & Escajedo San Epifanio, 2013, p. 49).

Enhanced cooperation in Switzerland in the last two decades was extremely active and is represented by intergovernmental conferences, institutions and agreements. The other forms are round tables, working parties, task forces, consultation procedures for cantons to participate in the federal decision-making process, parliamentary committee hearings, and cantonal representatives in federal administration, the House of the cantons.

There are more than 800 intergovernmental agreements within Switzerland, some of them with the participation of the Confederation, dealing with a large variety of subject matters: administrative and of legal character, contain-

ing legal norms that are binding for the cantons having ratified the agreements (ibid., 2013, p. 57). Recent examples are the Cooperation Agreement between the Confederation and Cantons (2015), the agreement on measures against hooliganism, the agreement regulating the activities of private security enterprises, and the agreement on the harmonization of cantonal legislations in the field of school education.

All the above forms of enhanced cooperation within the Swiss federal system prove the thesis that both horizontal and vertical cooperation is in place in Switzerland. The intense and growing character of different forms of interaction among cantons and of the latter with the federal center is strong evidence of the authority cantons possess after the century-long process of transferring powers to the Confederation. The dialectics of the Swiss federal system demonstrate how the evolutionary development has spiralled, beginning with independent and strong cantons in 1846–1848, the confederal and later federal trend, the weakening of the cantons, and, once again, cantons' endeavors for more powers in federal decision-making.

Enhanced cooperation contributes to cooperative federalism in Switzerland, forming a vast realm of formal and informal relations and institutions. Democratic forms of cooperation among cantons and with the participation of the Confederation bring decision-making closer to the citizens; serving the everyday needs of the citizens, which are better seen and obvious from the cantonal perspective versus the federal level. The democratic character of Swiss federalism is rooted in the recognition of the persisting ambitions of some cantons to feel independent and sovereign, on the one hand, and having a wide autonomy of communes and allocation of their diversities, on the other hand. This three-tier system – federal center, cantons, communes – made Switzerland one of the most effective federations in the world.

The USA. The example of the USA demonstrates the oldest practice of what is now called the flexibility principle. It is authorized by the US Constitution, namely in the Compact Clause, which is Article I, Section 10, Clause 3: "No State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State, or with a foreign power," (The Constitution of the United States, 1787). By virtue of exception, the US Constitution authorizes the agreements or compacts among states of the United States, the only condition being that the latter should be given congressional consent. Hereby, the US Constitution authorizes the horizontal form of enhanced cooperation.

The US Supreme Court, however, has ruled that not all interstate agreements must obtain the approval of Congress. In *Virginia v. Tennessee* (U.S. Supreme Court, 1893) it held that Congress must approve only two types of compact: those that alter the balance of political power between the states and federal government; and those that intrude on power reserved for Congress. If Congress grants consent, a compact becomes federal law (*Cuyler v. Adams*, 1981).

The system of interstate cooperation in the USA includes compacts concluded among the US states and the agencies formed by the states in the purposes of interstate cooperation and implementation of the above compacts. "An interstate compact is a formal binding contract, authorized by or enacted as legislation,

between two or more states in their capacity as states" (Litwak, McCabe, Buenger & Masters, 2016, xix).

In the USA, the principle of flexibility has been in use in this form or the other for about 250 years. Well before the United States was established under the Articles of Confederation and Perpetual Union (Articles of Confederation), colonial authorities had experience of using mechanisms and processes similar to compacts to resolve their disputes. Rooted in the American colonial era, the compacts are the oldest mechanism available to promote formal interstate cooperation (Litwak, McCabe, Buenger, Masters, 2016, p. 4). The very first compacts in American history were drawn up over state boundary disputes as in the cases of Rhode Island v. Massachusetts (U.S. Supreme Court, 1838) and Virginia v. Tennessee. It was the 20th century when compact practices developed rapidly and began to cover the multiple spheres of everyday life, including regional and national policy problems. The areas where states utilized this mechanism included environmental protection, regional transportation, water and oil management, nuclear waste disposal, land use planning, pollution control, economic development, crime control, insurance and licensing. Examples of these compacts are the Interstate agreement on Detainers, the Missouri-Nebraska Boundary Compact, the Central Arizona Project, the Interstate Compact on the Placement of Children, the Tahoe Regional Planning Compact, etc. In the 21st century the states concluded the Great Lakes-St. Lawrence River Basin Water Resources Compact, the Surplus Lines Insurance Multi-State Compliance Compact (SLIMPACT), the Interstate Compact on Educational Opportunity for Military Children, the Interstate Compact for Juveniles, the Interstate Compact for Adult Offender Supervision, etc. Physical Therapy and Telepsychology Licensing Compacts, the Medical Licensing Compact, and the State Authorization Reciprocity Agreement are under development.

Interstate compacts have served an important – albeit largely unnoticed – role in shaping relationships between the states and, at times, between the states and the federal government. However, the practice of enhanced cooperation in the USA has developed in the direction of the growing participation of the federal government in inter-state compacts. For example, the federal government is party to the Interstate agreement on Detainers from 1971 (Fried, 1978, p. 1). When it joined, it did so as a "state" for purposes of the agreement, and is in an equal position with the states of the US (Interstate Agreement on Detainers Act, 1970). The symbiosis of horizontal and vertical forms of enhanced cooperation and the equal status of the federal center and the states in the latter is the peculiarity of American system of enhanced cooperation.

The formation of enhanced groups of states introduces asymmetry to the US federal system. Some American scientists view these interstate arrangements as incompatible with federalism. Interstate compacts violate the pure principles of federalism creating sub-federal, supra-state administrative agencies, and a third tier of governing authority (Broun, Buenger, McCabe & Masters, 2006, p. 11).

In our opinion, the possibility for states to form enhanced groups in order to foster cooperation in particular areas brings the democratic element into the US federal system. The mere fact that the constituent units are granted the right to cooperate and to conclude agreements is a reflection of the democratic attitude

of the federal center towards the units. This not only grants the constituent units additional rights but also increases their accountability. The practicalities of governing a large, multifaceted, federally designed nation frequently blurs the lines of what is distinctly national in scope and what is local. Some 30 of the largest metropolitan areas in the United States extend across state lines affecting 25 percent of the population of the United States. This is precisely where interstate compacts provide an effective solution in addressing supra-state problems (Ibid., p. 26).

Moreover, federal authorities are often reluctant to meet the regional and local needs. The compacts are a way to overcome federal insensitivity. At the same time, the compacts can effectively preempt federal interference into matters that are traditionally within the purview of the states but that have regional or national implications (Ibid., p. 27).

Over the years, interstate cooperation in the USA has proven to be an important and necessary feature of American democracy.

Canada. The analysis of Canadian intergovernmental agreements reveals that a strong tendency for active and long-time federal-provincial, and later, federal-provincial/territorial cooperation has existed. Although the Constitution of Canada of 1867 does not mention it, the provision authorizing the federal-provincial/territorial cooperation can be found in the Meech Lake Accord of 1987. It is stated in the Preamble that first ministers would provide new arrangements to foster greater harmony and cooperation between the Government of Canada and the governments of the provinces and would require that annual constitutional conferences composed of first ministers be convened (Meech Lake Accord, 1987).

The increasing role of governments has required them to enter into agreements in relation to many activities, whether they are of federal, provincial or shared jurisdiction. The vertical dimension of enhanced cooperation is rather well developed in Canada. Since 1922 more than 2900 federal-provincial agreements were signed in various sectors, such as education, health and the environment. One of the first federal-provincial agreements – on the issue of immigration, a constitutional power shared between the Parliament of Canada and the provincial legislatures – was concluded in 1868. Federal-provincial/territorial agreements have since multiplied. The examples are the Canada Job Fund agreements, the Gas Tax Fund Agreements, the Infrastructure Bilateral Agreements, the Infrastructure Framework Agreements, and the Bilateral Health Agreements. In 2009–2013 the Reciprocal Taxation Agreements with provinces and 3 territories were signed between the Canadian government and 8 provinces and 3 territories. The exceptions were Alberta and New Brunswick.

The Government of Canada has entered into an Environmental Occurrences Notification Agreement with the government of each of the following provinces and territories: Ontario, Manitoba, British Columbia, Saskatchewan, Alberta, Yukon and the Northwest Territories. The purpose of these Notification Agreements is to establish a streamlined notification system and reduce duplication of effort for persons required to notify federal and provincial/territorial governments of an environmental emergency or environmental occurrence, such as an oil or chemical release. Under these Notification Agreements, 24-hour authorities operating for

the provinces and territories receive emergency or occurrence notifications and transfer this information to the federal Department of the Environment, which is essential for the timely and effective oversight of the response, as may be warranted (Government of Canada, 2017).

The most recent example is the Canadian Free Trade Agreement of 2017 (Canadian Free Trade Agreement, 2017).

The bilateral "province-to-province" and multilateral agreements of which the Canadian government is not party to, form another horizontal layer of legislation. The examples are the Reciprocal Agreement between the Province of Ontario and Québec concerning Drivers' Licences and Traffic Offences of 1988 and a large group of Trade Enhancement Arrangements with the participation of two to five provinces and (or) territories such as the New West Partnership Trade Agreement, the Trade and Cooperation Agreement between Québec and Ontario, and the Interim Agreement on Internal Trade in Agriculture and Food Goods, etc.

The Constitution of Canada makes a clear distinction between provinces and territories. The provinces exercise constitutional powers in their own right; the territories exercise delegated powers under the authority of the Parliament of Canada. This *a priori* asymmetry of Canadian federalism is based on the different status of provinces and territories. However, over the past 40 years, major changes have occurred in the governance of the territories. Federal statutes have established a legislative assembly and executive council for each territory and province-like powers are increasingly being transferred or "devolved" to territorial governments by the Government of Canada. This process, known as "devolution", provides greater local decision-making and accountability (Government of Canada, 2017).

The *a priori* asymmetry in Canada is combined with *treaty-based* asymmetry shaped by the various federal-provincial/territorial arrangements. Provinces and territories form different groups solving a wide variety of problems, including agreements, constitutional and regular conferences, joint agencies, etc. The participation of the Canadian government in a large number of agreements on an equal footing with constituent units (as in the Free Trade Agreement of 2017) shows the respect for the latter from the part of the federal center and the willingness of the federal government to support the two-level sovereignty in Canada.

The Russian Federation. Enhanced cooperation in the Russian Federation has been developed since 1992 in its horizontal and vertical dimensions. The federative system in Russia demonstrates different forms of cooperation among constituent units of federation and constituent units and the federal center.

The well-known Federative Treaty was signed on March 31, 1992 by all constituent units of the Russian Federation with the exception of Tatarstan and Chechnya. It was the first document to form the basis for asymmetry in the Russian federal realm: it consists of three treaties each regulating the relationships of the federal center and the different types of constituent units. The scope of competencies of the latter is different.

The constituent units of the Russian Federation implementing the relevant provision of the federal Constitution (Constitution of the Russian Federation, 1993), initiated bilateral treaties with the federal center. It was in February 1994

when the first treaty was concluded between the Russian Federation and the Republic of Tatarstan. It regulated delimitation of jurisdictional subjects and mutual delegation of authorities between the bodies of state power of the Russian Federation and the bodies of state power of the Republic of Tatarstan. The treaty tried to fill the gap that occurred in the system of delimitation of jurisdictional subjects between the federal center and constituent units. As a matter of fact, the exclusive competencies of the federal center and the joint competencies of the federal center and the constituent units are regulated in detail in the federal Constitution, while the exclusive competencies of the constituent units are being formed residually, i.e. after what is left beyond the competencies of the federal center and joint competencies.

The constituent units of the Russian Federation had followed the first "vertical" treaty and 42 treaties were concluded between the Russian federal center and constituent units.

The treaty administrative practice, however, was active only until 1998; since that year no more treaties have been concluded. At the turn of the century, the tendency in the development of the Russian Federation has changed gradually. The issue of delimitation of jurisdictional subjects between the bodies of state power of the Russian Federation and the bodies of state power of constituent units was regulated by the federal law (Federal law, 1999). Federal laws have supremacy over bilateral treaties. In 2001–2002, most of constituent units terminated the treaties with the federal center. The Republic of Tatarstan was the only constituent unit to conclude a new treaty in 2007 for the term of ten years. Now the possibility and necessity for a new treaty is widely discussed.

Enhanced cooperation was vitally important in a multi-ethnic state like the Russian Federation. We support the well-known thesis of the Soviet era that federalism was a form of solving the nationality issue. We assume that asymmetry in Russia is a priori asymmetry and begins from the very structure of the federal setting, i.e. the existence of six different types of constituent units. According to the Russian Constitution, their status is different: being "a state" for the republics, and an ordinary constituent unit for a krai, oblast, etc. This asymmetry can be called *functional*, or formal, having its basis in the federal Constitution. Enhanced cooperation in its vertical form gives rise to another type of asymmetry - the treaty-based asymmetry; it presupposes the differences in status of the units of one level. For example, all of the republics had treaties with the federal center, but the scope of the exclusive authority they gained out of these was different. Moreover, three treaties - with Tatarstan, Kabardino-Balkaria and Bashkortostan - regulated not only the delimitation of jurisdictional subjects between the federal and regional levels, but also the mutual delegation of authorities, which means equal relationships between the two levels of federation in the issue of delegation of authorities.

As the vertical treaties were no longer prolonged, the constitutional mechanism of delimitation of authorities was left to be a single mode of delimitation of authorities in the Russian federal system. Only the treaty between the federal center and the Republic of Tatarstan had its continuation; it was adopted by federal law in 2007 (Federal law, 2007).

The vertical enhanced cooperation in the Russian Federation in the 90s introduced treaty-based asymmetry into the federal system. The constituent units were each granted its own list of exclusive competencies. This *multi-asymmetric federal system* ensured the democratic rights in a broader sense and in a specific way vis-à-vis the constituent units. The multiethnicity of Russia and the rights of national groups were taken into account. Republics and the other constituent units were granted the possibility to pursue their own manner of development with due attention to national, historic, cultural, linguistic and confessional peculiarities. They have since formed a modern structure of state power and legislation, implemented individual models of economic and social reforms and formed institutes of civil society. The well-known example is "the soft entry into the market [economy – *added by G. Sh.*]" in Tatarstan.

The Russian Federation of 1992–2002 was a multi-asymmetric constitutional-treaty federation. As the vertical dimension of enhanced cooperation does not practically develop nowadays, the form of federation has changed into asymmetric constitutional. However, the possibility of returning to the treaty practices is not prohibited by law and is used by some constituent units.

Results

- 1. An examination of case studies of Switzerland, Canada, the USA and the Russian Federation reveals that enhanced cooperation in modern federations has horizontal and vertical dimensions. The horizontal cooperation is represented by agreements among constituent units of a federation, the vertical cooperation is represented by agreements between a federal center and constituent unit(s). The horizontal dimension of enhanced cooperation is rather strong in all federations, the vertical dimension is well developed in Canada and Switzerland, less developed in the USA and poorly represented in modern Russia. In terms of authorizing enhanced cooperation by law, federations of the Romano-German family Switzerland and Russia regulate it in federal constitutions; federations of Anglo-Saxon family the USA and Canada either do not regulate it through the basic law or do it by virtue of exception, as in the USA. Enhanced cooperation is being developed *ad hoc* due to recognition by courts.
- 2. The implementation of the principle of flexibility introduces the treaty element into the structure of a federation, in particular when the treaties are concluded on the initiative of a federal center or with its participation. The USA and Switzerland are classic treaty federations, while Russia passed the period of a *de jure* constitutional-treaty federation in 1992–2002 and is now a *de facto* constitutional federation.
- 3. Asymmetric federations based on enhanced cooperation belong to the cooperative type of federations. They provide formal and informal procedures and institutions for the collaboration of two levels of authorities, very often with the participation of the municipal level. Cooperative federalism is a unique form of checks and balances that allows the constituent units not to be concerned about any possible seizure of their powers by a federal center and to maintain strong confidence in negotiating cooperation.

Conclusions

Enhanced cooperation inevitably leads to asymmetry within the federal system. Very often, it is the second level of asymmetry following the *a priori* form of asymmetry, being understood as a constitutionally regulated unequal status of constituent units such as provinces and territories in Canada or six different types of units in the Russian Federation. This second level of asymmetry can be called *treaty-based asymmetry* because it originates from the treaties concluded among constituent units and (or) a federal center. The possible results of treaty-based asymmetry are twofold: (1) the formation of enhanced groups of constituent units that solve the issues of mutual concern and (2) the establishment of different status for the units of one level with the backing of a federal center.

Asymmetric federation as a pluralistic form ensures democratic rights, the minorities' rights, representation and participation. Asymmetric federation is a mutual acknowledgement of the status of a federal center and constituent units. In these relationships, the respect for the rights of the units from the part of a federal center is a key element. Asymmetric federations are the response to the challenge of the units for the federal government. The democratic rights in linguistic, cultural, religious and economic spheres do not often require the same level of recognition. One national or linguistic group will be content with the cultural autonomy; the other will be satisfied with the status of the constituent unit of a federation. The asymmetric composition of a federation allows for responding to these different ambitions in different forms. The possibilities vary from territorial and cultural autonomy to the constituent units and associated states.

There is no doubt that asymmetric federation is a more complex and difficult to manage polity in comparison with symmetric federation. However, there are signs of asymmetry even in classic symmetric federations despite it not being authorized by law. Federations as dynamic, self-developing societies accommodating diverse groups and interests react to the challenges of these diversities and keep them united in order to achieve mutual progress.

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MODERN CITY SAFETY AS A COMPLEX PROBLEM

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Abstract

The issue of security has become one of the most important problems in modern cities. The beginning of the 21st century has shown rapidly increasing urban criminality. Large agglomerations without inherent integrated communities and with decentralized governance cannot implement the regime of law and order efficiently. Without security, a city's development and growth is not possible. Many factors influence the condition of security in cities but a leading role is played by two of these: the rate of citizen participation in the criminality prevention process through community integration, and the position of the police force in the structure of the country's organizational law enforcement systems.

Two examples show the importance of the powers of delineation in security matters. In New York City, the Police Department is a part of the city administration and implements policy formulated by the Mayor and the City Council. But in St. Petersburg and all other Russian cities, the Governor/Mayor, City Government/Administration and Legislative Assembly/ City Council are not paramount actors in the security policing process. The federal state, as presented by the Ministry of Internal Affairs of the Russian Federation, formulates security policy and its departments on all levels (regional and municipal) implement it according to principals and through methods fully determined by the federal authorities. These two models and their effectiveness are compared in the article.

Keywords: urbanization; security; safe cities; just cities; crime prevention; city administration; police.

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Introduction

In 2015 the UN General Assembly adopted a plan of action "Transforming our World: The 2030 Agenda for Sustainable Development" – a document that includes 17 Sustainable Development Goals (SDGs) and 169 global targets (United Nations General Assembly, 2015). Goal 11 states the necessity to "make cities and human settlements inclusive, safe, resilient and sustainable". In order to achieve this, access for all to adequate, safe and affordable housing and basic services, and the upgrading of slums should be ensured, and inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management enhanced. These measures will offer an opportunity to reduce social tension in urban areas.

"Safe city". Main characteristics

The urbanization process spreading throughout the world at an accelerating speed is leading to the simultaneous urbanization of modern crime that in turn is becoming one of the most complicated and diversified – in both form and level of gravity – phenomenons of the city life. The gigantic scale of modern cities, the alienation of human beings, and the decline of spontaneous social control characteristic of small cities and rural areas aggravate the social situation as a whole, including negative tendencies in the criminal sphere.

"The Safe Cities Index 2015" (The Economist Intelligence Unit, 2015) based on an index composed of more than 40 quantitative and qualitative indicators that are split across four thematic categories: digital security; health security; infrastructure safety; and personal safety focuses on 50 cities selected by the Economist Intelligence Unit (EIU), based on factors such as regional representation and availability of data. At the top of the ranking we see Tokyo, the capital of Japan (85.63 points), the world's most populous city with 37.9 mil people in the Tokyo - Yokohama agglomeration (Demographia World Urban Areas, 2017). In different categories, Tokyo also performs strongly: digital security (1st place, 87.18 points), health security (8th . 76.26 points), infrastructure security (5th, 89.79 points) and personal security (3rd, 89.31 points) (The Economist Intelligence Unit, 2015, pp. 31–33). From analyses of other city characteristics we see that safety is closely linked to wealth and economic development: Rankings by Income Classification (upper-middle income, US\$ 30000 up to 50000, 1, 85.6); Livability Index (18th out of 140), Worldwide Cost of Living (123 – 1 is the cheapest), Business Environment Index (27 from 82, 1 – the best), Democracy Index (20 from 167, 1 – most democratic), Global Food Security Index (18 from 107, 1 – the most secure) (The Economist Intelligence Unit, 2015, p. 35).

However, as the analyses show, wealth, ample resources, business environment and living conditions in the city are no guarantee of urban safety. But as a whole these factors form necessary conditions for targeted and active policy aimed at reducing crime and raising the safety level of life in a city.

In our article we compare the security models in two cities – New York and St. Petersburg – although in the Safe City Index there is no mention of St. Petersburg. We can however find Moscow there. So we can presuppose that the diffe-

rence from the point of safety between the two largest Russian cities is not crucial – which gives us an opportunity to extrapolate the Moscow situation to a certain extent to St. Petersburg. Furthermore, we should bear in mind the fact that both cities are not independent actors in regards to the policy-making process in the sphere of security – they have no right to determine strategy and make final decisions on methodology and choice of instruments.

Table 1
Main characteristics of New York and Moscow

Main characteristics	Moscow	New York	
Population of the agglomeration (mil. people)*	17.1	20.2	
Safe Cities Index	43 (61.6)	10 (78.8)	
Digital Security	46 (51.54)	3 (79.42)	
Health Security	24 (68.93)	2 (78.52)	
Infrastructure Security	41 (70.65)	16 (84.93)	
Personal Security	49 (45.27)	28 (69.25)	
Rankings by Income Classification	Low-middle income / US\$ 10000 to 30000 – 13 (61.6)	High income / above US\$ 55000 – 3 (78.1)	
Livability Index	73 (from 140, 1 – the best)	56 (from 140, 1 – the best)	
Worldwide Cost of Living	84 (from 103, 1 – the cheapest)	104 (from 103, 1 – the cheapest)	
Business Environment Index	60 (from 82, 1 – the best)	7 (from 82, 1 – the best)	
Democracy Index	125 (from 167, 1 – the best)	19 (from 167, 1 – the best)	
Global Food Security Index	40 (from 107, 1 – the best)	1 (from 107, 1 – the best)	

Sources: The Economist Intelligence Unit, 2015.

The comparison of the largest US agglomeration around New York City and the largest Russian agglomeration forming around Moscow give us an idea of the differences in safety arrangements in these two highly urbanized regions. These differences, as we have already suggested, can be extrapolated to St. Petersburg whose agglomeration of more than 6 mil inhabitants is forming largely in the same way as Moscow's.

Main reasons and basic factors determining the decline of safety in large cities in the 20th and 21st centuries. In search of a way out

The urban growth most typical of our time is characterized by "urban sprawl". The intergrowth of large agglomerations into megalopolises with dozens of millions of inhabitants, the concentration of power in these megasystems,

^{*} Major Agglomerations of the World, 2017.

and the formation of fragmented and weakly interlinked "cities–regions" creates the foundations for the spread of criminal practices and the emergence of new forms of urban crime. In the beginning of the 21st century we can see the evident growth of social tension in the cities due to real estate and land scams together with the money laundering, which produce a serious economic and social crisis. No less important for urban systems is the rise of contradiction and conflicts based on inequality of distribution of public wealth on the territory, and differences in the possibility of accessing infrastructure and services for different social groups living in the same city.

The intensity of centrifugal forces initiated by various interests and needs correlates with the degree of differences between city districts, categories of its inhabitants and social groups. The most vulnerable and therefore the most aggressive of these are groups such as young people who very often can't find their place in a modern city and migrants who are considered by other inhabitants as intruders in their world of values and whose behavior and lifestyle seem inconsistent with the model of socialization typical of a defined city. These centrifugal forces are of an objective nature and the negative synergy formed as a result of their existence snowballs quickly and intensively. In order to lessen tension and raise the safety level it is necessary to form positive synergy by implementing a policy aimed at the creation of "safer cities", "inclusive cities", "just cities".

The history of world cities provides us with a number of examples of a sharp rise in crime and thus a fall in the security level, leading not only to a fall in quality of life concerning safety but also to the lower rate of economic development, and to the formation of a negative city image in terms of public opinion throughout the world. The rise of crime from 1960 to the 1990s, in contradiction to the general opinion that crime is determined by poverty, was characteristic of cities in economically developed countries. One such example was New York City. It once more can serve as proof that there is no direct correlation between level of economic development, inhabitants' income and level of crime in the city. Urban crime itself is a multi-aspect phenomenon depending on various variables of city life. At the same time, different forms of crime may have totally different causes.

Security is a central element of city administration responsibilities. As past experience shows, policy based on repressions and violence as a rule brings mainly negative results. Bearing in mind the fact that the city and the state are the main actors in the process of formulation and implementation of the security policy as a whole and the fight against crime in particular, we want to stress that the city authorities should concentrate on crime prevention with the help of measures that could stimulate city development and ensure social harmonization and situational impact determined by specific characteristic of the city itself.

In his article "The Evolution and Challenges of Security within Cities" Franz Vanderschueren¹ argues that the decisive role in the level of danger to the peo-

¹ Vanderschueren Franz – Director of the Center for Citizen's Security, Universidad Alberto Hurtado, Santiago, Chile, and Coordinator of the team of technical advisers of UN-HABITAT.

ple is played not by the size of the city and the direct risks of organized crime, but by the efficiency of the system and the process of city management. Only a few city management systems have a clear and elaborate policy in this sphere. At the same time, Vanderschueren is sure that in matters of prevention, city authorities have unique possibilities because they can benefit from their proximity to the population and therefore know better regarding the needs and the characteristics of city inhabitants.

A prevention policy demands decentralization as it requires proximity actors in order to be implemented. A central government, by definition, is distant from the reality of cities, not to mention their various neighborhoods, does not know its people and territory, and therefore cannot guide an alliance with local actors necessary for effective prevention policies. It is unable to work actively to prevent the exclusion of certain social groups and layers from social life (Vanderschueren, 2016).

Prevention policy as a holistic strategy requires the use of a clear and rigorous methodology. In order to understand the reality and the causes of criminality it should start with a participative diagnosis (including city inhabitants, interest groups, NGOs, diasporas, religious communities, etc.). A strategic approach to crime prevention and high level security provision needs some sort of consensus among local actors. First of all, it is necessary to work out a model of strategic priorities that will define specific projects that will help to prevent crime.

The implementation of crime prevention strategies includes the monitoring and regular evaluation of these projects and, finally, some supporting policies such as the training of technical teams and communications. Though the focus on technical approaches is important, methodological accuracy is also relevant. Without it, enacting preventive measures is dispersive, dislocated and with little or no impact in the mid and long term.

Vanderschueren identifies three main phases in strategy formulation and implementation processes. The first is the collective learning of tools and the strengthening of alliances between the main actors. It lasts for approximately three to four years. In this phase, continuity, a rigorous approach, leadership and technical teams are the key issues. The second phase requires consolidation of the urban community expressed in terms of social cohesion, a culture of crime prevention, the quality of life and the reduction in crime levels. The third phase is characterized by the adaptation of a successful experience of other cities and in many cases urban strategies which allow for the creation a national urban security policy (Vanderschueren, 2016).

To a large extent the root causes of crime lie in the social environment, this is why the fundamental problem is to ensure coherence and consistency between the crime prevention and the social policy in the city. Efficient prevention demands focusing efforts on vulnerable groups and, at the same time, eliminating (or at least – reducing) the structural factors that generate vulnerabilities. Crime prevention should strive to achieve a "just city" (Fainstein, 2014a) that offers opportunities for the most vulnerable social groups and has clearly formulated, effective prevention approaches articulated by social and urban policies.

The transformation of a modern city into a "just" one is touched upon in a number of research works analyzing this problem from different political and ideological angles, starting with Karl Marx and Friedrich Engels (Marx & Engels, 1972, p. 482) and including such outstanding contemporary scholars as Manuel Castells, Michael Harloe, David Harvey, Peter Marcuse, Enzo Mingione, John Rowls (Castells, 1977, 1978; Harloe, 1996; Harvey, 1993; Marcuse, 2012; Mingione, 1981; Rowls, 1999) and many others. The main bulk of these researches is analyzed by Susan Fainstein in her book "The Just City" (Fainstein, 2014b).

The author's position regarding various actors in the process of enhancing the level of justice in a city that makes it possible to prevent the emergence of depressive districts and residential quarters, and the formation of favorable conditions for inhabitants' criminalization is as follows: firstly, the enhancement of justice is possible in modern developed liberal democracies – a statement rejected by neo-Marxist researchers; secondly, it can be done with the help of various municipal programs and projects with the active mass participation of inhabitants though in some cases urban movement participants' interests can have a negative connotation, for example, they can reflect distrust and hostility towards migrants; thirdly, the capabilities of municipalities in achieving high levels of justice are limited as they have no power to initiate system changes.

This is why Fainstein stresses the necessity to only support urban development that will be free from discrimination and will offer chances for self-realization and provision of optimal quality of urban life, with national social programs. This statement doesn't contradict the idea about the special role of cities in crime prevention and fight against its manifestations. The main obstacle for the implementation of such policy is the lack of necessary institutional arrangements, adequate resources and an efficient system of result evaluation. The Global Network on Safer Cities, launched in 2012 by UN-HABITAT (Global Network on Safer Cities (GNSC), 2012) promotes ideas of joint work aimed at the formation of safe urban systems through collaboration of local actors' coalitions with police and national governments.

British researcher Robin Hambelton in his book "Leading the Inclusive City. Place Based Innovation for a Bounded World" (Hambelton, 2015, ix-x) presents a whole list of numerous protests by urban residents in different countries that were accompanied with violence and brought considerable damage to their own cities: 1980 – riots in Bristol when people protested against tough police actions and M. Thatcher's governmental policies; 2001 – massive protests in a number of British cities; 2011 – new street riots in Bristol (this time – against the opening of "Tesco Express") becoming a sort of a prelude to the same kind of protests in many other cities in the country; 2013 – powerful demonstrations in Stockholm suburbs, protests in Brazilian cities, in Istanbul, and Paris districts; summer 2014 – massive riots in Saint Louis (Missouri) caused by the death of an Afro-American teenager killed by a policeman – a situation that made President Obama interfere, urging calm and promising fair investigation of the case and its roots. Hambelton argues that the main reason for such

events is the "exclusion" of large groups of people from social life and the absence of possibilities to influence the decision-making process that has a direct impact on their lives.

A day without crime. The history of New York City's success

In modern urban history there are some unique moments when as a result of efficient crime prevention and the high quality of the fight against criminal bands, the number of violent crimes show a steady decline and at certain point reaches zero – even if just for one day (Hughes, 2012). This very occurrence happened in 8 Million New York City – one of the most important political and financial centers of both the USA and the world (according to GWA classification) – in 2012. It is necessary to stress the fact that this was a logical result of the efficient crime prevention policy that had been formulated in the early 1990s when New York, a "Fear City", was considered to be one of the most dangerous urban areas in the USA.

The 2017 statistics on violent crimes in the city also shows a steady decline in their number. The results of the New York police and city residents' fight against crime is best illustrated by a special information bulletin (fact sheet) issued under the auspices of Mayor Bill de Blasio and NYPD Police Commissioner James P. O'Neill in April, 2017 (Police Department of the NY City, 2017). There we can find New York crime statistics for the previous week, the previous four weeks in absolute figures and as a percentage of the same period in 2016 as well as 2 years, 7 years and 24 years previously. Most interesting is the historical retrospective, starting with 1990, when there was a significant rise in crime in the city. The formulation and implementation of a city prevention crime strategy and the reduction of crime started at the end of 1993 after Rudolph Giuliani, the former U.S. attorney for the Southern District of New York State, had been elected Mayor.

Table 2
Number of violent crimes in New York City

Type of crime Year	1990	1993	1998	2001	2016
Murder	2262	1927	629	649	330
Rape	3126	3225	2476	1930	1415
Robbery	100 280	85892	39003	27873	15195
Felonious Assault	44122	41121	28848	23020	20457
Burglary	122 055	100 936	47181	32694	12743
Grand Larceny	108 487	85737	51461	46291	43421
G.L.A.	146 925	11622	43315	29607	6626
Total	527 257	430 460	212 913	162 064	99823

Sources: Police Department of New York City, 2017.

Table 3 Changes in number of violent crimes in New York City (%)

Type of crime Year	2016 to 2001	2016 to 1998	2016 to 1993	2016 to 1990
Murder	-49,2	-47,5	-82,9	-85,4
Rape	-26,7	-42,9	-56,1	-54,7
Robbery	-45,5	-61,0	-82,3	-84,8
Felonious Assault	-11,1	-29,1	-50,3	-53,6
Burglary	-61,0	-73,0	-87,4	-89,6
Grand Larceny	-6,2	-15,6	-49,4	-60,0
G.L.A.	-78,8	-85,5	-94,4	-95,7
Total	-38,4	-53,1	-76,8	-81,1

Sources: Police Department of New York City, 2017.

As we have already mentioned, one of the most important conditions for crime prevention and combating is the availability of a clear, distinctive strategy based on the situational analysis and consideration of specific characteristics of the city and its consistent implementation according to all of the basic principles of its concept. In New York there is a long tradition of strategic planning and management – not only for the city itself but also for a large urbanized region of which it is the center. Equalization of material and social conditions on the whole territory of the tri-state New York metropolitan area and the enhancement of justice for all its inhabitants were and still are strategic priorities of all three implemented regional development plans (Regional Plan Association, 2012).

When crime overwhelmed the city, a combat crime strategy as part of the city strategic planning had been worked out under the leadership of Mayor Rudolph Giuliani and NYPD Police Commissioner William Bratton² (Bratton & Knobler, 1998). In 1993 when Bratton was appointed, the situation was so bad that articles in newspapers were headlined "Rotten Big Apple" (Baker, 2015). It seemed to the residents that the city was under siege. In the early 1990s the 25 per cent increase in the size of the police department and the "Safe Streets, Safe Cities" programme of the then Mayor David Dinkins did not bring the desired results. By 1994 there was the impression that the police couldn't control anything. Bretton was sure that the police's mission was not only to react to the committed crimes but also to control and prevent them. To his mind, the main method of such control and prevention was to control street conduct. To do this a concept of "zero tolerance" was formulated and implemented in the city. The crime rates began to drop and continue to do the same nowadays.

The "zero tolerance" model was thoroughly analyzed by both American and foreign specialists (Walklate & Evans, 1999; Wacquant, 1999). It was highly ap-

² William Bratton – police officer and commander for 45 years till 2016. Police Commissioner of New York City 1994–1996 and 2014–2016, initiator of the "zero tolerance reform".

preciated though not all of its components were considered undisputable. Thus, the more aggressive style of police work in some cases led to abuse of authority, for example, the use of weapons against a man who had refused to show a standard ID with a photo. Analytics point out the following main elements of the New York model:

- 1. Specific targets for reducing crime were set for the Police Department and its officers: to remove weapons from the streets, to curb youth crime in schools and on the street, to force drug dealers out of the city, and to stop domestic violence.
- 2. Information systems have been significantly improved to ensure accurate and up-to-date data on the state of crime, especially in "hot spots", as well as trends in the situation during the week on the ground. Prior to this, such information was only available on a quarterly basis and at a higher level of aggregation.
- 3. The chiefs of the police precincts assumed responsibility for the state of crime in their territory, and more specifically for the development and implementation of the strategy for reducing crime in their territory.
- 4. Weekly meetings of senior leaders were introduced together with the chiefs of the precincts. During these meetings, special criminality maps were used to identify the most dangerous areas and points, active monitoring of police stations and their leaders was conducted, and resource allocation was planned.
- 5. The police were encouraged to severely curtail minor offenses in order to prevent the formation of patterns of deviant behavior and to suppress of the use of weapons. Other strategies were also used: observation of the situation in the territories by policemen in uniforms or plain clothes, the establishment of observation posts to search for stolen vehicles, the organization of "vertical patrols in buildings", the use of rules for the suppression of illegal business, and the operation of identifying drug sellers using "control purchases".
- 6. Local police chiefs were given the right to use detectives and specialized units to solve crime problems in the areas indicated by them, and not only within their own remit as before.

The concept became the basis of police actions and provided for punishment and detention for minor violations (hooliganism, being in a state of alcoholic intoxication, vandalism, etc.) as preventive measures against more serious crimes (theft, rape, murder), committed by the same persons who had been involved in previous violations of public order.

The special role of the mayor of the city and the chief of police in the development and implementation of the described model is connected, primarily with the fact that the issues of combating crime by all available means are to a decisive degree administered by the city authorities. The head of the New York City Police Department – the Police Commissioner – is appointed by the Mayor. He has more than 40,000 professional policemen in his subordination. The Department reports directly to the head of the city administration and acts exclusively in accordance with the municipal legal acts passed by the City Council. After the election of B. de Blasio, on January 1, 2014, William Bratton, author and main inspirer of the success story, was again appointed the Police Commissioner.

In 2014 the problem of combating urban crime exacerbated anew due to the murder of a black teenager by a white police officer and provoked intense controversy between Giuliani and the current mayor of New York City Bill de Blasio, as well as a rather harsh reaction from the New York Police. As a sign of disrespect to Mayor de Blazio, thousands of policemen turned their backs on him. A blatant challenge was demonstrated during the funeral of officer Wenjian Liu killed in retaliation for the death of several black people at the hands of the police.

On NBC's "Meet the Press" (Fisher, 2014) program Giuliani insisted that Darren Wilson, a white police officer in Ferguson, Missouri, who fatally shot 18-year-old Michael Brown, should be acquitted. He argued that 93 percent of black people are killed by other black people and the tragedy in Ferguson was an exception used by racist incendiaries. New York policy in Giuliani's time as Mayor saved more Afro-American lives than in any other period of the city's history. Giuliani explained that he and other New York City mayors had worked hard to make New York Police Department "as proportionate" as possible to reflect the racial makeup of the city.

Many black children are alive thanks to this policy. White police officers would not appear in areas where black people live if they did not kill each other. The danger for a black child in America, according to Giuliani, was not a white policeman, but another black person, and the responsibility was on the black community to reduce the reason why the police officers were assigned in such large numbers to the black community. Black people commit murders eight times more often than any other category in American society.

The current mayor of the city, Bill de Blasio (Mcduffee, 2014) who positions himself as a fighter against racism (married to an Afro-American and has two children) expressed his disagreement with Giuliani's opinion, accusing him of a fundamental misunderstanding of the reality where a white child is in a different position than the black one: any action in the presence of a policeman – sudden movements, the desire to take out a mobile phone – may be misunderstood if it is a young man of color. We should begin a frank dialogue about the problems wherein parents fear that their children are at risk of interacting with the police, while the latter should protect them.

The words of de Blasio prompted city policemen to say that they protect all the children of the city from violence, regardless of skin color (Altman, 2014). The conflict arising in this context demonstrates a high level of complexity and sharpness of contradictions in the heterogeneous – multinational, multiracial and multi-confessional city. Nevertheless, the New York example gives hope.

To understand what strategies to combat crime can be effective in municipalities and how this affects the composition of residents, their property status, employment and other factors, an analysis of specific municipalities is needed. The situation in each individual case is influenced, among other factors, by an understanding of what the local community is and how it is defined as a whole. In understanding the municipality and the local community, which is important for addressing the problems of crime roots in certain parts of the city (often in the central part, in the "old city"), the following circumstances are most significant:

- the location in a certain place (in a geographical and topographical sense), a sense of attachment to the territory and its way of life;
- the presence or absence of social contacts and connections;
- the existence of a symbolic image of the territory and the local community;
- the presence of some common characteristics for a significant part of the residents (occupations, age, social and property status, ethnicity, etc.);
- awareness of the role of the municipality as an engine of collective action.

Often these characteristics are closely related to the perceptions of residents about the state of crime in their part of the city. In the last decades of the 20th century many municipalities in the US and Europe formulated and implemented their own security strategies as a reaction to the growth in crime. The notional shift from "fighting crime" to "ensuring security" meant a growing understanding of the need for inter-level and interagency cooperation within the framework of this activity.

Quite indicative is the example of security in the southern Bronx (in the context of the New York City reforms). In 1993–1994 the situation in this neighborhood was one of the most difficult in the whole city: many newly arrived migrants (mostly of Hispanic origin), unemployed and in need of social benefits, health insurance, etc. The level of reading and math skills (standard criteria for assessing the level of education) was significantly lower than the average for the city (less than 30% of students in both subjects showed knowledge at the standard level).

A group of researchers (Delgado et al, 2015) analyzed the matter of the reduction in residents' reporting various offenses and crimes to the police. As a result, the following conclusions were drawn:

- 1. The more active and constructive position of the police precincts contributed to the reduction of offenses and, accordingly, to the number of reports.
- 2. The best information support the allocation of the most sensitive points made it possible to concentrate police actions, for example, to send special patrols to certain parts of the district.
- 3. Simultaneously, the decrease in the number of reports was connected with the overall decline in crime in the city and in the United States as a whole.

In general, the experience of New York City shows that the political will of the inhabitants of the city and its authorities can bring exceptional results in the struggle for a higher level of justice and security, but this is impossible without the appropriate institutional conditions (powers, resources, understanding the severity level of the problem). In addition, this struggle can never be completed and constantly requires new efforts, ideas, concepts and consensus building in the urban community on the choice of methods for this struggle and the means of their provision.

From "gangsters Petersburg" to "safe city"

On April 3, 2017 in St. Petersburg, the first large-scale terrorist act occurred in 90 years of the city's history: on the platform between the "Technological Institute" and "Sennaya Ploshchad" stations of the St. Petersburg Metro, a suicide

bomber launched an improvised explosive device. A second explosive device was discovered at "Ploshchad Vosstaniya" station and was rendered harmless by sappers. Immediately after the explosion, all train movement in the metro was completely stopped and all passengers were evacuated.

Such incidents happen quite often in large cities, however, it is not they, as a rule, which make the development of the entire system more difficult, destabilize the situation, and negatively affect the quality of life. Every day in cities with multi-million populations a large number of crimes are committed, including violent ones, that destroy the integrity of the system and form entropy "black holes" that absorb resources and create fear among residents, uncertainty about the future, fears for one's own life and the lives of their children, and hatred of "others", whoever they may be: members of another race, ethnic or linguistic group, culture, social stratum, etc.

The choice of St. Petersburg as an object of analysis is not accidental. According to one of the investigators of the criminal situation in the city, journalist Andrei Konstantinov (Konstantinov, 2016), the wave of organized crime that swept the city in the early 1990s was not only related to changes in Russia – democratization, the introduction of private property, a decline in the level of authoritarian pressure on society, etc., but also rooted in the history of the country and the city itself. In his book, A. Konstantinov included chapters on the first years of the history of the city, the imperial period of its existence, the first years of Soviet power and its further struggle against crime throughout the seventy years of the existence of the socialist system. The depth of analysis and the multidimensional nature of the perception of the problem of crime in a large city are particularly visible in the chapters describing the "dashing nineties" when the number of murders in St. Petersburg reached 1,000 per year (Akhmetzhanova, 2015).

Without delving into the past, especially since the modern system of criminal statistics has developed relatively recently and does not allow open access to existing data from the 1990s, we will analyze the state of crime in St. Petersburg in last few years. They quite sufficiently testify the significant achievements of law enforcement authorities, however, they provide additional data for further consideration of what conditions and factors of influence are insufficient for the final stabilization of the situation and prevent further improvement of the security level in the city as a whole and in its separate districts and quarters.

Table 3
Crime data for St. Petersburg

Type of crime	2016	2015	2016 to 2015 (%)	2010	2016 to 2010 (%)
Particularly serious	7566	7966	-5.0	5196	+31
Serious	14052	14540	-3.4	20461	-31
Murders and attempted murders	212	302	+4.4	427	-50
All	52351	56480	-7.3	64370	-19

Type of crime	2016	2015	2016 to 2015 (%)	2010	2016 to 2010 (%)
Unsolved					
Particularly serious	5968	5844	+2.1	2822	+52
Serious	8712	8848	-3.4	11362	-23
Murders and attempted murders	21	23	-8.7	58	-63
All	26506	25845	+2.6	30138	-12

Sources: Prosecutor General Office of RF, 2017.

Based on the general definition of the "safe city" parameters as "just" and "inclusive", as well as the role in the formation of a system with such parameters of various parts of its management contour and the development of the principles of its functioning, we must determine those basic elements that play a decisive role in this process. In the first place, in any case, it is the city leader and the head of that part of the law enforcement system that directly performs activities to maintain law and order round the clock. In the case of St. Petersburg, as well as in the New York City variant, this is the responsibility of the police force, which is headed by the Central Administration for Internal Affairs of the City of St. Petersburg and the Leningrad Region (The Central Administration of Internal Matters for St. Petersburg ..., 2017).

St. Petersburg is not a municipality. Being a subject of the Russian Federation, in fact, it can be characterized as a city-state. We fully agree with S. Feinstein's idea of the special role of municipalities in the formation of a "fair city" that is necessary to prevent crime and reduce the crime rate in it. But in the situation of a citystate, we are sure that the greater part of its responsibility as an administrative body of the constituent unit of the Russian Federation should be an active involvement in ensuring the effectiveness of integration and consolidation of the urban community and local government. In the federal cities of Russia - Moscow and St. Petersburg - the role of local self-government is reduced mainly to issues of gardening and landscaping, as well as the execution of certain state powers transferred to them, for example, in guardianship and trusteeship. However, the list of issues of local importance of the 111 municipalities in St. Petersburg includes participation in the prevention of law in the city. At the same time this participation is strictly regulated by federal legislation and the legislation of the subject of the Russian Federation. Similarly, activities are regulated in the field of the prevention of terrorism and extremism, participation in the creation of conditions for the implementation of measures aimed at strengthening interethnic and inter-religious harmony, the preservation and development of the languages and culture of the peoples of the Russian Federation residing on the territory of the municipality, social and cultural adaptation of migrants, and prevention of interethnic conflicts (On the self-government organization in St. Petersburg, 2017).

The statements above are to a large extent formal, and municipalities do not have sufficient authority or the necessary resource base to follow an active and coherent strategy in this sphere. In addition, if we agree that it is necessary to form

coalitions at the local level in order to actively confront hostility, hatred and crime, then one of the main questions about the interaction of municipal authorities (that have almost no real power) with business, NGOs and, primarily, the police remains unanswered. In addition, the Main Administration for Internal Affairs is a part of the of the federal ministry structure, subordinated to the Minister of Internal Affairs, and practically is not able to pursue its own policy in accordance with the peculiarities of the city. Moreover, such a structure can't take into account the specific characteristics of city districts and individual municipalities.

The difference between the parts of St. Petersburg is as striking as the differences between the areas of New York City. This can be judged by various statistical indicators, starting with the characteristics of the housing stock, including the age and ethnic composition of the population, and right up to the criminal situation. On May 4, 2016, a map of the most dangerous districts of St. Petersburg was published on the website of the RBC television channel. It was developed on the basis of the data of the Central Internal Affairs Directorate, the St. Petersburg Information and Analytical Center, the Committee for Informatization and Communication of the Government of St. Petersburg, and the Committee on Legality, Law and Order and Security. In accordance with the data presented on this resource, the greatest number of crimes per thousand inhabitants is committed in the Admiralteysky, Kronshtadtsky and Central districts of the city. The clearance rate is the highest in the Kronstadtsky district because it is a fairly closed system. However, the inevitability of punishment does not stop criminals.

The main features of the Admiralteysky and Central districts include the preservation of a fairly large number of communal apartments in poor condition that attract low-rent migrants and other marginal categories, and at the same time, the presence of a large number of places of mass congestion of tourists and people visiting theaters and concert halls in the evening.

Most frequently, serious crimes are committed in the Admiralteysky, Moscovsky, Frunzensky and Kirovsky districts, and least frequently in the Petrodvortsovy, Pushkinsky and Kurortny districts that are considered to be of elite character and are located in the suburbs. Most murders and attempted murders are committed in the Central, Nevsky and Moscovsky districts.

Conclusion

Further movement of St. Petersburg towards being a safe and just city depends to a large degree on external factors that the Northern capital can't control to the necessary degree. Therefore its ability to achieve success equivalent to the success of New York is greatly limited.

First of all it is necessary to point out the fact that one administrative body is responsible for police operations in the City of St. Petersburg and in the Leningrad Region – two subjects of the Russian Federation with totally different conditions of life and work. Consequently, types of crime in a highly urbanized city and in rural areas are, mildly speaking, far from alike. So it is necessary to have specialists with two different kinds of experience and mentality. At the same time the leadership of the Central Administration for Internal Affairs has

to establish and preserve good contacts with two different Governors and regional governments.

The second problem is that the Head of the Central Administration is appointed by the federal center and the choice of that particular person can be determined not by the interests of the city but by some other considerations. Thus, on June 11, 2011 under the decree signed by President Dmitry Medvedey, General-Colonel Mikhail Sukhodolsky was relieved from his post as first deputy interior minister and given the post of head of the Central Administration of the Interior Ministry for St. Petersburg and the Leningrad Region, replacing the discharged General-Lieutenant Vladislav Piotrovsky. From the very beginning this led to opposition from St. Petersburg police officers (Vyshenkov, 2012). The main reason for this was that this man who had never worked in the city before immediately started to misuse his power by introducing "innovations" which did not coincide with the unique characteristics of the Northern capital of Russia. At the same time his style of leadership, full of arrogance and self-confidence, contradicted the tradition of comradeship that dominated the St. Petersburg police administration. The result was a public conflict that led to Sukhodolsky's dismissal in February 2012. Sergey Umnoy, the current police chief, was then appointed. His entire service in law-enforcement bodies since 1986 have been connected with St. Petersburg (Leningrad) - starting as a policeman in the patrol and guard service and moving step by step to a position of the head of the police.

One of the main principles of civil service functioning in today's Russia is that of rotation. The heads of the regional departments of federal bodies and their deputies responsible for control and supervisory functions are subject to job rotation which is considered to be an efficient mechanism for fighting corruption. Under current legislation, top police officials are transferred to similar posts once every five years. In the opinion of the Russian ex-Minister of Internal Affairs, Rashid Nurgaliyev, such a reshuffle helps newly-appointed leaders to "get a fresh look at the situation, see the problems and define ways to settle them" (Internal Ministry, 2011).

A change of leadership is certainly necessary. However, in the case of such complex systems as St. Petersburg, there is a real danger that the process of the new police leader's adaptation will be prolonged and lead to a decrease in the overall level of security in the city. In such cases, in our opinion, a person who has no experience of life and work in the city should not be considered a possible candidate for replacement. It is the responsibility of the city authorities to control this kind of decision-making process in Moscow bearing in mind the interests of St. Petersburg and its inhabitants, using all the lobbying resources they have. In the current situation, without efficient collaboration with the federal center, a qualitative leap toward a safe city is impossible. But in the future, decentralization in this sphere is highly desirable.

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ADVOCACY OF PUBLIC INTEREST AS THE IMPERATIVE FOR IMPROVING PUBLIC ADMINISTRATION

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Abstract

In the face of the increasing complexity (multidimensionality) of the transforming Russian society and the emerging pluralism of socio-political interests, a growing need in civil society for strengthening the functional capacity of the institute for advocacy and promoting public interest in the public sphere was shown. The modality of this request is enhanced by the crisis conditions of economic development. With the dominance of administrative-bureaucratic approaches to public policy there is a falsification of feedback and a dysfunction of the public sphere in the direction of strengthening the influence of corporate and bureaucratic interests against the public interest, which inevitably leads to increased social tension and protest moods, as well as to a declining level of confidence in state activities and the legitimacy of political power. The subject of this research are successful practices in identifying and advocating the public interest. Among them: the administrative guillotine, associated with the reduction of terms for rendering state and municipal services to entrepreneurs in the Perm region; the preservation of the status and location of the Children's cancer hospital in St. Petersburg; protection of relict lake Harovoye in Kazan; defending the rights of citizens to common house property in Kostroma. The main questions arising while studying the above practices are: who and how articulates the public interest?; what is the role and influence of civil society institutions on regional policy formation?; And, how and in what way are concerned citizens becoming "actors" of public policy, etc? The case study approach was selected as a basic method for this project. The method of content analysis of available publications was applied in all of the selected cases. Descriptions of cases were made on a unified format. In-depth interviews and focus groups were used for clarifying details. It is shown that the development of institutions for public participation, and mechanisms for cross-sectoral social partnership contribute to streamlining interaction between authorities

and society. In the conditions of incompleteness of processes for socio-political transformation these approaches also enhance the effectiveness of the social representation of public interests and stimulate the reform of public administration in the direction towards openness and transparency, that help to more adequately take into account the increasing mobility and pluralism of social groups and their socio-cultural preferences. This article summarizes the results of case studies in three Russian regions (Kostroma and Yaroslavl oblasts plus the Republic of Tatarstan). The main conclusion is that in improving the functional capacity of the institute for identification, formation and advocacy of public interests can be reached through enhancing the procedures for citizen engagement in decision making processes, and considering it as an important resource and the basis for improving the quality of modern governance and democracy.

Keywords: public policy; criterion; institutions functional capacity; advocacy of public interests; government, civil society; public participation; state control.

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Introduction: New Challenges for Public Administration

The problem of the identification, formation, evaluation, and advocacy of public interests is one of the poorly explored issues of the social development of Russia and simultaneously it is a challenge facing the state structures and civil society. It is obvious that with increasing differentiation in the structure of society, increasing environmental, geopolitical, demographic and other risks, many functions of the modern state are complicated and face the challenges of a more subtle and adequate reflection of the system's diverse interests and the needs of society. Any huge and extensive state apparatus is unable to cope with this problem. There is a growing need for the active engagement of society in the processes of public policy formation (Rhodes, 2003; Hoppe, 2009; Hoffe, 2009). The concept of public policy research draws attention to the nature, process procedure development and implementation of programs for the activities of the authorities at different levels. In general, under public policy (hereinafter PP) one can recognize the programs and priorities of the authorities, as well as the mechanisms and technologies of their implementation, designed on the basis of the expectations of different social groups.

Today in Russia, the field of PP is rapidly expandin. Within this field the "agenda" is formed and the monitoring for programs implementation is realized. (Kaufmann, 2010). The structure of public policy is ever complicated. It consists of macroeconomic policy, social policy, communication and information, cultural-symbolic, ethno-national, environmental policy, security policy, etc. The process of implementing public interests and producing public goods becomes a centre pairing differentiated infrastructure of the public sphere. Thus, transformation processes in the public sphere lead to an increased role in the PP formulation and implementation of both state structures and civil associations, which undoubted changes the system of their relations towards greater cooperation.

Two qualitatively different systems of social interest representation – electoral-party and functional – have developed within society (Almond, Powell, 1995; Fabriani, 1990). But the role of these systems within public policy is unequal. The system

of electoral representation is dominant in Russia. In its turn, the system of functional representation in the process of the socio-political interaction of society and power plays an auxiliary role. However, over recent decades society has become significantly complicated due to the expanding diversity of social interests, of which not all could find its place in the system of party and electoral representation.

The erosion of old social cleavages (especially class) occurred, which again led to a crisis in the system of representative democracy institutions. The system of political administration became substantially complicated and thus demanded more intense socio-political interaction with society (Janda, Kwak, 2011). In other words, all of the above changes required a transition to the direct (not mediated by political parties and elections) format of interaction between the state and public associations, which determined the increasing importance of the system of the functional representation of interests in contemporary societies. All of this raised a very relevant question about the nature of the models of interaction between the state and the so-called "interest groups" (Blondel, 1995; Dzhordan, 1997). The pluralist model considers the political process as the pressure from various interest groups on the authorities and the redistribution, respectively, of power in society. In this case a policy is an authoritative allocation of scarce government resources under pressure from interest groups, which are active factors of the political process, while the state represented by the government as a whole performs the function of a passive response to interest groups. A pluralistic approach does not allow us to explore politics as a system of interconnected relations between the state and society in which the state is not just an agent responding to the call of pressure groups, but an active participant in cooperation (Alekseeva, 2001; Fraenkel, 1991). An analytical model of corporatism in its own way solves the problem of the relationship between public interest and government agencies. In contrast to pluralism, corporatism views the state as a key element in the relations between interest groups and politics (Schmitter, Grote, 1997). In accordance with this concept, a limited number of compulsory, non-competing, hierarchically ordered and functionally distinct entities are valid in policy approved or licensed by the state and seek a monopoly on representation in the relevant field. As a rule, corporatist literature includes consideration of the most influential groups - business and labor, and in this sense, it leaves in the shadow many other participants in the political process today which oppose corporatism and build their own relationships with the state, not through a hierarchical relationship. The network approach to policy and governance is developing its research strategy on the basis of a new relationship between the state and society, and between the public and private spheres of social life. The common credo of the policy networks theory is that in contrast to pluralism and corporatism, it is able to "catch" the complexity and fluidity of the contemporary process of political decision-making and policy formulation (Rhodes, 1997). The theory of networks modifies the understanding of power centered policy towards a policy of mutual responsibility and obligations. Thus, the network approach, by emphasizing the increasing significance of the "horizontal lines" in social development, indicates the limitations of hierarchically organized political administration, as opposed to the concept of governance, in which the intensity of relations between the state and society are considered to be bases for an increase in the efficiency of public administration, on the one

hand, and democracy on the other. The philosophy of this approach was influenced by communitaristic criticism of liberalism and the liberal state (Smorgunov, 2014). In Western thought, this structural shift in the system of criteria for degree of openness and governance quality have led to a transition from the paradigm of "New Public Management" (NPM) to Public Value Management (PVM), when the autonomy of the state is relative and it is limited by the structures of social power. The PVM concept goes beyond the economic approach to public administration and introduces a number of imperatives that describe relations between the state and society in a different way (O'Flynn, 2007). The concept of "co-management" (governance) and good governance (effective management) were first presented to the world community in 1997 in the documents of the United Nations (Report on Human Development 1997). The implementation of the concept of good governance depends on a well-developed and stable institutional and political environment in the state. The institutional environment must provide the ability to accumulate the opinions of numerous political and public actors to facilitate the exchange of opinions, seeking consensus when making political, economic, social and other decisions, with the support of the public.

This stimulated the development of a new concept of governance for the twenty-first century, providing for the wide access of citizens and businesses to governmental information, primarily in the areas of education, health and social security, employment, tax, licensing and the conduct of business, public procurement and government contracting, and international trading operations. The concept also envisaged providing citizens with new channels of communication that allow them to participate in the development of rules that define the relationship between government and citizens, and to exercise permanent control over how these rules are enforced (Manning, Parison, 2003).

Research Methodology

The subject of our research is successful practices in development together with the advocacy of public interest. In the course of the project we carried out in 2012-2014, we identified and, according to the common format, described about 20 very effective practices for the advocacy of public interests from different regions of the country (Praktiki formirovanija..., 2014)]. Among these: the administrative guillotine, associated with the reduction of the terms of rendering state and municipal services to entrepreneurs in the Perm region; preservation of the status and location of the Children's Cancer Hospital in St. Petersburg; protection of the relict lake Harovoye in Kazan; and advocacy of the rights of citizens to common house property in Kostroma. The main goals and objectives of the analysis are: who articulate public interest, and how?; what is the role and influence of civil society institutions in the formation of regional policy in relation to problem situations - both from concerned citizens and from issues "subject to" public policy, lobbying the interests of the public?; what is the role and possibility of different venues?; and, what tools defend the public interest effectively and how well are citizens and public bodies ble to apply them? The case study approach was chosen as the basic method. One case for detailed study was selected in each region

(Opportunities and barriers..., 2014). In the Republic of Tatarstan it was the conflict of the protracted confrontation between the residents of the houses around Lake Harovoye in Kazan plus environmentalists against the Tanarstan Ministry of Land Property which has tried to destroy this unique pond by using this territory for new urban development. In Kostroma we studied the case associated with common house property (CHP) at the level of urban and rural municipal formations. Since the mid-1990s, the practice has arisen whereby the CHP of the owners of apartment houses (cellars, lift wells, other premises, etc.) were alienated to third parties. Particular damage to the house and its inhabitants was caused by the selling of technical basements and attics to third parties. Under the Housing Code, the ability of citizens to self-manage their housing could not be realized in the absence of possession of the subject management of the common property of the house. In Yaroslavl we studied the case associated with the engagement of representatives of the NGO community in work regarding the independent evaluation of the quality of social services, delivered by both state and municipal institutions in the region. In each of these case studies, the content analysis of publications method was applied. A description of the case studies was implemented on an unified format. In-depth interviews and focus groups were used as basic instruments. In each region the government officials, staff of NGOs and public associations, mass media representatives, businessmen, academics and civil society activists were interviewed as respondents (from 35 to 40 persons).

Civil Society's Request for Efficient Institutions Enabling Public Interaction with the State

Russian practices and the format of the publicity of its interaction with civil society are still far from meaningful, or high managerial requirements of Good governance. Nevertheless, the events of administrative reform related to the formation and introduction of the standard of openness to the activities of federal bodies of executive power (Standart..., 2014), implementing a new request for communication openness, including network communities, in new ways highlighted the significance of the study of the phenomenon of the publicity of public administration. The request for well-functioning institutions of public interaction is increasingly focused on by civil society. In our studies, we relied on the analysis of Russian practices in the functional representation of interests, taking into account non-hierarchical social structures based on the priority of public values. In order to compare the efficiency of different institutions of public policy, we have proposed a new criterion – the functional capacity of public policy institutions¹ (Yakimets, 2014; Nikovskaya, Yakimets, 2015). We calculated the functional ca-

¹ The Essence of the functional capacity indicator for the PP Institute means the proportion of respondents who put a particular PP Institute in a 10-point scale scores from 6 to 10 points, inclusive, to the total number of respondents evaluating this PP Institute. We recall that in the study of the status of PP in the regions, we interviewed representatives of the three groups of respondents (based on the target sample) – state and municipal servants, representatives of small and medium-sized businesses and NGOs. Each of them were asked to rate on a 10-point scale the effectiveness of PP Institutes or mechanisms and the effectiveness of key players and actors in PP.

pacity of the PP institutions for a number of areas based on data received in surveys in 2012 and 2013 in many regions (Nikovskaya, Yakimets, 2013). Among about 20 PP institutions and mechanisms the following were found to be of low functional capacity: mechanisms of anti-corruption, regional healthcare system, mechanisms of public control over the activity of authorities, and mechanisms for the identification and advocacy of public interests.

Not all PP institutions and mechanisms with low functional capacities can be improved at the federal level. It is the representatives of the regions who will have to decide what needs to be improved first. To ensure the sustainability of social development, an important principle of "horizontal integration" in institutional reform has to be applied. This suggests that the transformation of institutions from the public sphere is not isolated from socio-political actors, but rather it is in close cooperation with the advocacy and promotion of the interests and expectations of the main agents of public fields in the region, who are interested in the effective functioning of the PP institutions.

The principle of publicity has made democratic control over state activities possible. Under the conditions of forming an anti-crisis strategy of development, particularly important is the institution of feedback, which allows the authorities to catch trends in the development of social processes, to make corrections to management decisions, to channel the accumulated social tension, and forces the population to trust in the capacity of representation of their interests, and the right and opportunity to influence the adoption of socially important decisions.

Thus, the problem of studying approaches to the advocacy of public interests was actualized. The need for such a study in Russia is determined by the polarity of the authorities' actions. On the one hand, a package of laws was adopted, which have positive norms and regulations: a program of NGO support, the introduction of the business Ombudsman institute and the spread of the Ombudsman institution to every Russian Federation region, the simplification of the rules of registration for political parties and social movements, partial change of the election legislation, the introduction of governors elections, the redistribution of financial powers between the state and the municipalities, and a system of independent quality assessment of social services. On the other hand, there are actions of a disturbing character: the introduction of the "foreign agent" concept for NGOs, partially financed from abroad (which is dependent on the participation of the NGOs in political activities, however criteria for evaluating such an feature is not clearly described) (Zakonodatel'stvo..., 2014), the tightening regulation on rallies (Ob uzhestochenii..., 2017), a return to the "diffamation norm" in the criminal code (Kleveta i lozhnoe obvinenie, 2012), and a toughening of control over Internet activity (Trojnoj udar..., 2016), etc.

The Status of Institutes Generating and Promoting Public Interest in a Regional Dimension

The problem of identifying and advocating public interest, in respect of which our research has shown a significant imbalance (Nikovskaya, Yakimets, 2014), is closely connected with the most important function of the public sphere, in which the interaction of civil society and the state allows for the establishment – through public discourse – of public interest. In this process all three components – the quality of the development of civil society, the quality of public administration focused on dialogue with society and which considers it as the most important resource of social development and an important factor in the adoption of socially important decisions, and the state of the public sphere itself (transparency and accessibility for the variety of private, particularistic interests) are important.

In summarizing materials of the qualitative research conducted in summerautumn 2013 with the participation of 35–40 experts from three regions (Yaroslavl and Kostroma regions and the Republic of Tatarstan) about the interaction between civil society (represented by social NGOs) and regional authorities in solving problems related to identification and advocacy, we can distinguish some peculiarities of this process.

It is well known that public interest is not a mechanical sum of private and group interests. It is born at the intersection of the joint requests and expectations coming from "below", from society, and decisions on the promises coming from above, from the political and state bodies. These signals occur in the public sphere and, through dialogue, mutual reflection, and active discussion, are much sought after points of agreement, conjugation and solidarity for the formulation of common goals and priorities, forming the basis of public interest.

The ability of civil society to have such an interaction with the government and to understand the public good and interest, some researchers have called it citizenship, or a civil culture of interaction with the state. The main difference with civil associations is that they serve a public purpose, working towards the public good. The role and quality of public sphere development is very important in shaping and advancing the public interest.

The public sphere appears, on the one hand, as a forum for the collective search for citizen's common goals and the means to achieve them, and on the other hand, as a field of practical realizations of these goals in a system of relations and institutions that form the public sector of society and the state. The key features of the interaction between government and society are dealing with shaping public policy and expressing public (social) interest.

The articulation of the main clusters of society's interests in the public space are a means to and a prerequisite of a societal identity which defines the essence and main thrust of the state's public policy. Of concern to the society interests should be discussed, understood, in order to the authorities, and the public itself were able to notice them and appreciate their significance. Then on the agenda of public policy is to identify the issues that really concern the public, as well as to determine their priorities and sequence of their decisions. Practically representatives of all three regions noted that the institutional framework of interaction in the public space in general has developed thus integrative institutions of public interaction were created: there are relevant departments on public relations within the administrations of regions, and public chambers in the regions are functioning. Regional Civil forums have some impact, but... "in order for the channels of feedback between society and government to work effectively, the necessary steps on both sides are needed. The relevant authorities need to communicate ef-

fectively with their target audience. The government must be ready for dialogue not only "on paper" but in reality." (interview, Yaroslavl). Almost all of the participants of the expert community evaluated the Court of General Jurisdiction as the most cumbersome and inefficient tool in protecting the public interest: "Usually officials dispatch owners of a common house property to the court. But it is a very unproductive problem solving technique, wasteful of time and money with unpredictable results. The court often keep themselves in a pro-government position" (focus group, Kostroma). Regional media plays weak role in shaping public opinion and, consequently, in attracting an audience for reflection and crystallization of the public interest: "the Regional media provide an opportunity for the public to speak or present their point of view only along with the governmental view" (interview, Kostroma).

The Yaroslavl community members clearly indicated that the media are not instruments for forming and conducting real public opinion in the region: "on the one hand, the media are dependent, being financed and therefore they give a unilateral interpretation of the situation. On the other, this is corrected by the Internet. If the information on TV, radio or in newspapers gives filtered news then discussions in social networks and electronic publications can reveal the true picture". In a problem situation, the role of the media is supplemented with online resources, created by the authorities or specifically for the solution of the problem: in Yaroslavl the portal "people's government" is actively working, in Kostroma – through its Internet site (tsgdom.ru.kos), Internet reception rooms, and Internet forums.

But not all interested respondents and proactive citizens involved in the discussion and solution of problematic situations have access to them. It appears that individuals are more inclined to personal channels of communication with the authorities, including the informal ones, which demonstrated the high importance of direct access to those officials who directly take executive and administrative decisions. As a rule, online communities use a signalling function to inform the authorities about the significance of the problem and to mobilize their supporters.

The qualitative surveys in all three regions have shown that particularly in demand nowadays is the role of civic education: "in recent years, the city Administration (since March 2014), under pressure from the public began to hold training seminars (Kostroma city Council Housing managers, etc.)" (focus group, Kostroma). This indicates the perceived importance of a certain competence on the part of civil society in cooperation with the authorities. It turned out that not only the necessary skills of a qualified expert and analytical activities that allow you to systematically see the problem, but it also requires narrow expertise which is aimed at addressing the narrow subject areas of public life. Not all organizations are ready for such systematic and meaningful interaction. The dependent position of public associations and the inability to be engaged in constructive interaction with representatives of the civil service is retained. Thus, representatives of the Kostroma public organizations pointed out the lack of business negotiations skills of business negotiations in the owners of common house properties and their representative social organizations, and the lack of tolerance and professional knowledge in the field of law and regulations.

Experts of all three regions noted that when solving problems for the advocacy of public interests, the crucial role remains with the state and its bodies. The line on the dominance of state bureaucracy in the public sphere is applied to all structures of society. In relations with civil society organizations and the business community, the authorities give priority to the strengthening of the state. These organizations and associations are seen as "transmission belts" forming a vertical total system of governance controlled from one center. While the Yaroslavl experts noted that the current state of the public administration system does not give an effective framework to generate a long-term strategy of constructive engagement: "Officials are working under contract and they have no incentive to think in a long-term way. NGOs also have limited resources to make long-term plans."

The Kostroma public noted elements of distrust and bureaucratic processing in the activities of the administrative structures, the prevalence of corporate and commercial interests over public ones: "the administration always has the potential to hide something and "to sell" something or other premises of trading." In the Tatarstan case dealing with the protection of the lake of Harovoye, the solution was completely dependent on the decisions of the top executive – the President of Tatarstanm, Minnikhanov R.N.

The Challenge of Constructive Interaction between State Power and Civil Society on the Basis of a Balance of Interests

Failures and institutional gaps in the interaction of government and civil society as well as a lack of skills for such interaction significantly block the process of identification and advocacy of the public interest, because this process is mutual. Representatives of government and civil society need to learn how to build symmetric bilateral ties, based on the balance of interests. The basis of this process is the art of dialogue, establishing effective communications in order to identify areas of overlapping interests and to create conditions for their approval. These technologies represent a way to achieve the goals in which the subject and object of management exist not as opposite, sometimes antagonistic substances, but as interrelated actors of public relations interested in each other and finding "points for the coordination of interests" as an internal imperative of its existence and success (Communication, 2011). "The authorities need to not be lazy and to listen to public initiatives and avoid the formal approach to the citizens and public organizations. In turn, NGOs should understand that they are designed to help the executive bodies, and get rid of the principle that "they should do everything" (focus group, Yaroslavl). The ability of the public to influence the executive bodies is expanding, activists are increasing their resources (social trust, political resonance, mobilizing a wide range of supporters including politicians). Changes occur not only in the circle of civil society, but also within the structures of government, which has to get involved in public relations with citizens.

However, the public practices of cooperation between the NGO community and authorities related to advocacy and promotion of the public interest are facing administrative resistance. It appear that there are a number of factors behind this. First, the discrepancy between standards in the administrative activities of highly

formalized management structures, on the one hand, and much more "free" formats which manifests in the social activity of citizens, jn the other hand. The "inconvenience" of interacting with the public often forms the management view that the activities of civil society activists are often a risk for the administrative system. Authorities prefer to abandon the dialogue or settle for the flushing of public initiatives in bureaucratic delays, rather than change their administrative procedures. But what is significant is that where authorities are trying to strictly control the scope of civil initiatives, we have negative consequences – the refusal of residents in different forms of public participation and the recognition of inefficient, low levels of trust and support explodes in confrontation and protest. Successful collaboration occurs where developed civil society institutions are able to persuade the government of the validity and realism of their "agenda", or where the Governor or the mayor is focused on cooperation with civil society institutions.

Overall, our studies of PP in 2010-2014 confirmed that the administrative powers of authority still considerably dominate the public sphere. A complex web of contradictory trends occurring at the interface point between claims for strengthening the regulatory role of the state and increased requests for a "more mature" society having civic participation on an equal footing with it. The young and better-educated people and the residents of large cities and regional cities experience growing need for more active attitude to the social fabric of their lives. Promising areas of civic participation in the eyes of the people today are health, education, active ageing, the adaptation of socially vulnerable groups of the population etc, that is, almost the entire social sphere of society. Many experts have highlighted spheres beyond private interests: environmental protection, human rights, charity. Moreover, it includes forms of such participation which can be described as socio-civic: a key aspect of the modern democratic "agenda" of activists becomes a question of structuring civil society in such a way that it could influence the government on an equal footing to interact with it. The creation of a truly democratic order cannot simply be a result of the "living creativity of the masses from below" and involves various forms of public-state partnerships (Rossijskoe obshhestvo, 2015). Thus, we see how gradually a network model of promotion and representation of interests is formed. But its development depends on a more balanced presence of the hierarchical principle: the state, important as it is, should not be the only actor forming the "agenda," and the adoption of socially important decisions.

A Stronger Request for Transparency in Public Administration and a System for the Representation of Social Interests in the Context of a Network Society

In summarizing, we can say that the modern democratic state, includes those that the have recently, objectively seeked to build partnerships with civil society, realizing that reliance on civil society is a powerful "root system", giving strength and stability to the political system. However, the search for the optimum in this interaction today is very simple. Socio-cultural changes of the postmodern society

characterized by "refinement" of the social fabric, increase the fragility of social ties and their "virtualization".

A changing society in the political context of the early twenty-first century generates a request to expand the access of citizens and organizations of civil society to the decision-making process, increasing the transparency of government and its responsibility for its activities to society (Dalton, Scarrow, 2003). A special role is played by the system of representation of social interests in the framework of the increasing publicity of public administration that allows one to maintain a balance in the relationship between state and public associations, protecting it from the threat of "stalling" in a destructive direction. It is known that the development of mechanisms for public participation, institutions, PP, and mechanisms of intersectoral social partnership contribute to the streamlining and efficiency of interacting authorities and society and has a positive impact on improving public administration. That is a significant shift in the environment of civil society when there is a tendency towards the redistribution of the center of gravity of civic engagement from political parties towards non-political public associations, forced to gradually reform the state in the direction of broadening the scope of its openness to society and its needs.

And the role of the "driver" of this transformation of public administration undertook a cross-sector partnership – as a special modern social technology, connecting the search for the balance of interests between business, non-profit community and government on the basis of the identification of "areas of agreement", and compromise in conditions of pluralism and divergent private groups, and administrative interests. Technologies of the cross-sectoral social partnership, in the diversity of its manifestations, are taught to move from the particular or narrow corporate interests in the direction of uncover the underpinnings of public goods and common interests. This requires, in turn, the full development of the public sphere and its important elements as an institution forming and advocating the public interest, which can work only in the presence of feedback channels between the authorities and civil society. In this capacity, many of the public association "third sector" have a special request about the quality of public administration. It should be competent, ensuring the fulfillment of basic functions of government and society, providing essential public good, uncorrupted, transparent, responsible and with constant feedback from society. There should be respect for the rule of law, protection of the rights and freedoms of citizens, including property rights, and the free development of every citizen and group of citizens should be ensured. Such a state, in addition to its other basic functions, can act as a mediator and manager in the resolution of conflicts arising from the diversity of interests. It is important that the public authorities have developed a social mechanism of state control allowing one to control the consideration and use of civil society initiatives. Firstly, this will allow one to avoid the loss of potentially effective public proposals and civic initiatives. "Pearl grain" should not disappear in bureaucratic millstones. It will also enhance the performance of a new social contract through the use of the capacity of civil society organizations. Secondly, it will convince many in civil society that their efforts are not in vain and that they demanded the reform of the system of interaction between authorities and entities. In addition, capa-

city development for civic engagement self-government support. In this respect, the Federal government is the beginning of an institutional movement to shape public request in January 2014, the concept of openness of the Federal Executive authorities was approved. The concept and its methodological recommendations constitute the so-called standard of openness of the Federal Executive authorities (Standart..., 2014). It is aimed at improving the efficiency and effectiveness of the measures for improving the system of public administration, defined by decrees of the President of Russia from May 7, 2012 and the basic directions of activity of the Russian Government for the period up to 2018. Documents include: the continued implementation of "electronic government"; the organization of broad, multi-channel access to public resources; building a feedback system within civil society; the introduction of a system of internal and external evaluations of the Federal Executive authorities affecting subsequent financial, staffing and other decisions; simplification of the process of public rulemaking, a reflection of socially significant results, the achievement of which directed the work of ministries and departments; communicating the work of the Federal authorities to citizens in an understandable format. In decree No. 601 "On the main directions of improvement of the state administration" of May 7, 2012 Russian President Putin outlined a "road map" for the development of public-state governance (Yakimets, 2015) by declaring innovations and the timing of their implementation.

The challenge of "publicity" in a networked society claimed a new type of civic competence - professionalism, with the ability to negotiate "on the merits", without the intervention of external mediators. The process of preparation and decision-making became particularly sensitive to the requirements of the procedure. There has been a noticeable increase in the number of participants. An attempt to establish a connection with the real interests and sentiments of various interest groups with public priorities began to be viewed in the decision making process. But this twist is very fragile and is still quite controversial. By opening new opportunities for civil society, it also creates new problems. First, new requirements are imposed on participants. In order to successfully operate in the mode of consultations, civil society representatives need to increase their competence in matters of public policy and protect their socio-political autonomy and the right to equal participation in making socially important decisions. In the field of competence, the administrative authorities possess a "natural monopoly". This dominates not only the executive and administrative power and political influence, but also as the monopoly of professional competence. Experience related to the contradictory process in the formation of independent systems for the quality assessment of social services in the regions confirms this. It is clear that the request for quality of social services to the population, protected from corruption, is an expression of the public interest, but it needs systematic implementation: legal, methodological, expert, organizational, etc., and representatives of civil society organizations here are put in a difficult situation. Secondly, the consultation runs the risk of increasing bureaucratic corporatism.

A traditional bureaucracy is not ready for equal dialogue with partners who are trying to enter the circle of public consultation. The formation of the state regional policy is continued to be as a part of bureaucracy prerogatives. The par-

ticipation of citizens was perceived as an attack on the sovereign territory of the Executive. Many community organizations and structures, not having reliable channels for the representation of interests and political connections, are outside the scope of "paradigms of harmonization", which has more functions in the spirit of bureaucratic-elitist corporatism. New challenges of social development, generated by the increasing complexity of the socio-political transformation, are creating an increased demand for a more effective functioning of the public institutes of public administration.

In the current environment, we observe a contradictory situation for the development of the PP institutions, and in particular, the institute of advocacy and promotion of the public interest. The findings of our study have problematized the overall context of this situation – how to make an effective system of the social representation of public interests under the conditions of the incompleteness of the transformation process, how to adapt the administrative machinery of the state to significant shifts in civil society to be able to more adequately take into account the increasing mobility and pluralism of social groups and their socio-cultural and national preferences. But on the other hand, civil society itself wondering how it is ready for systematic and painstaking work in cooperation with state bodies, whether the necessary level of civil competence to provide independent expert assessment and public control over the activities of authorities. These properties make civil society an independent and strong player in collaboration with the state bureaucracy, which allows to advocate the public interest and to ensure the sustainable development of society.

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WHY ENFORCEMENT AGAINST EXCESSIVE PRICING IN THE RUSSIAN FEDERATION IS NOT SUFFICIENTLY SUCCESSFUL?¹

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Abstract

In developed competition jurisdictions, excessive pricing is more a subject of academic and expert discussions than an actively used instrument of competition enforcement. Russian competition enforcement is an exception in this regard. During the last ten years the Russian competition authority, the Federal Antirust Service (FAS), made several hundred decisions on the violation of rules prohibiting excessive pricing. The question remains whether Russian enforcement is consistent with international experiences, and which part of enforcement limits a positive welfare effect. To achieve this objective the article explains the targets of excessive price enforcement, the legal standard for excessive pricing, and remedies applied in Russian competition law. The main conclusion is that the selection of targets does not generally contradict the objectives of competition enforcement. There are clear theories of harm specific to two of the main target groups: dominant exporting companies that apply third-price discrimination in the domestic market vis-à-vis export markets, and dominant companies that increase prices after deregulation, in case there is no new entry. Standards for proving price excessiveness represent a questionable part of enforcement, and they often turn out to be weak under judicial review. The application of either lower or higher standards for establishing price excessiveness results in decreasing the deterrence effect. A fear of decreasing deterrence explains the recent shift from ex-post intervention to ex-ante price remedies.

Keywords: excessive price; enforcement; competition law; price-cost margin; comparable markets: remedies.

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Introduction

Excessive prices are those exceeding competitive ones. There are several arguments both for and against antitrust enforcement to prevent excessive prices. On the one hand, excessive pricing decreases the consumer surplus and results in welfare losses. On the other hand, interventions against excessive pricing may also result in welfare loss. The consensus is that welfare loss under enforcement against excessive pricing arises because of the high probability of false conviction.

Competition economics consider arguments for and against enforcement regarding excessing pricing, using both normative and positive approaches. A normative approach implies that the enforcement target is a price that definitely exceeds the benchmark price under competition (though imperfect). The main argument for antitrust intervention is an opportunity to increase the consumer surplus.

Nonetheless, there are arguments against intervention as well. The most important is the fear of legal error when the enforcer makes a mistake in deciding that the price is excessive simply because of a high margin, due to a lack of information on what is the 'first best' price under competition. High margins in some industries (for instance, network industries) are necessary for productivity and efficiency. High profits occur as a natural outcome of market forces in such markets. Profits may also by result of innovation and risk taking. Thus, prohibition of excessive pricing would be a disincentive for future innovations and investments. Furthermore, high margins (even from exercising of market power) are attractive to new entrants and any subsequent expansion of competitors might strength competition. From this point of view, and to paraphrase a US Supreme Court quote, charging excessive prices is not only not unlawful, but it is an important element of the free market system.

The most important part of a positive approach to analyzing excessive price enforcement is an evidentiary standard for excessiveness. Even if there are circumstances when regulatory intervention would not undermine economic efficiency, practical difficulties related to determining when a price is excessive arise. Another part of the same issue is establishing what price level is acceptable as a remedy.

Despite the potential criticism, many countries still apply provisions against excessive pricing (Jenny, 2017). The Russian Federation is among them. During the decade from the adoption of the law 'On Protection of Competition' (2006) and a substantial increase in penalty standards (2007), several hundred investigations on excessive pricing have resulted in infringement decisions. However, recently in Russian competition policy there has been a trend towards narrowing the area of enforcement against excessive pricing, and replacing ex-post enforcement in the form of investigations and sanctioning by establishing ex-ante price remedies.

A review of Russian enforcement against excessive pricing allows for answering the question on the role of 'normative' and 'positive' explanations for the increasing skepticism about prohibition on excessive price, or explanations based on the possible welfare effects of enforcement and the available strength of a de-

terrence. This is the objective of our analysis in the paper. In order to answer the question we analyze enforcement targets, indicators of excessive pricing, and alternative approaches to enforcement that the Russian competition authority applies. In this paper we consider excessive pricing only as 'exploitative' abuse, that is, a 'pure' higher price for customers, in contrast to excessive pricing as a part of 'price squeeze' (a high price for essential input for competitor combined with a low price for the final customers).

The main conclusion is that it is not enforcement targets but standards of proof, which reveal themselves to be the weakest chain of enforcement. A weak deterrence rather than negative side effects explains the shift from ex-post to exante enforcement. A brief review of international experience of similar enforcement in the Member States of the European Union, South Africa and China shows that in many jurisdictions decisions on excessive pricing have little chance of surviving a judicial review. Problems with relevant evidence is not only a Russian curse. The weakness of available standards of evidence explains the decrease of expost interventions, even if the targets of enforcement could be chosen that substantially limit the risk of false conviction (Type I legal error).

The structure of the paper is as follows: Section 2 reviews discussions on enforcement against excessive pricing in law and economics. Section 3 discusses the legal definition of excessive pricing in Russian antitrust law, typical antitrust cases and the main characteristics of enforcement on this issue, and explains the low success of ex-post intervention. Section 4 describes enforcement against exploitative abuse in the form of excessive prices in other countries, especially BRICS, from the angle of Russian experience.

Law and economics of excessive pricing: brief overview

Market efficiency is at its highest level when prices are competitive. If prices are higher than the competitive level, then total welfare as well as consumer surplus decrease. The excess of the price over marginal costs is the source of profit for the monopolist, which have market power. Of course, not every price that exceeds marginal cost is excessive.

There is a difference between a price that induces a decrease of total welfare in comparison to 'first best' and a price that initiates competition investigations and decisions (Joscow, 2002). In microeconomic theory, the benchmark is a price equal to marginal cost. In competition legislation, the benchmark is a price equal to the price level in the market where there is no dominant company or dominant company not abusing their dominance.

The concept of dominance is one key to proceeding with the discussion between 'non-interventionists' and 'interventionists' about the large proportion of negative effects induced by enforcement against excessive pricing. An important argument against enforcement is that it attempts to prevent high prices impeding incentives to entry (Evans & Padilla, 2005) and is therefore detrimental in the long-run. Enforcement does not only distort incentives to entry, it is simply not necessary when excessive prices are not sustainable under the threat of potential competition (Fletcher & Jardine, 2008).

If these arguments are valid then excessive price is 'self-correcting' and should not be an enforcement target. Nevertheless, what if it is not? Potential entrants may decide not to enter the market if there are high and non-transitory entry barriers (Hou, 2011). Under high entry barriers excessive pricing might be not self-correcting (Ezrachi & Gilo, 2009). Three of four important market characteristics that justify intervention, according to Motta and de Streel (2007), consider entry barriers:

- High and non-transitory entry barrier in the market;
- Market power originating from current/past exclusive/special rights but not from risky private investments;
- Competition authority has no opportunities to decrease entry barriers.

In turn, high entry cost, or entry barriers that facilitate the influence of a dominant seller, not only on price but also on competition, are an essential part of the dominance concept. If the competition authority applies the appropriate test on dominance correctly, it avoids welfare-detrimental distortions as side effects of enforcement. This seems to have been the case for many of the largest recent investigations into excessive pricing. The most known and widely discussed example is the *Mittal Steel* decision in South Africa, where the large seller gained dominance due to special rights, historical legal protection and state ownership (Roberts, 2008). A specialized court called this market structure 'super-dominance' or 'quasi-monopoly' (Roberts, 2008; Erzachi & Gilo, 2009). Under this type of market structure dominance is sustainable and 'incontestable' (Roberts, 2008): high pricing cannot induce entry in the medium-run.

One more side effect of enforcement is possible, in addition to entry deterrence. If the competition authority applies a unit cost as a benchmark to prove excessive pricing, antitrust enforcement can provide the same effects on the incentives to decrease cost and increase productivity as cost-plus price regulation provides. If there is a certain legal cap on the price-cost margin, incentives for cost efficiencies disappear (Laffont & Tirole, 1986). However, it might not be the case if there is benchmark for price excessiveness that is not related to the cost of a particular company.

Even though, under a particular market structure and the pricing of a dominant company, antitrust intervention can promote welfare, and the competition authority could apply a benchmark that does not distort incentives towards increasing productivity, there is an important group of arguments against such intervention. All of which address the issue of evidentiary standard. There are still no well-defined and workable rules that would allow the comparison of a particular price level with the presumed competitive (or not abusive) price.

Let us bear in mind that European Court of Justice in its seminal decision in the case of *United Brands* argues that a price is excessive if the price-cost margin is excessive and the price is unfair compared to other prices, which constitutes the two-stage test. The first stage is to calculate the profit margin (price-cost margin) and assess whether the margin is excessive. Methods that could be applied to the analysis of price-cost margin at this stage are discussed widely (O`Donoghue & Padilla, 2006). It is unclear how to assess any unfairness of prices at the second stage. Comparison of the past prices of a dominant seller

in the same market, current prices of other products of a dominant seller in the same market, current prices of competitors in the same market, current prices of a dominant seller for the same relevant product in another geographical market, prices of a dominant seller for the related product in the same market, and prices of comparable product of the dominant seller are all options for benchmarking (Hou, 2011).

Suggestions in regards to assessing the (un)fairness of a price may also include the direct comparison of the changes in the surplus of buyer and seller (see for instance, dual entitlement approach by Akman & Garrod, 2011). Some authors even propose to eliminate this stage and to define excessive prices as being significantly above the minimum average cost (Motta & de Streel, 2006).

At both stages the price and performance indicators of a dominant seller should be compared with some benchmark. The following conditions should be observed in order to ensure that the comparison is objective (Evans & Padilla, 2005):

- clear determination of which indicators are to be compared (only prices or profit as well);
- choice of an unambiguous benchmark (the marginal cost, prices of competitors, or the price assigned by the same seller in another market etc);
- choice of threshold level for allowable excess of benchmark;
- ensure that the principle "other things equal" with respect to all factors affecting demand and costs is met.

A number of benchmarks could be used. Price-cost comparison suggests price analysis in relation to a relevant cost measure. Here problems arise with the choice of a threshold price and with the costs calculation since there are different economic concepts of costs. Profit rates are often suggested to be a benchmark, but profitability measures are usually influenced by accounting conventions. Moreover, the analysis of excessive return, that is the difference between the rate of profit and the cost of capital, may lead to wrongful conviction. A company may have a higher internal rate of return (IRR) than competitors or companies in other sectors due to good business reasons. It means that companies with similar cost profiles may have different IRRs (Grout & Zalewska, 2007). Another approach allows for comparing prices with those of competitors. However, consumers may buy products at higher prices if they consider them to have competitive advantages. The price in international markets could also be a benchmark, though price discrimination across regions does not necessarily harm consumers (at least unless we are not in the country with highest price). Finally, the regulator may use the earlier prices of a dominant firm for such a comparison, but there is no guarantee that they were not below the competitive level.

Thus, any analysis of excessive prices, in practice, may lead to mistakes. There is no definition or benchmark that permits identifying excessive pricing without possible legal errors, including Type I error (false conviction) and Type II error (false acquittals). Both types of errors limit the deterrence effect of legal rules.

In addition, legal errors induce side effects contributing to the social cost of enforcement. Under the positive probability of errors, not only do the participants of particular litigation bear additional costs. This is also true for every

dominant seller. The cost of legal errors may be explicit or implicit. The explicit cost of Type I errors includes expenses on investigations and litigation. Distortions of the decisions of a dominant seller due to the probability of expected litigation bring an implicit cost of errors. The second part of the cost includes, among other things, the negative effects of errors in litigation on investments and innovation due to the decrease in the expected rate of return in the companies, which are potential targets for investigation. Let us remind that it is a convention that the largest social cost of Type I error in enforcement against excessive pricing is due to the suppression of incentives to entry. It may be true not only for the market under investigations but also for other markets where potential entrant may appear dominant at some point.

The cost of a Type II error (when excessive prices are unpunished) constitutes the loss of consumer welfare, where some consumers buy goods and services at higher prices than in an otherwise competitive market, while others are forced to refuse to buy goods and services (Evans & Padilla, 2005). To sum up, the costs of legal errors reduce the positive welfare effects of antitrust intervention for affected companies and limit deterrence for all dominant market participants.

There is no commonly accepted indicator of the magnitude of the probability of Type II errors. However for the probability of a Type I error a relevant indicator exists. The high probability of a possible error in terms of false convictions (Type I error) is revealed in the likely annulment of the decision under judicial review (in the administrative enforcement system) or by the responsible court (in the prosecutorial system). Let us remind ourselves that the South African Competition Appeal Court annulled the previously mentioned *Mittal* decision because of the unconvincing test for price excessiveness. Competition economists consider this decision as an example of the deep coherent economic analysis that contributes to the increase of evidentiary standards (Calcagno & Walker, 2010). We may however consider this case from another angle. If a test for price excessiveness, which includes a reasonable level of doubt, does not exist, deterrent effect of enforcement is necessarily low. Because of this, enforcement against excessive price does not make sense.

The competition authority, choosing the scope of the intervention against excessive pricing, takes into account both expected welfare effects and strength of deterrence. Strength of deterrence depends on whether the method of establishing price excessiveness is able to distinguish between 'legal' and 'excessive' price as an abuse of dominance correctly. The low discriminative quality of tests undermines the positive welfare effects of enforcement.

It is necessary to stress that legal errors in the investigations against excessive pricing may arise because of the low discriminative quality of two types of tests – the test on dominance and the test of price excessiveness. In order to assess enforcement targets and enforcement effects in a particular country, it is necessary to distinguish between these two tests. A large proportion of the arguments of non-interventionists address the issue of markets not being able to pass a 'structural test' for dominance. For instance, the argument on entry prevention is valid only in those markets where high profit induces effective entry. In many jurisdictions this would not be the case, simply because a large company in a market with low

entry barriers is not qualified as a dominant². However even if a structural test works well, the inability to identify the level of 'normal' price and therefore excessive price with a reasonable level of certainty may result in low deterrence effects.

"Excessive pricing" concept in Russia

Legal definition

In Russian antitrust legislation the definition of excessive pricing (in terms of Russian competition legislation - monopolistically high price) has changed over time. The starting point was its definition in law 'On Competition and Restriction of Monopolistic Activities', which was in force from 1991 to 2006. This law defined an excessive price as the price of a dominant seller exceeding the price, set in comparable conditions, but in a competitive environment. The subsequent version of the law (Federal law 135 of 26.07.2006 'On Protection of Competition'), adopted in 2006, widened this definition. According to Article 6 of this law, an excessive price is a price established by a dominant seller that satisfies two criteria: (1) the price exceeds the sum of cost and profit necessary for production and distribution and (2) the price exceeds the price established under similar demand and supply conditions in the comparable competitive market. Ideally, to reach a conclusion on excessive pricing, the competition authority should prove that both criteria are satisfied. The Supreme Commercial Court of the Russian Federation in 2010 established the rule that the first criterion could be applied alone only if there are no comparable markets where price could be used as a benchmark. Price established by sector regulators, price of commodities market and price on IPRs are safe harbors for an investigation into excessiveness.

In 2009, the competition authority introduced the 'dynamic test', according to which a price is considered to be excessive if it remains constant while prices of inputs decrease, or it increases faster than input prices or if the price increases under non-changing input prices and demand conditions. Changes in the law reflect the non-satisfactory outcomes of all the applied tests on price excessiveness.

Enforcement

From 2008 to 2015, 105 infringement decisions by the Russian competition authorities on excessive pricing (high monopolistic price) as a form of abuse of a dominant position were appealed in the commercial courts³ – this was about 9% of all appealed decisions where competition issues were at stake. Taking into account that about every third competition infringement decision is appealed, this amounts to about 35 decisions annually.

² Russian legislation is not an exception. A large company with a market share exceeding 50% has the right to prove the absence of dominance. The most important reason for this is low entry cost. There are examples when competition authorities refrain from qualifying as dominant large participants in the market with low entry cost, using the argument of contestability.

³ In Russia, competition policy is organized as an administrative enforcement. The competition authority (FAS), including the Central Office and regional subdivisions, investigates and makes decisions on infringements. Any company found to be infringing has the right of appeal in order to annul the FAS decision in a commercial court. Costs of litigation are relatively low in Russia. Thus most companies, which consider themselves to be convicted erroneously, submit appeal claims.

Russian antitrust enforcement is only a partly centralized system. Regional subdivisions of the Federal Antitrust Service are sufficiently independent from the Central Office. The structure of enforcement targets, economic analysis and development of evidence in its cases may substantially vary from one regional division to the other. We concentrate mostly on the decisions of the Central Office.

Selection of enforcement targets

Under the Russian provisions for the enforcement regarding excessive pricing, two groups of targets are most important. The first group is large exporters, who are dominant in the domestic market. Large-scale mergers after privatization has improved international competitiveness of Russian companies, but at the same time has also increased their power in domestic markets (Avdasheva & Tsytsulina, 2015). A large proportion of exporting companies discriminate against Russian downstream customers vis-à-vis customers abroad by systematically setting higher prices (Golovanova, 2010). The most high-profile case concerned oil companies, which have a persistent dominant position in the domestic market historically. The FAS accused the 'Big Four' Russian suppliers of motor fuel (Gazpromneft, Lukoil, Rosneft and TNK-BP (acquired by Rosneft in 2013)) of excessive pricing as a form of abuse of their collective dominance in 2008-2009. The main test for price excessiveness was the asymmetric pass-through of world oil prices on domestic wholesale fuel prices. When world oil prices rise, domestic wholesale prices increase more rapidly, while when world oil prices fall, domestic wholesale prices decrease more slowly. The FAS imposed a huge fine of 26 billion rubles (approximately US\$1 billion) on the companies.

The FAS initiated similar investigations, where the main evidence was higher prices in the domestic market vis-à-vis export prices, into large exporters of other primary products. One remarkable case concerned the Novolipetsky metallurgical plant, one of the largest cold-rolled steel producers worldwide. Its market share in the domestic market is almost 100 per cent. In 2012 the plant was accused of imposing a excessive price for cold-rolled grain-oriented steel. The evidence was based on the disparity between the trends in export and domestic prices, and between the changes in production cost and the domestic price. After a judicial review over several instances⁴, these arguments did not convince the court of cassation, and the court finally annulled the infringement decision. Another example was the accusations against Raspadsky Coal Company for the unjustified establishing of various prices for concentrates of coal. The FAS showed that the difference in commodity prices for Russian and foreign consumers in October-November 2009, reduced to a single delivery basis (FCA departure station), was about 48%. Again, the court annulled the decision in the end for the reason that setting different prices in different market is not an unlawful practice.

The second important group of targets is sellers in deregulated markets. The typical context for investigations into excessive pricing is similar to investigations

⁴ There were six court decisions on this case. After the commercial court of first instance, appeal and cassation instances supported the conclusion of the FAS on excessive pricing, the Supreme Commercial Court decided that all these courts had not implemented important substantial tests and sent the case to the first instance court again. Finally, under the second round of the judicial review the cassation instance annulled the decision.

into the refusal to deal by the operators of essential facilities (Golovanova, 2013). Recent cases (2016-2017) are the investigations and decisions on stevedoring companies (cargo terminals) including Novorossiysk Commercial Seaport, Global Ports, and Universal Cargo Logistics Holdings companies. Until 2013–2014, rates for cargo services were regulated and set in dollars. After deregulation, which coincided with the depreciation of the national currency, prices for stevedoring services in Russian ports increased in line with the ruble depreciation rate – by 2.5 times on average. Complaints from large exporters and the national rail operator resulted in an investigation. The FAS found most stevedoring companies guilty of abusing a dominant position in a form of excessive pricing in the markets for the transshipment of different commodities, such as ore, fertilizers, containers, ferrous and non-ferrous metals, oil and fuel. The conclusion on excessive pricing relies on the analysis of margin-cost ratios. As a result, the FAS fined the accused companies around 17 billion rubles (approximately US\$ 0.3 billion) and imposed remedies in order to convert rates into rubles⁵. In June 2017, the commercial court of the first instance annulled one of the decisions against one oil cargo terminal. There are reasons to expect that the judicial review will be long and difficult. Similar examples of cases concerning the excessive pricing of interconnection in telecommunications were held several years ago (see Krychkova, 2013, in Russian). In these cases the courts also annulled the bulk of the decisions made against excessive pricing on interconnection.

Table 1
Targets of enforcement and options of evidence under enforcement against excessive pricing

Targets	Relevant theory of harm	Observed indicators of consumer surplus loss	Companies under investigation (markets affected)	Type of analysis (benchmarks)
Exporters of primary products and participants of adjacent markets	Third-degree price discrimi- nation	Domestic price exceeds export prices	Largest oil companies ('Big Four'), 2008– 2009 (motor fuel) Novolipetsky metallurgical plant, 2009–2011 (colled- rolled steel) Raspadskaya Coal, 2008–2009 (concen- trated coal)	Unit cost Price of dominant sellers in other mar- kets (abroad) Past price of domi- nant sellers in domes- tic market
Dominant companies in the markets after deregulation	Sustainabil- ity of natural monopoly and excessive price	Substantial price increase after deregu- lation	Cargo terminal opera- tors: from 2016 (after price deregulation in 2014) Megafon, BeeLine (2010–2012)	Unit cost Price of (regulated) competitors in other markets Past price of domi- nant sellers (before deregulation)

Source: The table is created by the authors.

⁵ "FAS ordered four stevedores to transfer almost 17 billion rubles to the budget for abuse of dominant position". 2017. Available at: http://fas.gov.ru/press-center/news/detail.html?id=49561 (in Russian).

A common feature of both targets is that the theories of harm to consumers are straightforward. For the first group, the theory of harm is the third-degree price discrimination of domestic customers vis-à-vis export commodity markets. The pricing observed is very close to the 'import parity' pricing system in the *Mittal* case in South Africa (Roberts, 2008): a large exporter establishes, in the domestic market, a price that is low enough to prevent profitable import. Such a policy results in a substantial decrease of consumer surplus within domestic market boundaries. It is also important that there are no circumstances under which third-degree discrimination brings additional surplus to domestic customers. The same is true for the sellers in the market with unsuccessful deregulation, when competition does not arise. Market structure and harm to consumers may justify antitrust enforcement. Moreover, for large exporters, distorting the effect on incentives for cost-minimization is unlikely. Competition in relevant international markets is sufficient to incentivize an increase in productivity and a decrease in costs.

Standards of evidence

The Russian competition authorities have made substantial efforts to develop convincing standards of proof in cases regarding excessive pricing. The FAS elaborated several guidelines to explain in more detail the approaches to assess market comparability (Shastitko, 2010) and to calculate cost and profit necessary for production.

In September 2014, the Presidium of the FAS approved the 'Principles of Economic Analysis of Pricing Practices' (hereinafter referred to as the Principles) for their compliance with the law 'On Protection of Competition'. The idea of the Principles is that prices in the Russian markets will change in accordance with international market prices. As a result, domestic buyers of the products of exporting companies, that obtain a dominant position in the domestic market, benefit, because the terms of their contracts would be no worse than for foreign buyers of the same suppliers.

The Principles allows the FAS to use indicators of world market prices, such as the prices of spot contracts, export contracts prices and other over-the-counter indicators, for the application of comparable markets concept. In fact, the indicators mentioned are not always a result of competition. In some cases, they are amenable to manipulation by the market participants, especially if the number of producers in the markets is not high. Regardless, the FAS usually considers world markets as comparable for almost all cases against exporters and make a comparison of prices as noted by Hou (2011). Prices of the company under investigation are compared with prices of the same supplier in markets abroad. This was true in the cases of Novolipetsky metallurgical plant and the oil companies (Table 1).

Another standard of evidence includes the cost and profit necessary for production. There are two documents devoted to the calculation of costs and profits necessary for production and distribution. The 'Scientific and practical commentary to the Federal law 'On Protection of Competition" (2015) clarifies among others:

- the approach to the comparison of profit to cost margin over time;
- the approach to the comparison of profit to cost margin of dominant sellers with the profit to cost margin of other sellers in comparable markets;
- the approach to taking into account differences in productivity.

The explanatory note of the Presidium of the FAS – 'Definition of monopolistically high and low price of goods' (2016) – establishes that costs are recognized as costs in the reporting period in which they occurred, regardless of the time, explicit monetary payment and other forms of implementation. In this way, the competition authority allows for taking cost, not only in explicit but also in implicit form, into account. The analysis should cover not only prices, costs and profits, but also the excess of actual profitability over the normative indicators of profitability for those markets where the level of profitability is established normatively (for instance, under regulation). While determining the economic feasibility of the costs, the authority may compare the changes in similar costs of the undertaking in the production of other goods and the changes in similar costs in other sectors. For example, the comparison may consist of the cost of raw materials for the production of a commodity sold by dominant seller and the cost of similar raw materials for the production of goods sold under competition. The absence of reasonable economic explanation of costs for production can serve as a basis for recognizing the price to be excessive.

The elaboration of guidelines followed the application of methods to prove excessive pricing. In their investigations into excessive price during the last decade, the FAS applied nearly every approach that international experience suggests (How, 2011). In most cases this meant not just one but several approaches (see Table 1). The commercial courts found none of them sufficiently convincing and annulled most of decisions made. The only exceptions were cases in the oil sector, when the Supreme Commercial Court of the Russian Federation supported the FAS decision on the excessive price of motor fuel in the TNK-BP (2010) case. Even in this case, which is very politically sensitive, not all the commercial courts support infringement decisions. The difference between the decisions of regional courts of first instances, and courts of first instance and appeal courts, and then appeal and cassation courts, shows that the FAS approach is not very persuasive to judges (Avdasheva & Golovanova, 2017).

In many cases the reason for annulling an infringement decision was a failed structural test for dominance. However, in general, courts are more often satisfied with the analysis of market competition and dominance than with the analysis of prices and cost.

Enforcement

There are two possible enforcement options: to implement it ex-post (when the regulator makes infringement decisions and obliges penalties) or ex-ante (the regulator prepares price remedies to prevent possible infringements). The Russian competition authority applies both, yet over time it has preferred the second.

Excessive price investigations and decisions have resulted in the largest monetary penalties. For example, for oil companies this has amounted to approximately US\$1 billion, for stevedoring companies – US\$ 0.3 billion. Fines are calculated based on either turnover (oil companies) or illegal gains (excessive profit) expropriation (recent examples being the stevedoring companies). The second approach is explained by the desire to avoid a distortive impact on output and prices (Bageri et al, 2013).

In the recent years, there has been a shift towards extensive price remedies. Usually remedies establish price caps and permitted price variation across groups of consumers. The regulator uses prices in the international markets or the export contracts of a dominant seller as benchmarks (Avdasheva & Radchenko, 2017, forthcoming).

The FAS applied remedies to those sellers who dominate unilaterally (Uralkali in the market of basic fertilizers, RUSAL in the market of primary aluminum), and also in oligopoly markets (LUKOil, Rosneft, and Gazpromnetf in the motor fuel markets). Typical targets of remedies are large producers of exported products. Thus, remedies attempt to prevent discrimination of customers in the domestic market within the model of third-degree price discrimination.

FAS can either establish remedies themselves or ask companies to elaborate remedies for approval. In recent years the FAS has required producers to develop and implement 'commercial policy', which should be approved by the competition authority. These represent guidelines regulating all aspects of transactions with customers, including pricing – 'not to establish the same level of retail prices', 'not to make economically unreasonable simultaneous changes in retail prices' and 'to follow cost-based pricing' (Avdasheva & Golovanova, 2017). Large oil companies and suppliers of potash fertilizer, caustic soda and other industrial inputs developed such commercial policies in Russia. It is difficult to estimate the overall effect of such remedies. The immediate effects are based on the redistribution of a surplus towards a target group of market participants. Negative side effects of remedies are also possible (Avdasheva & Radchenko, 2017, forthcoming), but until recently there was no relevant empirical evidence to prove their emergence.

Excessive pricing in case law of other countries: perspective from Russian experience

Any comparison of Russian enforcement against excessive pricing with similar types of enforcement abroad is limited because of the great divergence in competition legislation in this regard. In the US there are no provisions against excessive pricing by dominant companies. This is in line with the concept of self-correcting price. In contrast, European Union legislation introduces illegality of excessive pricing as particular types of unfair prices. Member States follow this approach. Most other competition jurisdictions worldwide, including BRICS share the EU but not the US approach. One important exception among BRICS is Brazil, where legislators recently excluded provisions on excessive pricing from the national law.

In the EU member states and also in South Africa and China, in spite of substantial differences in tests to establish excessive pricing (Jenny, 2017) the authorities apply provisions against the same group of companies as in Russia, including exporters of primary products, natural resources sellers, and companies in deregulated industries.

In the EU a large percentage of infringement decisions on excessive pricing are against companies in deregulated industries. The Commission accused *Deutsche Post* of excessive pricing for delivering cross-border mail because the price was equal to delivering domestic mail but the cost was less due to the oppor-

tunity to collect mail⁶. Another example is the case against the *Port of Helsingborg*⁷. The Commission concluded that the port charges resulted in excessive revenues from ferry operations. This is the only case made by the Commission through cost accounting and examining an excessive profit margin. The potential comparability with another port was rejected by the Commission due to differences in infrastructure and the number of services offered by the two ports.

In South Africa there have been at least two high-profile cases against exporters of primary products which obtained a dominant position in the domestic markets, very similar to the Russian investigations into the producers of motor fuel and steel. Competition Tribunal made (in 2009) an infringement decision accusing *Mittal Steel South Africa Limited* of excessive pricing in regards to flat steel products in the domestic market⁸. The Tribunal argued that excessive pricing was induced by *Mittal*'s 'super dominant' position as an 'uncontested firm in an incontestable market'⁹. However, the Competition Appeal Court annulled the decision because it did not contain a comparison or analysis of price with reasonable economic value.

Another infringement decision regarding excessive pricing in South Africa was made in 2014 against *Sasol*, a producer of purified propylene and polypropylene¹⁰. *Sasol* obtains a cost advantage in these products' production since propylene is a by-product of coal-to-liquid fuel production. The Tribunal argued that *Sasol*'s prices to customers in the domestic market exceeded *Sasol*'s actual cost of producing purified propylene and polypropylene, including the cost of capital. Additionally, for polypropylene, the Tribunal found that *Sasol*'s pricing to domestic customers was higher than the deep sea export price and the prices in Western Europe for polypropylene.

The outcomes from enforcement against excessive pricing in the jurisdictions mentioned are also similar. Decisions on excessive pricing have little chance of surviving a judicial review, mostly because the courts consider evidence of excessiveness to be non-convincing. In EU, infringement decisions are sustainable only in those Member States where there is no tradition of judicial revision (Svetlicinii & Botta, 2012). This is also the case outside Europe. As it was already mentioned, the infringement decision against *Mittal* was reversed by the Competition Appeal Court, obliging the Tribunal to assess prices on the basis of more reliable test.

Furthermore, in many countries there is a shift to remedies, being either complementary to monetary penalties or substituting them, as in Russian Federation. Consider for instance the high-profile case of *Qualcomm*, a leading U.S. semiconductor and telecommunications equipment producer. In 2015, the Chinese competition authority fined *Qualcomm* for abuse of a dominant position in the form of excessive pricing, unfair terms and bundling. The violation consisted in excession

⁶ Case COMP/C-1/36.915

⁷ Case COMP/A.36.568/D3

⁸ 70/CAC/APR07. Available at http://www.comptrib.co.za/list_judgement.asp?jid=1049

⁹ "Staying safe – dominant firms' pricing decisions in industries where high prices do not attract entry" Louise du Plessis and Lizél Blignaut. Third Annual Competition Commission, Competition Tribunal and Mandela Institute Conference on Competition Law, Economics and Policy in South Africa.

¹⁰ Competition Commission vs Sasol Chemical Industries, case no 48. CR. Aug 10.

sive royalties for mobile device manufacturers in China, since the Anti-Monopoly Law in China prohibits selling products "at an unfairly high price". In particular, *Qualcomm* did not provide customers with a list of all patents from a licensing package, including patents that had already expired. *Qualcomm* was found guilty in offering unfair cross-licensing conditions and setting the royalty rate at a high level. *Qualcomm* was obliged to follow a set of remedies, including the calculation of the royalty rates based on 65% instead of 100% of the wholesale price of handsets in China, which is essentially a kind of price cap¹¹. In South Africa, in the *Sasol* case behavioral remedies supplemented monetary fines. *Sasol* was required to set a price based on a forward-looking principle without the discrimination of any groups of customers in any markets.

Thus, Russian provisions for the enforcement of excessive pricing have a number of similarities with other jurisdictions. Worldwide, competition authorities who tend to apply provisions against supra-dominant companies in the markets with high entry barriers face serious problems in proving price excessiveness. The authorities try to substitute infringement decisions that a company can successfully appeal for the use of commitments, settlements and remedies. Our explanation of this shift is the high cost of investigations due to the absence of a convincing test for price excessiveness together with the non-satisfactory outcomes of judicial reviews of infringement decisions.

Conclusion

In Russia, the high concentration and market power in those sectors which are most important for international trade, together with the experience of price regulation and deregulation, explain the approach to enforcement against excessive pricing. The FAS applies two tests to price excessiveness – the comparable markets and the cost plus approach – and is making efforts to develop both of them. Low satisfaction with the outcomes of traditional enforcement using penalties results in the extensive development of ex-ante price remedies. In general, this field of antitrust enforcement addresses similar targets and faces similar difficulties as other countries that apply provisions on excessive pricing, including the Member States of the European Union and, principally, the BRICS countries. Neither typical targets, nor methodological issues, nor applications of behavioral remedies are idiosyncratic to Russian competition enforcement.

However it is far from clear whether or not enforcement satisfies the criteria of the combination of large losses from high price avoidance and the reasonably low cost of competition enforcement. Two groups of reasoning oppose enforcement as a possible welfare-detrimental: the first is a trade-off between static and dynamic efficiency, and the second is the absence of satisfactory legal standard for establishing price excessiveness.

Both issues could appear independently but they could also be interrelated. Punishment for high prices and high profits caused by high prices may prevent

¹¹ Antitrust in China: NDRC v. Qualcomm – One All. Allen & Overy. 12.02.2015. Available at: http://www.allenovery.com/publications/en-gb/Pages/Antitrust-in-China-NDRC-v--Qualcomm---One-All.aspx

entry if a Type I legal error occurs regardless of the approach to establishing price excessiveness. Use of high price-cost margins as an indicator of excessive pricing suppresses incentives towards cost-efficiency. In the latter case, an imperfect measurement approach reinforces distortions of the incentives. The importance of these two groups of considerations for Russian competition enforcement differs.

Until recently, concerns about undermining the incentives for cost efficiency and investments were not relevant to a large proportion of enforcement targets in Russia. Large exporting companies, which are targets of excessive price investigations (including exporters of metals, coal, oil and petrol products), have high incentives to increase cost efficiency due to competition in the global commodity markets. This statement is not so evident for the second group of targets, which are companies in deregulated industries (for instance, cargo terminals).

The analysis of Russian case law confirms well-known difficulties in defining excessive prices in practice. There is no clear and convincing criterion for excessive prices since it is unclear which standard to use for comparison of the actual set price, to what extent profit indicators can be used, and what excess of the actual set price over the benchmark is necessary for the qualification of the price to be excessive. During last decade, the FAS applied nearly all the possible criteria for establishing price excessiveness that is mentioned in the literature and applied in other jurisdictions. Among these, comparison of the price in question with the price of a dominant seller in another market provokes less criticism. Paradoxically the Supreme Commercial Court of the Russian Federation rejects exactly this criterion with the statement that any seller has a right to set different prices in different markets under different demand conditions. All other methods applied caused criticism, which explains the fact that courts annulled more than half of all the decisions made by the competition authority on excessive prices in 2008–2015.

Russian experience shows that irrespective of all other problems, legal rule in competition enforcement against excessive pricing is the weakest point. If the standards for establishing excessive pricing are high enough to avoid Type I error, it is very unlikely to support a conclusion on excessive pricing with a satisfactory level of confidence. As a result, probability of detection as well as deterrence decreases. In turn, a decrease in the standard may result in the increased probability of Type I error that is again detrimental to deterrence. This trade-off explains the non-satisfaction of competition authorities with the outcomes of enforcement against excessive pricing and the recent shift to ex-ante behavioral remedies.

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