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THE INFLUENCE OF POLITICAL COMPETITION ON THE EFFICIENCY OF THE REGIONAL EXECUTIVES IN RUSSIA

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The research is dedicated to the analysis of the relation between political competition that measured as the sum total of the electorate competition and the consolidation of the elite, as well as of the effectiveness of the fulfillment of the social and economic responsibilities of the regional authorities. The results of the analysis show that though the influence of the political competition within hybrid Russian regional political regimes is significant, it lacks some definite direction, as well as shows itself very selectively (mostly in health service and budgetary management) and is based upon weak social links, which is quite typical for partly institutionalized feedback and socio-political control channels.

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Introduction

The problem of interconnection of the political competition and the Russian regional authorities' efficiency has come to the fore once again after the relations between the federal center and the regions had entered a new phase, which on the one hand could be characterized by the liberalization of the electoral legislation caused by the revival of the nationwide gubernatorial elections. This system reintegrates the element of accountability to the citizens into the legitimacy of the regional authorities' heads mechanism, making it more complicated as the president retains the right of their removal on account of the loss of confidence (something that has already happened to N. Denin, the elected governor of Bryansk oblast). On the other hand, the federal center has toughened drastically the requirements for the fulfillment of obligations in the field of maintenance and increase of efficiency of the governmental management by the regional authorities - the tendency that has found its implementation in the so-called "May decrees" signed on the first day of the third term of V. Putin's presidency.

The abovementioned circumstances have created a more complicated accountability system for local executive authorities due to substantial increase of the requirement rate enforced by the federal government ("from above'), by the citizens ("from below") and by the local elites ("from the sides"). Such settings presuppose the considerable increase of the role of political competition. All this happens against the specific background of shrinking resource base and thus the difficulties in the implementation of "May decrees" occur to be quite predictable. In the light of the above mentioned reasons this research attempts to answer the question, whether the political competition within the hybrid regime is able to cause influence on the efficiency of the regional executive authority, and if so, by what means does this happen.

Literature review

A massive body of research is dedicated to the problem of relation between the political competition and the efficiency of executive. Scholars keep on applying to this issue because there is a considerable lack of solid conclusions and explanatory models on the matter, leaving aside the methodology, i.e. the specifications of regressions, the calculation techniques and the variants of index modeling.

The assumption that political competition imposes a positive influence on the authority efficiency (let's say this is our 'initial proposition") is a common benchmark in this case. The researchers in the adjacent fields and issues, such as economic growth [Keefer & Knack, 2002; Pinto & Timmons, 2005; Persson, Roland, Tabellini, 2007], executive authorities' staff salary

[Svaleryd & Vlachos, 2009] and corruption [Svensson, 2005; Testa, 2003; Brown et.al., 2011] have came to the abovementioned conclusion too.

As for the thesis about the positive relation between political competition and efficiency, the logic of the causal mechanism is derived from at least two scientific sources: the economic theory and the theory of democracy. The economic argument states that the perfect competition leads to the welfare increase, because it provides for the optimal supply-demand equilibrium, whereas the monopolies tend to derive more of the surplus product thus guaranteeing higher prices without any respective qualitative improvements. Furthermore this logic is transferred to the political sphere, where the political competition is likened to the economic one, assuming that the low competition rate leads to the monopolization of the political market. In such circumstances the risk of position loss reduces, whereas the income from government securities, extracted by the officials from the private sector, increases [Becker, 1958, 1983; Stigler, 1972; Barro, 1973].

Within the scope of the theory of democracy the political competition is seen as a mechanism of control and interconnection of the citizens and the authorities [Schumpeter, 1994; Dahl, 1971]. The main part is played here by the accountability mechanism, which is positively linked with competition [Hobolt and Klemmensen, 2008]. The abovementioned classical research works were performed without any statistical analysis, the usage of which would be quite standard and instrumental nowadays. Thus their authors were utilizing a purely qualitative approach in the political competition analysis, based upon the presupposed parameters of freedom and fairness (i.e. free and fair election).

There is also the integrative logic that approaches the democratic mechanisms in the context of their relation with the competition rate and the rate of executive authority efficiency and studies them within the framework of the rational choice institutionalism. Substantial attention is given here to the effects caused by the political institutions, cost-based transactions and information. Obviously enough, alongside with obtaining the features of the mainstream in contemporary comparative studies, this approach has become the prevailing one.

The most widespread thesis within the frames of new institutionalism states that the high competition rate may decrease the political rent through feeding the electorate with more information and due to the improvement of the "principal-agent" relationships between the voters and the representatives. Thus, political competition stimulates politicians making them work for the increase of social welfare in order to secure their administrative positions [Dash & Mukherjee, 2015; Wittman, 1995].

High political competition and conflict rate results in a heightened interest in politics among the population, which automatically transforms this population into a more informed one [Belsey and Burgess, 2002]. P.Jones calls this "exciting mechanism", because political conflicts tend to attract and keep the public attention [Jones, 2013: 484]. This "excitement" consists in the inner need for connection to the information flows, which bring in the information about the competitors and results in a right (potentially beneficial) decision that manifests itself as a vote.

Secondly, the political competition makes the citizens concentrate on their own interests and strategies of their protection. This hypothesis logically follows from the first one, because political agenda influences the substantial part of the population, whereas within the frames of rational approach the well-informed citizens strive for protecting their interests [Jones, 2013: 485]. This happens due to the lower trust and collaboration that are typical for more diversified communities. By-turn this contributes to the development of the specific behavioral models that are aimed at the protection of personal interests against the interests of other groups.

It comes naturally that such unambiguous interpretation of the relation between the political competition and the executive's efficiency could not satisfy the researchers, especially taking the fact that there are some examples of economic growth in the authoritarian countries and the crises in political administrations in democratic ones.

The role of political competition may be two-sided. On the one hand it encourages the accountability and from Fox's point of view [1994] political competition is an effective tool which destroys the patronage-based relations. However we should also take into account, that patronage is incorporated even into the competitive party systems. According to Kitschelt and Wilkinson [2007: 28], political parties are more apt for building up the patron-client relationships than competitive relations: "Especially among poor countries, competition enhances clientelism. Because competition intensifies ethnocultural mobilization, and ethnic groups promote clientelism, politicians will move to employ every imaginable strategy of attracting constituencies, subject to a general budget constraint" [Ibid: 32]

The following conclusion can be made at this point: with the increase of political competition rate the incumbent would try to strengthen and to expand of patronage networks in order to lower the risks of loss of his position. It also should be mentioned that first and foremost this logic is applicable to the hybrid regimes, characterized by underdeveloped accountability mechanisms. This doesn't mean, however, that clientelism interferes with the social benefits supply. To the contrary, "political appeals to patron-client networks may be welfare enhancing, but in the long run, they delay political development by discouraging direct appeals to voters that are essential for credible mass-based political parties." [Keefer, Vlaicu, 2008: 371].

In turn, Alejandra Armesto [2005] argues against Kitschelt's and Wilkinson's points considering the particularistic practices of resource distribution, implemented by Mexican and Argentinean regional executive authorities. On the one hand, in spite of decentralization proper to these countries, the regional authorities obtain the ability for reproduction of the authoritarian enclaves due to their access to the fiscal resources of the federal center. In case the regional authorities find themselves in a position of strong subsidy dependency, they get trapped in the so-called "fiscal illusion", being unable and inapt to estimate the tax-collection spendings, which leads to ineffective fund distribution [Ibid]. This fact is mentioned in the work by Dias-Kayeros and his colleagues [2003].

The results of Armesto's research show that regional authority can abandon the principle of particularism if there is a competition rate growth. In this case the logic is the following: while distributing the resources it is necessary to take into consideration the stability of the core electorate, as well as the political competition and socio-economical characteristics of this or that region. The incumbent's opportunities for widening his patronage links are limited, because the opposition electorate, as opposed to the "wavering" one, would likely be resistant to the vote-bribery. The only possible targeting niche here (which also may be already occupied) would be the comparatively poor "wavering" electorate. That's why the authority would choose the strategy of adoption of a universalistic criterion of distribution rather than take the extremely expensive and unproductive particularistic measures.

The second possible explanatory mechanism that may be set against the "initial thesis" is based on the results of the panel data analysis gathered within the OECD countries. These results have revealed the positive link between the political competition and the rise of the financing of the short-term effect programs aimed to influence the electorate prior to re-election [Padovano & Ricciuti, 2008].

Thirdly, even if the political competition favors the efficiency, the dependence is more likely not to be a linear one. On the one hand Alfano and Baraldi [2014] state that only mid-level political competition may cause favorable impact that lowers the probability of the funds being wasted on the "pork-barrel" programs. This proves the conclusions made by a number of researchers who state that the extreme pluralism causes negative influence on the political stability and the function fulfillment efficiency due to the increasing fragmentation of the governing coalitions [Ashworth et al., 2014; Chhibber and Nooruddin, 2004]. On the other hand, the efficiency growth dynamics also submits to "feedback decrease" logic [Akhremenko, 2012], though these results were obtained through comparison of the resources invested against the results achieved.

Fourthly, besides the extreme pluralism, the ideological polarization is also important: the less are these differences, the less costly are the shifts in the political preferences for the electorate [Sørensen, 2014]. Sørensen undertook the research of the Norwegian local authorities, that has shown that the ideological polarization not necessarily results in the efficiency decrease. If the political competition rate is high, one way or another, the incumbents are concerned over the possible loss of their popularity and therefore take efforts to spend the resources effectively. At the same time the high-rate ideological polarization – low-rate political competition overlap represents the worst scenario possible.

Fifthly, according to Bolding and Brown [2014: 199], the political competition rate may not cause any positive effect at all if combined with the high poverty rate or drastic social differentiation.

Thereby, while analyzing the influence caused by the political competition, it's necessary to keep in mind that its mechanism is mediated and thus the intensity of interdependence may be quite low. However, the main problem lies not in this fact. As it may be seen from the survey presented above, the overwhelming majority of research effort was taken in democratic countries or at least in such countries, where the process of democratization develops successfully. Only in such cases it would be proper to indicate the efficiency of the feedback mechanism operating, as well as the active position of the informed citizens, self-discipline and the rational motives for the increase of civil servants' efficiency.

Data and research design

For causal relations detection the multiple linear regression method is used, applicable to all 83 subjects of the federation as of 2013 and within the following formula:

$$y_i = \alpha_i + \sum_i \beta_i x_i + \sum_i \gamma_i z_i + \varepsilon_i , \quad (1)$$

where y_i is a dependent variable, x_i are independent variables, z_i are control variables, ε_i are errors.

The integral composite efficiency index that incorporates the subindices of social and economic efficiency goes for the dependent variable (appendix 1). The first subindex incorporates the measurements taken for the basic socially important services, such as health service, education, housing and utilities and road sector. The indicator selection singles out only the most general indexes that depict the development of the respective spheres. Sometimes these indexes show only mediate dependence on the executive authorities' performance, but

nevertheless they tend to depict the requirements and specifications made by the federal government. For example, the decree "On improvement of state policy in the sphere of public health" comprises the requirement that urges the life-span increase, the infant mortality reduction, whereas the optimization of the medical staffing goes as a proxy for the clause 2d, that states the necessity of a phased liquidation of the medical staff shortage.

The efficiency in the sphere of public health subdivides into so-called "technical" and "social" one, which is being calculated by the use of Data Envelopment Analysis (DEA) [Akhremenko, 2013]. "Technical" efficiency depicts the infrastructure constituent, whereas the "social" stands for the health service mission, i.e. health protection and increasing the span of life (which partly coincides with federal government requirements). The similar division within the field of housing and utilities may be problematic due to the absence of the respective "social" statistics. The similar data, acquired through the poll that was organized by the Federal Guard Service to measure the level of satisfaction with housing and communal services among the population, rather reflects the subjective perception of the issue (it is known that welfare growth triggers the respective growth of qualitative demands) that might be mixed up with the personal attitudes towards the authorities. Due to the abovementioned reason the measurement of efficiency with regard to housing services, communal services, road sector and education system is carried out only within the frames of "technical" subsection.

The efficiency of the economic sphere regulation is measured within three distinctive dimensions, which are: economic growth, budgetary regulation and investment policy. It should be mentioned that within the frames of the budgetary regulation efficiency estimation the values exceeding 10% deficit are equated to zero here, as opposed to 15% commonly assumed by the Ministry of Finance in this case, because it is not uncommon at all when the retention of negative expense-to-income balance within these fixed limits goes at the expense of the national debt increase.

As the indicators are represented in various units of measurement, the procedure of linear scaling is applied, that presupposes the reflection of the named indicators within the interval [0;1] combined with the preservation of proportions between the initial data blocks, and allows for preservation of the entire body of their structural characteristics. The applied formula implies the scaled value $X_i^{(ls)}$ to be a resulting one from the division of remainder of X_i and the minimal value of the variable to its range.

$$X_i^{(ls)} = (X_i - X_{min})/(X_{max} - X_{min}) \qquad (2)$$

In cases of need (for example, when considering the child mortality rate index), the inverting procedure was applied. The common averaging serves as a method of aggregation of the economic direction subindex, this being caused by the impossibility of DEA model exits separation. The same logic works for the shaping of the integrative index that comprises regional authority's social and economic efficiency rate.

The political competition index (the key independent variable) can be measured as the average of two sub-indices (see Appendix 3): electoral competition and elite consolidation.

Firstly, I suggest to use the most frequently applied indices of electoral competition in comparative political studies. Part of them were originally designed for the measurement of the effective number of parties (Laakso-Taagepera and Molinar indices), others were elaborated to identify the level of electoral dominance of the winner ("margin of victory" and "vulnerability of winner"). All indices are based on the last regional parliamentary elections results (cause gubernatorial election after return in 2012 has not been held in all regions yet).

Laakso and Taagepera index [1979] is calculated as follows:

$$N_{LT} = {}^{1}/_{\sum v_i^2}$$

where v_i – share of the votes of *i* party.

It has one very significant disadvantage in Russian context, that is insensitivity to dominant party.

Molinar index [1991] aims to compensate that disadvantage and is calculated by following formula:

$$N_M = 1 + N_{LT} \ * \sum v_i^2 - v_i^2 / \sum v_i^2,$$

where N_{LT} - Laakso and Taagepera index, v_i – share of the votes of *i* party, v_1 – share of the votes of the winner.

"Margin of victory index" represents the difference between the winner and the runner-up:

$$MV = v_1 - v_2$$

"Vulnerability of winner index" takes into account results of all parties (unlike "margin of victory") and is calculated by following formula:

$$V = \sum v_i - v_1$$

If $V < 0$, the winner is vulnerable.

All indexes have the abovementioned advantages and drawbacks. Accordingly, there is a problem of the optimal method that can take into account the general level of electoral competition. It seems that the Principal Component Analysis (PCA) can solve that problem cause it allows us to find a common values and to get rid of errors of single indicators. In our case the PCA reduced four electoral indices into one component[4] that take into account 85% of variance.

Secondly, I use the regional elite consolidation rate measured by Political and Economic Communications Agency & Regional Political Studies Lab HSE [Rating…2014]. The rate was obtained from the survey of 211 experts on Russian regional politics. The experts estimated governor's level of efficiency of elite consolidation by 5-degrees scale[5]. The total scores for each region are average of the estimates.

The disadvantage of such approach is the absence of the common notion of "elite consolidation efficiency". The lack of statistical data requires to use that estimates despite the drawback. Nevertheless, the regional elite consolidation rate correlates with the electoral competition (r=0.49). This fact contributes to the validity of the expert based survey conducted by PECA & RPSL HSE. For this study the index was rescaled into z-scores (see Appendix 3).

Also taken as independent variables:

- The share of individuals employed by regional executive authority institutions against the total population of the region;
- The average state municipal employee's salary to the average salary for the region ratio;
- The share of non-repayable federal loans susceptible to political decisions (subsidies and subventions) against the total amount of a consolidated regional budget;
- Total revenue amount of consolidated budget of this or that Russian Federation's subject (log).

Taken as control variables:

[4] Criteria: eigenvalue >1
[5] The expert could estimate not all regions from the list.

- Economic welfare of the population taken as average salary throughout a region to living wage ratio;
- The urban population ratio;
- Population (log)

The results

At first let's examine the results of preliminary correlation analysis (tab. 1) so that we could trace the dimensions where the supposed relations could have been present or absent. According to the data from table 1, such significant relation to the regional executive authority efficiency exists in the spheres of health service and budgetary management. Apart from the extreme selectivity of the relation, it should be noted that the "technical" efficiency within the health service sphere is positively related to competition, whereas the same relation with "social" one proves to be negative.

Tab. 1. Correlations

Efficiency	**R**
Overall	.060
Social	.010
Of health care	.052
Of health care (social)	**-.200***
Of health care (technical)	**.217***
Of education	-.042
preschool	.018
general	-.092
Of housing and utilities, and transport	.004
Of housing	-.088
Of transport	.096
Economic	.077
Of economic growth	-.060
Of investments	-.038
Of budgetary regulation	**.219***

*- correlation is significant at the 0.1 level

The correlation itself is nevertheless insufficient for proving the existence of causal relation. Therefore we have to pass on to the results of the regression analysis (appendix 2). Eight models were derived altogether, that is, two models for each independent variable: along with the "social" (models number 5 and 6) and "technical" efficiency in health service and budget control (models number 7 and 8), the analysis for the overall index was also carried out.

The modeling principle consists of the following: one model incorporates only the independent variables, whereas another one includes both independent and control variables, thus being able to cope with robustness. All the models derived comply the general requirements (homoscedasticity, no multicollinearity, normal distribution of errors etc.). On the other hand, the explanatory power of the models is quite low, because the multiple coefficient of determination (R-square) approximately equals to 0.2-0.3. Only in two cases (models № 2 and №8) it exceeds 0.4.

The modeling of overall efficiency of the regional executives shows that political competition doesn't play any significant role here: neither in model №1, neither in model №2 could prove the respective coefficients to be significant, thus confirming the preliminary results of correlation analysis. On the other hand, it seems valid to assert the positive influence of government workers' salaries (quite a common issue for voluntary group activists to break their lances about) as well as of the regional budget capacities.

Some interesting results were obtained in the process of detection of social efficiency factors within the sphere of health care. The political competition influence occurs to be negative here. So how could it be possibly explained? Proceeding from the data that we have at our disposal and on the basis of the results obtained, we may conclude that the third and the fourth models differ from the others because they incorporate federal transfers susceptible to political decisions (i.e. subsidies and subventions) as a significant factor. As the correlated analysis shows it, these subsidies and subventions are distributed mostly on the basis of the universalistic criterion in favour of the depressive regions. The relation with economic welfare is negative (r=-.516), whereas the relation with unemployment is positive (r=.506). In other words, quite the opposite situation is very probable to occur in this case: the low social efficiency may trigger the increase of subsidies and subventions inflow. The substantial inflow of resources in the situation when the efficiency of their distribution can't be evaluated in a short-term perspective (which is quite typical for the "social outputs") causes the respective competition for their acquisition. In the final analysis this may be represented as causal mechanism (if combined with the presupposed inversion of the developed model).

To the contrary, the "technical" efficiency in the sphere of health care experiences the positive influence of political competition, which proves to be the most stable of all the indicators involved. The states and municipal apparatus scale factor preserves its importance only within one of the models, whereas the "budget capacity" variable had to be excluded from the model № 6 due to critical value overriding within the frames of multicollinearity test (VIF-test).

The similar results were obtained in the process of evaluation of the models № 7 and 8, where the political competition appeared to be a significant factor too due to its evident positive influence on the budget regulation. Considering the overall efficiency level, the importance of the budget capacity accounting may also be asserted: the bigger it is, the fewer budget funds management problems are to be encountered by the regional authorities, because there's more space left for "maneuvering".

What do the results show: Russian regions vs. the "initial thesis"

The obtained results represent rather an eclectic picture made up of various patterns. In some cases political competition matters and causes positive influence, therefore confirming the "initial thesis", whereas in other cases it doesn't correlate with the regional executive authority efficiency spheres or may even be negatively correlated with them. In other words, the patterns of Russian regional executive authority functioning do embrace various aspects of the respective academic discourse.

On the one part, the positive relation of political competition to the authority efficiency that is "operational" for consolidated democracies is being confirmed. On the other – the point considering the weakening influence that poverty causes to this relation provided by Kitschelt and Wilkinson is also suitable, though with a respective reservation presupposing that current research work was mostly dedicated to the general level of regional socio-economic development. Nevertheless, the regions, which are dependent on the transfers from the federal budget (i.e. the most depressed ones) seem to be more susceptible to inefficient funds-distribution when it comes to mid- and long-term projects' implementation and evaluation. It's hardly possible to follow A.Armesto's logic and apply to this regularity as to the "fiscal illusion", because the analysis performed has indicated the combination of negative influence caused both by competition and federal transfers. This seems to be closer to the regularities of political and administrative relations which are common for rentier states, where political competition becomes a destabilizing occurrence that clearly indicates the erosion of distributional elites.

On the one hand, the deficiency of the political competition influence on the overall level of the regional executive authority efficiency may be explained by the weakness of feedback institutionalization, as well as by underdeveloped state of civil society (unfortunately, it is not yet possible to check this hypothesis due to the lack and discreteness of reliable data) and other institutions of public control, as the supervisory authorities are incapable of fulfilling this function because of many disparities in their organizational structures (hierarchy vs. self-

organization). On the other hand, we may see here the confirmation of the abovementioned paradoxical interconnection lapse between "social" and "technical" aspects of public administration [Akhremenko, 2013]. For this reason the question rises, whether the system of various social spheres administering that has emerged in Russian regions is rational and non-controversial at all.

The potential research tools imperfection should also be taken into consideration, as Data Envelopment Analysis has its own drawbacks. However, this would be a matter to pay attention to if there were no meaningful models, whereas their existence indicates the sound influence, caused, say, by the factors of civil servants' salary and of the consolidated regional budget income amount. Consequently, the "weak research tools" argument is not fully applicable here, though it can't be totally disregarded.

The political competition does play an important role within the following subdirections: "social" and "technical" health care and budget control. Some differences are present here, though they do not fully disprove the "initial thesis". As for the social efficiency (never mind in what exact sphere), the difficulty of evaluation within the frames of cross-section lies in the absence of short-term effects, which are quite common for the "technical" efficiency: for example, it is impossible to improve the living standards in one-year term. Apart from this, the problem of endogeneity emerges inevitably, and the predictors – right to the contrary – may be the consequence of some level of "social" efficiency, or other.

It should be admitted that in this case further research development may follow two directions: towards the panel database formation for the purposes of dynamic and individual effects identification (the quantitative data deficiency in the sphere of regional elite consolidation being the main obstacle here), and towards the identification of institutional feedback configurations of influence selectivity (as housing and utilities sphere is no less socially "sensible" than health care). In the latter case there is an important similarity, which consists in the insignificant differences in the influence intensity. The degree of political competition influence on efficiency in different public administration spheres is approximately equal, and this fact allows for the assertion of existence of some institutional (or quasi-instituitional) channels of influence that establish certain frames. The study of these institutes, which actually represent those causal mechanisms indicated by the regression analysis, represents an interesting and perspective field for the comparative research.

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Appendix 1

Dependent variable aggregation

Method	Efficiency	Direction	Subdirection	Model element	Indicator*
Technical/ social – DEA; directions - average	Social	Health care	Technical	Outputs	Density of physicians per 10 000 population
					Hospital bed density per 10 000 population
					Salaries in healthcare sector (healthcare salaries) to average salary in the region
			Social		Infant mortality rate per 1000 babies
					Life expectancy, years
			Technical / social	Input	Federal Russian subject's spending on health care, per capita
		Education	Technical (preschool)	Outputs	Density of preschools for preschool-aged children, per 1000 children
					Salaries in general preschool education sector to average salary in the region
				Input	Spendings of the consolidated regional budget on preschool education
			Technical (general)	Output	Salaries in general education sector to average salary in the region
				Input	Spendings of the consolidated budget on general education
		Housing, and road facilities	Technical (housing)	Output	The share of old and dilapidated housing
					The provision with drinking water, %
					The share of unprofitable organizations in the sphere of housing and utilities
				Inputs	Spendings of the consolidated budget on housing and utilities, per capita
			Technical (road facilities)	Output	The share of public regional roads length not meeting the normative requirements
				Input	Federal Russian subject's spending on road facilities, per capita
Elements and directions - average	Economic	Economic growth	-	-	Industrial production index (by Federal Statistics Agency)
		Investments	-	-	Agricultural production index (by Federal Statistics Agency)
		Budget regulation	-	-	Investments in fixed capital excluding regional investments, per capita
			-	-	Budget's debt burden level, % to budget incomes
			-	-	Quality of budgeting Rating (by Ministry of Finance)
			-	-	The deficit of the regional budget, % to budget incomes)

* All indicators were rescaled (see formula 2)

Appendix 2

Regression analysis

	General		Health care (social)		Health care (technical)		Budget regulation	
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Political competition	.002	.004	**-.032*** **	**-.023***	**.042*** **	**.055*** **	**.042*** **	**.035***
	(.007)	(007)	(.011)	(.014)	(.019)	(.022)	(.020)	(.019)
Subsidies and subventions	-.193	-.153	**-.526*** **	**-.443***	.054	-.001	-.206	-.067
	(.136)	(148)	(.185)	(.247)	(.369)	(.448)	(.362)	(.309)
Apparatus (log)	-.010	.032	.001	.045	.000	**.137*** **	**-.100*** **	.011
	(.018)	(.022)	(.028)	(.042)	(.046)	(.063)	(.045)	(.046)
Salaries in regional executive and municipal administrations (log)	**.025***	**.030*** **	**.049***	**.058*** **	-.004	.022	-.007	.025
	(.017)	(.014)	(.027)	(.029)	(.041)	(.047)	(.041)	(.036)
Budget incomes (log)	**.050*** **	**.042***	**-.054***	-.074	**.112*** **		**.151*** **	**.231*** **
	(.017)	(.023)	(.030)	(.049)	(.050)		(.047)	(.049)
Urbanization		.000		-.001		.000		-.004
		(.001)		(.001)		(.002)		(.002)
Welfare (log)		.001		.175		.070		-.107
		(.055)		(.117)		(.132)		(.115)
Population (log)		**.030*** **		.020		.042		**.115*** **
		(.011)		(.022)		(.034)		(.027)
Constant	-.011	-.252	**1.413*** **	**1.331*** **	-.515	.270	**-1.344*** **	**-3.237*** **
	(.214)	(.291)	(.364)	(0.573)	(.632)	(.402)	(.585)	(.655)
N	76	74	71	77	73	74	81	73
R-squared	.289	.401	.255	.234	.231	.200	.215	.419
F (prob>F)	.000	.000	.002	.015	.004	.025	.002	.000

- coefficient significant at the level of 0,1; ** - at the level of 0,05; * - at the level of 0,01*

Appendix 3

Political Competition Index (2013, z-scores)

Region	Electoral Competition (PCA)	Consolidation of the elite	Political Competition
Altai Krai	0,812	-0,381	0,216
Amur Oblast	0,424	-0,381	0,022
Arkhangelsk Oblast	0,638	1,782	1,210
Astrakhan Oblast	-0,293	-0,727	-0,510
Belgorod oblast	-0,991	-1,822	-1,407
Bryansk Oblast	-0,631	0,701	0,035
Vladimir Oblast	0,367	-0,999	-0,316
Volgograd Oblast	0,068	0,484	0,276
Vologda Oblast	1,267	0,484	0,876
Voronezh Oblast	-0,790	-0,727	-0,758
Moscow City	-1,058	-1,678	-1,368
Saint-Petersburg City	0,626	-0,257	0,184
Jewish AO	-0,180	0,917	0,369
Zabaikalskii Krai	0,432	-0,035	0,199
Ivanovo Oblast	-0,504	0,917	0,207
Irkutsk Oblast	0,572	0,484	0,528
Kabardino-Balkar Republic	-1,333	-0,554	-0,944
Kaliningrad Oblast	0,696	0,484	0,590
Kaluga Oblast	-0,235	-1,246	-0,740
Kamchatskii Krai	0,356	-0,381	-0,012
Karachai-Cherkess Republic	-1,209	0,138	-0,535
Kemerovo Oblast	-2,070	-2,399	-2,235
Kirov Oblast	1,028	0,701	0,865
Kostroma Oblast	-0,031	-0,554	-0,292
Krasnodar Krai	-1,347	-1,534	-1,441
Krasnoyarsk Krai	1,050	0,484	0,767
Kurgan Oblast	0,688	1,349	1,019
Kursk Oblast	0,756	1,176	0,966
Leningrad Oblast	1,213	0,484	0,849
Lipetsk Oblast	0,871	0,138	0,505
Magadan Oblast	-0,131	-0,035	-0,083
Moscow Oblast	1,299	-0,774	0,263
Murmansk Oblast	1,600	-0,381	0,610
Nenets AO	0,488	0,484	0,486
Niznii Novgorod Oblast	0,592	-0,999	-0,203
Novgorod Oblast	0,591	0,657	0,624
Novosibirsk Oblast	0,060	-0,813	-0,376
Omsk Oblast	0,665	0,917	0,791
Orenburg Oblast	0,646	0,830	0,738
Orel Oblast	0,823	0,917	0,870
Penza Oblast	-1,337	-0,381	-0,859
Perm Krai	0,964	1,782	1,373
Primorskii Krai	1,300	-0,381	0,460
Pskov Oblast	1,043	-0,554	0,245
Adygea Republic	-0,544	0,138	-0,203

Altai Republic	2,515	0,196	1,355
Bashkortostan Republic	-1,234	-0,035	-0,634
Buryat Republic	0,449	0,830	0,640
Dagestan Republic	-0,976	-0,669	-0,823
Ingush Republic	-1,673	-0,554	-1,113
Kalmyk Republic	-0,249	0,484	0,117
Karelia Republic	1,699	1,638	1,668
Komi Republic	-0,123	-1,246	-0,684
Mari El Republic	-0,882	-1,246	-1,064
Mordovia Republic	-2,221	-0,381	-1,301
Sakha (Yakut) Republic	0,107	0,484	0,296
North Ossetia Republic	0,463	0,484	0,474
Tatarstan Republic	-1,675	-1,592	-1,633
Tuva Republic	-1,627	-0,813	-1,220
Khakassia Republic	0,200	-0,669	-0,235
Rostov Oblast	-0,833	-0,381	-0,607
Ryazan Oblast	1,356	0,484	0,920
Samara Oblast	0,772	-1,246	-0,237
Saratov Oblast	-1,656	0,484	-0,586
Sakhalin Oblast	-0,059	1,782	0,861
Sverdlovsk Oblast	1,421	0,657	1,039
Smolensk Oblast	0,594	0,484	0,539
Stavropol Krai	0,050	0,484	0,267
Tambov Oblast	-0,937	-0,669	-0,803
Tver Oblast	0,794	2,215	1,504
Tomsk Oblast	0,930	0,052	0,491
Tula Oblast	-0,384	0,484	0,050
Tyumen Oblast	-0,313	-0,554	-0,433
Udmurt Republic	-0,345	-0,381	-0,363
Ulyanovsk Republic	-0,602	-0,381	-0,491
Khabarovsk Krai	0,103	0,484	0,293
Khanty-Mansi AO	0,492	0,830	0,661
Chelyabinsk Oblast	-1,297	0,484	-0,406
Chechen Republic	-1,996	-2,687	-2,342
Chuvash Republic	-0,306	0,830	0,262
Chukotka AO	-1,334	-0,554	-0,944
Yamalo-Nenets AO	-1,007	-1,246	-1,126
Yaroslavl Oblast	0,534	2,863	1,699

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