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Are Intergovernmental
Grants Tactical?
The Evidence from Russia

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Contents

Abstract	5
1. Introduction	6
2. Intergovernmental Fiscal Relations in Russia	7
3. Tactical Grants: Formulating Hypotheses	9
4. Empirical Analysis	12
4.1 Data Sources	12
4.2 Empirical Methodology and Description of Variables	12
5. Results	17
Conclusions	23
Reference	25



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Abstract

Two hypotheses about the determinants of Russian intergovernmental grants are tested empirically. According to first hypothesis, federal transfers to regions correlate with recent voting behavior of regional electorates. Second hypothesis states that transfers are higher in regions with politically powerful governors. We find a strong confirmation for the first hypothesis and no evidence for the second for years 1995-1998. This result is robust across specifications. Panel data analysis allows us to control for regional fixed effects. However, in years 1999-2001 election variables show no effect on transfers. It appears that in the nineties transfers were used by the incumbent government to enhance its reelection probabilities, while by the end of the century this mechanism was no longer in use as the transfer system has become more transparent and objective.

1. Introduction

That tactical considerations enter into redistribution is evidenced by numerous studies showing strong relations between grants and political factors such as voting patterns, timing of elections, geographical location, lobbying activity, etc¹. Empirical studies on Russia showed the importance of the political factors on the allocation of intergovernmental grants. Daniel Treisman (1996, 1998a and 1998b) found that receipts by regions of federal transfers in 1992-1996 were a positive function of anti-incumbent voting, and also of protest actions by the region – sovereignty declarations, and strikes. On the contrary, the study by Vladimir Popov (2004) found that during 1995-2001 net transfers were positively related to the pro-Yeltsin vote and pro-democratic results of the parliamentary elections.

This paper contributes to the discussion of tactical transfers in Russia in that it first, analyses panel data and second, uses a comprehensive measure of regional ‘needs’ in transfers. Panel data provide more observations and allow us to control for individual-specific effects. The existence of substantial regional heterogeneity in Russia suggests that some regional-specific characteristics may influence transfer allocation. If correlated with explanatory variables, these regional-specific effects might cause bias in interpreting results in previous research. To control for regional ‘needs’ in transfers, we use estimates of fiscal capacity and fiscal needs by the Russian Ministry of Finance. By using a comprehensive measure of normative ‘needs’, we are able to get better estimates of political factors.

Two hypotheses are tested. First, the *electoral* hypothesis suggests that federal transfers to regions correlate with recent voting behavior of regional electorates. Second, the *grantsmanship* hypothesis advocates the idea that regions with politically powerful governors receive transfers above their objective ‘needs’. We find a strong confirmation for the first hypothesis and no evidence for the second for years 1995-1998. This result is robust across specifications. Panel data analysis allows us to control for regional fixed effects. However, in years 1999-2001 election variables show no effect on transfers. Two (not necessarily exclusive) explanations are in order. First, with the use of formula-based transfers instead of *ad hoc* grant disbursements and with improvement of the transfer formula itself, politicians could have lost opportunities to use transfers for their electoral goals. Second - a political economy explanation – suggests that vote-buying behaviour of incumbents may depend on the popularity ratings.

¹ For the comparative analysis of the available empirical studies, see Martinez-Vazquez and Boex (2005).

Incumbents that have a large lead in the polls may be less likely to indulge in manipulations of transfers than those that face a close race (Schultz, 1995).

The paper is organised as follows. First, we briefly discuss the developments in the intergovernmental fiscal relations in Russia. Second, based on existing theory and the Russian political reality, we formulate hypotheses of tactical transfers. Third, a section on empirical analysis includes formulation of the methodology, description of data and variables. Next section presents results. The last part concludes.

2. Intergovernmental Fiscal Relations in Russia

In this section I will briefly discuss the developments in the intergovernmental fiscal relations in Russia which were relevant to this paper².

There are three levels of government in Russia: the federal government, the regional government and municipalities. Federal transfers are an important revenue source for regional governments. Federal transfers account for about 15 percent of the consolidated subnational revenues (Lavrov et al, 2001). However, the proportion grows to almost 30 percent, if financial aid from extra budgetary sources is included (OECD, 2002). Large regional differences are observed, e.g. for Moscow federal transfers amounted to 1.4 percent and for Ust-Ordynski Buriatski autonomous district – to 86.7 percent (OECD, 2002).

Intergovernmental transfers can be divided in two general categories: equalization transfers, which support regions with small tax capacity and large costs, and other transfers, including subventions and mutual settlements, which are mainly unbudgeted, nontransparent allocations made during budget execution (See Table 1).

Table 1. Structure of Federal Transfers in 1995-2001 (percentage of GDP)

	1995	1996	1997	1998	1999	2000	2001
Equalization Transfers	0.90	1.23	1.46	1.10	0.93	0.95	1.12
Other Transfers	0.90	1.32	1.09	0.78	0.36	0.40	1.28
Total Transfers	1.81	2.55	2.55	1.89	1.30	1.35	2.40

Source: State Tax Service

² For a detailed historical overview of intergovernmental fiscal relations in Russia, see Martinez-Vazquez and Boex (2001) and Lavrov et al (2001).

Equalization transfers (under the title of Federal Fund for Financial Support of the Regions, FFSR) are the dominant form of federal financial aid. In 1994, a new system of formula-based transfers was introduced. It had two equalization windows in its formula. The first formula window was distributed among regions with budget revenues lower than the country average ('needy' regions). The second window supported regions where budget revenues were insufficient to cover regional expenditures (very 'needy' regions) (Gaidar et al, 1996). The formula for the second window was based on the "gap-filling" philosophy of the subvention system that was used during 1992-1993 and previously in the Soviet Union (Martinez-Vazquez and Boex, 2001). The use of actual revenue collections and actual expenditure data did not properly measure fiscal capacity and expenditure needs. This was accompanied by many adjustments and lobbying activity of the regions during parliamentary discussions of the Federal Budget Law. No estimates of potential taxes and expenditure needs were available until 1999.

With a reform of 1999-2001, estimates of fiscal capacity and fiscal needs have been introduced. For the year 2000 estimates of tax potential used country average share of taxes in the Gross Regional Product (Ministry of Finance, 2002). Estimates of expenditure need included the minimum subsistence level and other indicators to reflect differences in prices of governmental services per capita across regions. Researchers agree that by 1999 the methodology for distributing equalization transfers has significantly improved and distribution of transfers has been done according to the transfer formula (see, for instance, Martinez-Vazquez and Boex, 2001).

In addition to the FFSR transfers, several other types of transfers were used during 1995-2001. The biggest category of other transfers is "mutual settlements". Mutual settlements formed an umbrella category that included transfers in lieu of financing regional investment programs in the federal budget, to compensate regional government for the mandated delivery of federal programs, and as emergency aid³. Other transfers include grants to Moscow for performing the role of capital city, Sochi, the northern territories for the delivery of goods, and "closed" cities that were part of the military-industrial complex (Martinez-Vazquez and Boex, 2001). None of them were allocated based on objective, transparent criteria and depended to a greater extent on the informal agreements between the federal center and regions.

³ Morozov, 1998 as cited in Martinez-Vazquez and Boex, 2001.

To summarise, the methodology for distributing equalization transfers used until 1999 had many features of the Soviet-era gap-filling approach. Other transfers of discretionary nature played an important role in regional budgets.

Apart from federal transfers, another important source of regional budgets is shares in federal taxes. After the transition period of 1992-1993, reforms implemented in 1994 introduced standard rates for sharing tax revenue between the federal government and regional governments. However, revenue sharing agreements were not always respected by the regions (Martinez-Vazquez and Boex, 2001). In addition, a number of regions enjoyed supplementary retention rates that were often agreed by the federal center in the bilateral agreements with regions. First two were signed with Tatarstan and Bashkiria. By mid of 1996, 24 of these were signed (Treisman, 1999). For instance, Yakutia sent almost no money to the federal budget as a result of the agreement of 1992-1993. Moreover, the amount of taxes remitted to the center have been changing across years, e.g. Karelia's share in federal taxes decreased from 95% in 1994 to 67% in 1995, that of Tatarstan from 84% to 77% (Gaidar et al, 1996). It is likely that the changes were a result of political considerations rather than economic necessity.

Between 1997 and 1998 the federal government became aware of the negative consequences of bilateral agreements on the federal budget policy (Martinez-Vazquez and Boex, 2001). As the federal center was regaining strength in the relations with regions, by 1999 it mostly succeeded to bring bilateral agreements in line with the general legislative framework. By then the system of revenue sharing was rather well enforced and supplementary retention rates were almost eliminated.

It is important to note that in this paper we do not consider direct federal expenditures in regions (e.g. payroll of militia, wages in the federal subsidized sectors, investment projects, construction, etc.). These federal budget expenditures are no less important the federal transfers, however, these data, especially for the period studied, are unavailable.

3. Tactical Grants: Formulating Hypotheses

According to *Electoral* hypothesis, incumbents believe that transfers help them in re-election. They can observe results of the *past* elections, and pursue their strategy with regard to transfers that benefit particular group of voters. This may relate to presidential elections as in Johnston (1979) and Cingranelli (1983) or to the pork barrel politics of congressmen as in

Ferejohn (1974). The prediction from Cox and McCubbins's (1986) model is that the incumbent government purchases votes by investing in regions where it already has high support. The intuition here is that supporters are "well known" quantities, and incumbents have relatively precise and accurate account of them.

Electoral hypothesis predicts that federal transfers to regions correlate with recent voting behavior of regional electorates. In Russia, electoral hypothesis found supportive evidence. Popov's findings (2004) were consistent with prediction of Cox and McCubbins's (1986) model: transfers increase with the pro-incumbent vote. Interestingly, Treisman in a series of papers (1996, 1998a, 1998b, and 1999) found that transfers were higher in the protest regions. The measure used to test the electoral hypothesis is the percentage vote in the preceding elections.

The focus of a Downsian politician, who only cares about winning election in a democratic state is voters (Downs, 1957). A different political economy tradition argues that political decision-making processes can be "captured" by powerful interest groups, so that the regional distribution of public resources would be at least partially determined by political and institutional factors (for instance, Grossman and Helpman, 1996; Vazquez and Boex, 2005). The idea that sub-national governments may have differential capacity to secure transfers is expressed by the *grantsmanship* hypothesis (Stein, 1981).

As Shleifer and Treisman (2000) state concerning the Russian case, "in a fluid political setting, where the implementation of policies is important and as difficult as their enactment, and where enactment relies on agreement among powerful political groups rather than a vote, elections are only one of many arenas in which interest groups compete". In the 90-s regional governments gained substantial power in relations with the central government through leverage over regional tax-collection offices, representation in parliament and threats of separatism (Shleifer and Treisman, 2000). A particular role belongs to governors (regional government heads), who often determine regional relations with the federal center (Petrov, 2000a). 1996-1997 saw regional elections in almost all Russian regions (before in half of the regions governors were nominated by the President).

The prediction of the *grantsmanship* hypothesis is that regions with powerful (influential) governors receive higher transfers. To proxy political power one might look if regional heads were democratically elected and have long tenure. As a result of regional elections, governors became more independent of the federal center, and probably had a better bargaining position with the federal government. Tenure is often used in the literature as a proxy for power (see e.g.

Horiuchu, 2003). Political power might also depend on the regional leaders' degree of access to central officials (Treisman, 1999). One mode of access believed to be important is the contact with central policymakers that comes with an official visit to the region. We expect regions which were visited by Yeltsin during the election campaign of 1996 to get higher transfers.

Governor's power might also depend on which political party he is a member. In the 90-s the common rule was that communist governors were in opposition to the incumbent pro-democratic government. During the election campaign of the Parliamentary 1999 elections some governors joined the newly found pro-Putin party 'Bear', whereas others supported the anti-incumbent party 'OVR', led by Moscow mayor Luzhkov.

Other indicators of regional power include the extent, to which regional laws and regulations violate federal laws; the frequency of public statements by the governor against the policies of the center; the bilateral treaty between the region and the center; regional natural resource endowments. Regions that violate federal legislation and have bilateral agreements with the center are more likely to have a strong bargaining position with the federal center. National resources give governors additional bargaining power *vis-à-vis* the center.

These indicators are summarized in two indices of political relationships between regions and the federal center from Ponomareva and Zhuravskaya (2004). We use indirect measures as we were unable to find variables that directly measure regional bargaining power. We think that the two composite indices are the best available proxies for the regional power. We discuss the construction of the indices in detail in the next Chapter.

Besides electoral goals, the pattern of transfers might reflect other priorities of central policy makers, i.e. to support economic reform, to support particular economic sectors or to weaken ethnic tensions. We include a variable for ethnic-territorial conflicts to control for the last priority. With ethnic groups comprising approximately 20 per cent of the total population, ethnicity has been an important problem for Russian policy makers (Marsh and Warhola, 2000).

Russia has inherited a complicated administrative system⁴. Historically, administrative units used to have different rights. Regions with republic status used to have more developed institutions of self-government along with various tax benefits, compared to regions with

⁴89 administrative regions of Russian Federation include twenty-one republics, forty-nine provinces ('oblasts'), six territories ('krais'), eleven autonomous districts ('okrugs') and two cities, with Moscow and St. Petersburg having the latter status.

provinces or territory status. Thus, as the *grantsmanship model* might suggest, the former will be more capable of seeking and receiving federal assistance than the latter. Although differences were formally abolished by the current legislation, this still might have an effect on transfer allocation. Many researchers have documented that 21 ethnic republics were favored in the form of larger subsidies, permission to retain a higher share of tax collections, and special decrees granting economic benefits (Martinez-Vazquez and Boex, 2001; Matheson, 2005). We also control for population in the region, as it might be the case that big regions have better bargaining positions with the federal center.

4. Empirical Analysis

4.1 Data Sources

Data on total transfers, equalization transfers, other transfers and taxes remitted to the center for 1995-2001 come from the State Tax Service (STS). It contains data for all Russian regions except the Chechen republic (88 in total). Estimates of tax potential and expenditure need are from the Ministry of Finance (Minfin, 2001). Data on presidential elections of 1996 and 2000 are from the All Russian Central Election Committee (VCIK); data on parliamentary elections of 1993, 1995 and 1999 are from the Center for Russian studies at NUPI (http://www.nupi.no/russland/elections/Elections_1991_2000.html). Data on governors, visits of the Russian president to regions and ethnic-territorial conflicts was collected from various publications of the Carnegie Moscow center (<http://pubs.carnegie.ru/choice.asp>). Two political indices of relations between the federal government and regional governors were independently constructed by the MFK Renaissance and the Urban Institute (Ponomareva and Zhuravskaya, 2004). Data for population are from the Goskomstat (Official Russia's Statistical Agency).

4.2 Empirical Methodology and Description of Variables

To test the hypotheses described in the previous Section, I perform fixed effects estimation on the panel data of the following model:

$$Transfer_{it} = \alpha(Need_i) + \beta(Electoral_{it-1}) + \gamma(Power_{it-1}) + Controls_i + v_i + \varepsilon_{it}$$

In addition, I have run cross-section regressions with political variables (and controls) for years data were available, 1997-2000. The unit of the analysis is Russian region. For fixed effects estimation I have analysed separately two periods: 1995-1998 and 1999-2001. As has been

discussed in the Section 2, distribution of transfers clearly shows two distinct patterns in 1995-1998 and 1999-2001. First, it concerns the dependent variable. In Section 2 we saw that until 1999 revenue sharing was used by the federal center as an additional instrument of redistribution. Standard retention rates were often not respected by regions and supplementary retention rates were common at that time. Thus, revenue sharing was subject to political forces and should be included in the dependent variable. However, by the end of 90s sharing rates were standardized across regions and supplementary retention rates were eliminated. Following the fiscal developments, for years 1995-1998 we adjust *Transfers* with the taxes remitted to the federal center.

Second, the criteria of transfer allocation also have changed significantly. In years 1995-1998 the common practice was to use transfers as accounting tools to balance regional budgets. So, for this period we define variable *Need* as the difference between estimates of expenditure need and tax potential. The expenditure need reflects regional differences in costs and demands in public services depending on population structure, climate conditions, and so on. The tax potential estimates the regional ability to raise taxes, given the tax base and average tax rates. The underlying logic of the 'need' criteria is that it takes into account regional 'need' in public expenditure and then adjusts it with the taxes that can pay for it. We expect $\alpha > 0$ (transfer is a positive function of regional 'needs').

By 1999, the practice of filling the fiscal gap was abandoned and distribution of transfers has been done according to the transfer formula. This formula includes expenditure need and tax potential. So, for years 1999-2001 expenditure need and tax potential are introduced directly into the model⁵.

For all years we use the Ministry of Finance estimates of tax potential and expenditure need for 2001⁶. We assume that measures of tax potential and expenditure need do not change from year to year. Estimates of tax potential take into account regional differences in gross regional product (or value added), adjusted for the industrial structure (oil and gas industries generate more tax revenues than agriculture). Estimates of expenditure need are calculated for all major categories of government spending – housing, education, health care, etc, - and

⁵ For year 1999-2001, we also ran regressions with the Need defined as the difference between expenditure need and tax potential, and political variables had similar signs and significance, but the R-squared was lower than in the regressions with expenditure need and tax potential.

⁶ Official estimates of tax potential only exist since 2000, and estimates of expenditure need – since 1999 (Lavrov et al, 2001).

include cost of living (subsistence minimum), indices of infrastructure development, demographic structure, climate conditions and many others.

I control for regional 'need' as, otherwise, political factors might be overestimated⁷. An alternative way to control for regional 'need' is to use various proxies such as demographic structure of population, social infrastructure development, income per capita, etc. For instance, this approach is used in Treisman (1996, 1998a and 1998b). In our view, if comprehensive normative estimates of 'need' are available, it is more efficient to use those than indirect proxies.

To test *Electoral* hypothesis transfers are regressed on the results of *past* elections. Incumbents are assumed to use the most recent available results of elections. The *Electoral* variable is constructed in the standard way as it is done in the literature (see, for instance, Castells and Sole-Olle, 2005). Transfers of 1995 are regressed on the data on 1993 Parliamentary election; transfers of 1996 - on the data on 1995 Parliamentary election, transfers of 1997 - on the data from 1996 Presidential election, and so on. In the baseline regression for years 1995-1998 I use the percentage vote for the incumbent party Russia's Choice in 1993, percentage vote for the pro-reform Russia's Choice and Yabloko parties in 1995, and percentage vote for Yeltsin in the second round of 1996 Presidential elections. I also ran regressions with the percentage vote for the pro-reform Russia's Choice, Yabloko and another incumbent party - Our Home is Russia in 1995, and with percentage vote for Our Home is Russia in 1995 only, and got similar results. In the regression for 1999-2001 I use the percentage vote for Yeltsin in the second round of 1996 presidential elections (in 1999), percentage vote for pro-incumbent party Bear in 1999 parliamentary elections (in 2000), and percentage vote for Putin in 2000 presidential elections (in 2001). $\beta > 0$ is expected, or regions which showed high percentage votes for the incumbent are rewarded with higher transfers.

Power variable is the label for four variables of the political power of the governor (*Elected Governor dummy*, *Governor's Tenure*, *Governor Participation in Political Parties* and *Region visited by the President*) and two indices of relations between the governor and the federal center. As we discussed in the previous Section, democratically elected governors with long tenure are likely to have strong bargaining position with the federal center and will probably receive higher transfers. *Elected Governor dummy* (1 for elected governor, 0 for appointed governor) is only used for years 1995-1998, as by mid-1999 all governors were elected⁸. As by

⁷ For a relevant discussion, see (Johansson and Dahlberg, 2002).

⁸ By 1998 only Karachaevo-Cherkessia did not have elected governor. First elections there took place in April 1999 (Carnegie center, 1999).

1998 elections of regional heads have taken place in most of regions, *Elected Governor dummy* might peak up a time trend, so we include *year dummies* to control for that. *Governor's Tenure* (Governor's years in office) is from the previous year to avoid potential endogeneity problem that transfers increase governor's tenure. *Governor Participation in Political Parties* include three dummies – governor is not a member of a communist party, governor supported pro-Putin party 'Bear' during the elections campaign of 1999, and governor supported anti-incumbent party 'OVR'. First variable is used in the regressions of 1997 and 1998, and last two variables are used in the 2000 regression. *Region visited by the President* dummy (1 – if visited, 0 – otherwise) stands for the visits by Yeltsin in 1996 and is used in the cross-section regressions of 1997 and 1998.

Indices of relationship between the governor and the federal center include *Index of Tensions in Relations of Governor with the Center* and *Index of Regional Bargaining Power* (Ponomareva and Zhuravskaya, 2004). The first index measures tensions in relationships between the governor and the federal centre in 1997 (higher value means higher tension in relationships). It was constructed by the former investment group MFK Renaissance. It summarizes information on the frequency of public statements by the governor personally against president Yeltsin and against Yeltsin's policies, the level of political support of the governor by the centre during the last regional elections (with the negative sign) and the presence (or not) of a bilateral treaty between the region and the centre.

The second index proxies for the strength of the bargaining power of the region with the federal centre in 1996 (higher values mean a stronger bargaining position for the region) (Ponomareva and Zhuravskaya, 2004). This index was constructed by the Urban institute in Moscow. This index is based on the analysis of regional legislation and its violations of the federal laws, the federal elections results (pro- or against the center policies), the regional natural resource possessions and other relevant information.

These two indices are only used in the cross-section regressions because of the data availability. We include the *Index of Tensions in Relations of Governor with the Center* in the 1998 regression, and *Index of Regional Bargaining Power* in the 1997 regression. We expect $\gamma > 0$, or more powerful governors get higher transfers.

Controls include administrative division dummies, population and variable *ethnic-territorial conflicts*. The latest variable comes from the Carnegie institute. It was constructed using information on ethnic-territorial conflicts in the regions in 1996. The lowest value is in the

republic of Chechnya meaning the highest ethnic-territorial conflict. We include *ethnic-territorial conflicts* in the cross-section regressions of 1997 and 1998.

Summary statistics of the variables used in the analysis are presented in Table 2.

Table 2. Summary Statistics of Variables used in Regression Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Transfers, per capita	616	0.74	1.40	0.00	12.45
Transfers Adjusted for Taxes Remitted, per capita	616	-0.52	3.05	-37.93	16.95
Equalization Transfers, per capita	588	0.51	1.01	0.00	8.07
Other Transfers, per capita	588	0.26	0.53	-0.01	5.49
Fiscal Need, per capita	616	-5.10	6.83	-47.43	5.77
Expenditure Need, per capita	616	2.59	2.55	1.27	18.11
Tax Potential, per capita	616	7.69	7.68	0.95	52.45
Population, thousand	616	1664	1500	18	8793
Vote for Pro-incumbent Party or Presidential Candidate, percentage	616	41.12	21.70	1.65	79.80
Governor's Tenure	604	3.74	2.63	0	10
Elected Governor Dummy	440	0.86	0.35	0	1
Governor's Party Affiliation Dummy	352	0.91	0.28	0	1
Region Visited by the President, 1996	88	0.24	0.43	0	1
Governor Supported Pro-Putin Party, 1999	88	0.45	0.50	0	1
Governor Supported Anti-Government Party, 1999	88	0.16	0.37	0	1
Index of Tensions in Relations of Governor with the Center, 1997	86	2.14	0.82	1	3
Index of Regional Bargaining Power, 1996	86	3.31	1.44	1	5
Ethno-territorial Conflict, 1996	88	94.55	14.13	40	100
Territory ('Krai') Dummy	88	0.07	0.25	0	1
Province ('Oblast') Dummy	88	0.57	0.50	0	1
Autonomous District ('Okrug') Dummy	88	0.11	0.32	0	1
City Dummy	88	0.02	0.15	0	1

Note: transfers, taxes and 'needs' are in real terms, per capita; here and below the unit is 100 thousand rubles from 1993, at the exchange rate of 576 rubles per USD dollar.

All specifications are in real terms⁹. The dependent variable, the 'need' variable and population are in per capita terms. Regressions are performed for total transfers, equalization transfers and other transfers as dependant variable. Distinguishing between types of transfers allows us to test our hypotheses not only for aggregate flows, but also for particular transfer streams. One would expect that political factors are more important in distribution of other transfers compared to formula-based equalization transfers. Once controlled for the regional needs in a transfer, we want to test what political variables are significant and have expected signs according to the *Electoral* and *Grantsmanship* hypotheses.

⁹ End year CPI comes from International Financial Statistics database and the Central Bank of Russia.

To control for temporal autocorrelation, I included lagged dependent variable in the regressions and performed the procedure developed by Arellano and Bond (1991) on the panel data. It turned out that in all specifications lagged dependent variables were insignificant. Unfortunately, we were not able to include some political variables in the fixed effects estimations that were significant in the literature (see, for instance, Treisman (1999)). Variables such as visits of the President to regions, governor participation in political parties are not available in the panel. However, we run cross-section regressions with some of those variables.

5. Results

1995 - 1998

Results of the fixed effects estimation for the years 1995-1998 are presented in Table 3.

Table 3. Regression Results, Dependent Variable Transfers Adjusted, for Years 1995-1998

<i>1995-1998</i>	<i>Total Transfers¹</i>	<i>Equalization Transfers</i>	<i>Other Transfers</i>
Fiscal Need	4.065 [0.457]***	4.333 [0.503]***	4.122 [0.480]***
Vote for Pro-incumbent Party or Presidential Candidate	0.017 [0.009]*	0.025 [0.009]***	0.023 [0.008]***
Governor's Tenure	-0.015 [0.047]	0.015 [0.045]	0.009 [0.043]
Elected Governor Dummy	-0.147 [0.240]	0.18 [0.241]	0.18 [0.230]
Population, million	-6.253 [5.051]	-10.369 [5.216]**	-5.19 [4.976]
Year Dummies	Yes	Yes	Yes
Observations	340	327	327
Number of id	88	88	88
R-squared	0.28	0.31	0.34

Note: 1. All dependent variables are adjusted for taxes remitted.

2. Here and below standard errors are in parentheses; coefficients are significant *** - at 1% significance level, ** - at 5% significance level, and * - at 10% significance level.

Three columns correspond to the regression with total transfers, with equalization transfers and other transfers as dependent variable (all adjusted for taxes remitted). First thing to note is that, as expected, fiscal need is positive and significant across specifications. Second, vote for pro-incumbent party or presidential candidate is positive and significant. This implies that regions with pro-incumbent votes got higher transfers, above their 'needs'. The magnitude of the effect is substantial. One percent increase in pro-incumbent vote resulted for a region on average in 51 thousand rubles of 2000 per capita ($0.017 \times \text{Consumer Price Index}'2000$) more in total transfers¹⁰. For some regions it accounts for a big portion of their total transfer. This result goes in line with Popov's (2004) finding that the federal government awarded its loyal supporters with transfers. Third, we find no evidence for the grantsmanship hypothesis: neither governor's tenure, no elected governor dummy turned out to be significant. We further check grantsmanship hypothesis with more variables in the cross-section regressions.

Region's population is negative and significant in the specification with equalizations transfers. Its sign is opposite to the one expected according to the *Grantsmanship* hypothesis. The fact that smaller regions get higher transfers might reflect inefficiencies of the existing system of fiscal federalism. Extremely small size of some regions (especially autonomous districts, but not only) might lead to excessive financing of some public goods. In Treisman (1996) population is also negatively correlated with transfers. An explanation he suggests is related to the bargaining power of regions: regions have roughly equal formal access to central ministries and officials, regardless of whether they represent a few hundred thousand or a few million residents.

Analysis of cross-section regressions with political variables for 1997 and 1998 confirm results of the regression for 1995-1998 (See Table 4)¹¹.

¹⁰ The average total transfer per capita for 2000 amounted to 2056 thousand rubles.

¹¹ We present here only results for 1997, as results for 1998 except for administrative dummies were similar.

Table 4. Regression Results, Dependent Variable Transfers Adjusted, 1997

	1997	Total Transfers	Equalization Transfers	Other Transfers
Fiscal Need		0.399 [0.029]***	0.362 [0.023]***	0.332 [0.017]***
Vote for Pro-incumbent Presidential Candidate		0.051 [0.018]***	0.027 [0.014]*	0.026 [0.011]**
Region Visited by the President		-0.172 [0.450]	-0.005 [0.359]	0.111 [0.270]
Governor's Tenure		-0.072 [0.092]	-0.101 [0.073]	-0.081 [0.055]
Non-communist Governor Dummy		0.551 [0.631]	0.346 [0.504]	0.489 [0.379]
Regional Bargaining Power Index'96		-0.127 [0.155]	0 [0.124]	-0.078 [0.093]
Ethno-territorial Conflict		0.029 [0.015]*	0.02 [0.012]*	0.021 [0.009]**
Population, million		-0.288 [0.160]*	-0.231 [0.127]*	-0.149 [0.096]
Territory Dummy		0.679 [0.832]	0.567 [0.664]	0.43 [0.499]
Province Dummy		-0.158 [0.533]	-0.118 [0.425]	-0.028 [0.320]
City Dummy		0.168 [1.491]	0.12 [1.189]	-0.134 [0.895]
Autonomous district Dummy		1.106 [0.737]	0.651 [0.587]	-0.773 [0.442]*
Observations		88	88	88
Adjusted R-squared		0.72	0.78	0.85

First, vote for Yeltsin is positive and significant, even after controlling for region's fiscal need. A one standard deviation increase in the Yeltsin's vote led to an increase in total per capita transfers of 63 percent in 1997. For comparison, a one standard deviation increase in fiscal need led to an increase in total per capita transfers of 274 percent. Second, the grantsmanship hypothesis is not confirmed. Additional variables for governor's political power – visited by the president, non-communist governor dummy, and two indices of relationship

between the federal center and regions are not significant. Treisman (1999) found that visits by the president are a significant variable. However, his regressions may suffer from an endogeneity problem. Visits of Yeltsin in 1996 cannot probably have caused transfers in the same year as transfers are usually decided at the end of the previous year.

Variable ethno-territorial conflict is significant and positive, implying that regions with ethnic conflicts in fact received less in transfers (the lower the value of the variable, the bigger is the ethnic conflict). A one standard deviation increase in ethnic conflict led to a decrease in total per capita transfers of 41 percent. So, it appears that the federal center was punishing regions with ethnic tensions by cutting the financial aid, especially the discretionary grants.

In 1997 administrative dummies does not turn significant, suggesting that regions received transfers irrespective their administrative status. City dummy (with negative sign) and autonomous district dummy (with positive sign) are significant in 1998, meaning that two Russian cities received less transfers than republics, and autonomous districts received more than republics (the omitted category). Negative sign of the city dummy might be driven by the fact that in Russia taxes are not always paid in the regions, where output is produced (Popov, 2004). For instance, Moscow remits to the federal budget substantially more than some resource rich regions such as Tiumen. Thus, actual taxes remitted by Moscow to the federal center (which adjust the dependent variable) would exceed its objective tax potential.

Overall, results of cross-section regressions should be taken with caution as in those regressions we were not able to control for regional fixed effects.

1999-2001

Let us turn to the discussion of the determinants of transfers in years 1999-2001. Table 5 presents the results of fixed effects estimation for 1999-2001 with total transfers, equalization transfers and other transfers as dependent variables.

Table 5. Regression Results, Dependent Variable Transfers, for Years 1999-2001

1999-2001	Total Transfers	Equalization Transfers	Other Transfers
Expenditure Need	3.515 [0.762]***	7.127 [0.675]***	-3.477 [0.642]***
Tax Potential	-1.714 [0.552]***	-2.061 [0.495]***	0.217 [0.471]
Vote for Pro-incumbent Party or Presidential Candidate	-0.001 [0.003]	-0.004 [0.003]	0.004 [0.003]
Governor's Tenure	0.007 [0.018]	-0.036 [0.016]**	0.04 [0.015]**
Population, million	8.62 [2.444]***	19.706 [2.121]***	-10.956 [2.019]***
Year Dummies	Yes	Yes	Yes
Observations	264	249	249
Number of id	88	88	88
R-squared	0.36	0.74	0.6

The first result is that all three models explain transfers better than the ones from 1995-1998. The R-squared goes up, especially for equalization transfers (up to 74 percent), which are formula based. This result is consistent with the developments in the Russian transfer system, probably reflecting the fact that the distribution of transfers has become more transparent and formal.

Second, expenditure need and tax potential are significant and have expected signs for regressions with total transfer and equalization transfer as dependent variable. Interestingly, in the regression with other transfers expenditure need enters with the negative sign and tax potential is not significant. That is, regions with higher needs were getting in fact less in other aid. This might be explained by the discretionary nature of other aid, and may suggest that reforms are still needed for transfers which are not part of the FFSR.

In contrast to the results for electoral variables in the previous years, vote for pro-incumbent party or presidential candidate is not significant anymore. It is also true for the cross-section regressions of 1999 and 2000 (See Table 6)¹².

¹² We present in the paper only results for 2000, as results for 1999 were similar.

Table 6. Regression Results, Dependent Variable Transfers, 2000

	2000	<i>Total Transfers</i>	<i>Equalization Transfers</i>	<i>Other Transfers</i>
Expenditure Need		0.502 [0.045]***	0.603 [0.041]***	0.137 [0.029]***
Tax Potential		-0.081 [0.013]***	-0.143 [0.018]***	-0.058 [0.012]***
Vote for Pro-incumbent Party or Presidential Candidate		0.006 [0.011]	0 [0.006]	-0.002 [0.004]
Governor's Tenure		0.026 [0.029]	0.017 [0.017]	0.01 [0.012]
Governor Supported Pro-Putin Party		-0.02 [0.174]	-0.065 [0.101]	0.065 [0.071]
Governor Supported Anti-Government Party		0.057 [0.235]	-0.074 [0.152]	-0.067 [0.107]
Population, million		0.046 [0.074]	0.079 [0.046]*	0.018 [0.032]
Territory Dummy		-0.115 [0.366]	-0.02 [0.217]	0.088 [0.153]
Province Dummy		0.088 [0.212]	0.168 [0.132]	0.16 [0.093]*
City Dummy		0.505 [0.665]	1.086 [0.427]**	0.568 [0.301]*
Autonomous district Dummy		1.148 [0.378]***	0.313 [0.241]	0.043 [0.170]
Observations		88	81	81
Adjusted R-squared		0.77	0.9	0.32

The result is also robust to the change in the construction of the electoral variable. In addition to the baseline regression for 1999-2001 with variable Vote for pro-incumbent party or presidential candidate as defined in the previous section, we also run regressions with Vote defined as percentage for Yeltsin in 1996 for all three years, and percentage for Yeltsin in 1996 (in 1999) together with the results of parliamentary election of 1999 (in 2000 and 2001). Vote for pro-incumbent party or presidential candidate in all regressions was insignificant.

Thus, we find no evidence for the electoral hypothesis for years 1999-2001. What can explain the fact that the incumbent in some years was buying votes with transfers, and in some years not? We argue that the first explanation is related to the developments in the Russian transfer system. 1995-1998 were characterized by the poor performance of the formula-based transfers with discretionary grants accounting for a substantial part of total transfers. Therefore, there was a room left for political manipulations and bargaining. By 1999 the transfer system has become more transparent and objective, and that created constraints to vote-buying.

Another explanation might come from the political economy side. Shultz (1995) argues that incumbent governments tend to be involved in macroeconomic manipulation when they face a close race. This was particularly true for the incumbent government in the Parliamentary elections of 1995 and for Yeltsin in the Presidential elections of 1996 elections. The election cycle of 1999-2000 is considered to be different in that Putin had a large lead in the polls which guaranteed re-election of the incumbent team (Petrov, 2000b).

Third, governor's tenure is significant in the regression with equalization transfers (negative) and with other aid (positive). This result, however, is not confirmed in the cross-section regressions of 1999 and 2000. Neither additional variables of governors supporting (or not) pro-incumbent party turned out to be significant (See Table 5). The magnitude of the governor's tenure on transfers is also very low. A one standard deviation decrease in the Governor's tenure led to an increase in equalization transfers per capita of only 10 percent in 2000. In comparison, a one standard deviation increase in expenditure need led to an increase in equalization transfers per capita of 1800 percent. Thus, from the results we cannot confirm, neither reject the grantsmanship hypothesis in 1999-2001. Further analysis is needed for more conclusive results.

Conclusions

This paper provides evidence that in the second half of the 1990s when distributing federal transfers to Russian regions, equity and efficiency considerations were not the only considerations and political factors played an important role. In particular, the incumbent government used transfers to increase its re-election probabilities. Regions with pro-incumbent votes were rewarded with higher transfers which is consistent with the prediction of Cox and

McCubbin's (1986) model. The result is robust to changes in the electoral variable (i.e. which parties are considered pro-incumbent). The magnitude of the effect is substantial. One percent increase in pro-incumbent vote resulted for a region on average in 51 thousand rubles of 2000 per capita more in total transfers. For some regions it accounts for a big portion of their total transfer. However, in 1999-2001 we did not find any significant effect of votes on transfers. Evidence of the effect of the political power of regions on allocation of transfers was particularly weak in this period either. Other political proxies of the grantsmanship hypothesis – governor-related variables and indices of tensions with the federal center – showed no relationship with transfers.

This paper adds to the discussion of optimal design of the system of intergovernmental transfers. Our results may suggest that a transparent formula-based transfer system leaves little room for discretion and political manipulations. On the contrary, grants that do not have objective criteria for allocation produce bad incentives for politicians.

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