The Political Economy of Russian Agricultural Subsidies

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Abstract:

Agricultural policy's support to farmers, measured in real terms, differs considerably across Russian regions. What explains these large differences in regional agricultural support? We argue that traditional approaches of agricultural economics cannot fully explain this variation and we draw upon the political eocnomy literature. In particular, we explain allocation and distribution of agricultural subsidies studying the incentives of federal and regional politicians. Electoral pressures arising from competing with other political parties may push federal politicians to target either loyal or easily swayed voters and regional ones to strategically target special interst groups. Vertical organization of the Russian dominant party may generate perverse accountability links between local governors and regional agricultural interest groups. We utlize a unique dataset on the agricultural subsidies in 2008-2015 in order to test the hypotheses. The evidence suggests that federal government targets "swing" regions in distributing agricultural subsidies and local governments are more likely to allocate larger co-funding shares facing higher political competition in the region. In addition, regions with better organized large-scale agricultural producers and elected governors are more successful in maximizing obtained agricultural subsidies from the federal level.

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1. Introduction

Although Russia spends large resources on support of the agricultural sector, allocation and distribution of funds results in large imbalances between the regions. Russia's self-sufficiency doctrine[1] generates a large political interest towards agriculture allocating 0.93% of its GDP towards direct and indirect support (OECD, 2017). However, the regions benefit from these resources unequally because the composition of federal and regional co-funding differs greatly between the sub-federal units for two reasons. First, although the federal co-funding of agricultural subsidies represent formula-based transfers according to the current legislation[2], we find a large share of unexplained variance. Second, regions have much more discretion in terms of the size of regional co-funding contribution and are subject to minimal regulation with this respect (Uzun, Shagayda, Yanbykh, Saraykin, & Gataulina, 2016). Since traditional

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[1] Food self-sufficiency strategy was first adopted within the State Program for Development of Agriculture 2008-2012 and then developed further by the consequent Program for 2013-2020.

[2] It would typically depend on local tax generation capacity, agricultural area, and some other more specific variables depending on the subsidy type.

economic factors cannot fully explain these differences, this study draws from the political economy literature to explain subsidies' allocation and distribution.

We examine how political incentives of central and regional Russian politicians may affect the distribution of agricultural subsidies across the regions and allocation of regional co-funding. A growing body of literature suggests that Russian political actors maximize their support redistributing state resources (Jarocińska, 2010; Marques, Nazrullaeva, & Yakovlev, 2016; Popov, 2004; Treisman, 1998). However, all of them examine the motives behind the distribution of intergovernmental transfers to the regions. These analyses are lacking a more nuanced account of how Russian politics works with respect to concrete groups of voters and support for specific sectors. To our knowledge, our study is the first one to contribute to this body of literature by examining how central and regional governments appeal to a very important voter group – rural residents representing roughly one third of Russian population. Although agricultural sector employed ca. 7% of the whole labor force in 2016 (RosStat, 2017), agriculture is of a central importance for rural residents and subsidies may spur regional agricultural growth (Petrikov, 2016). As a result, on the federal level politicians may use agricultural subsidies to reward or incentivize voters within a given sub-federal unit to support an incumbent political party. In particular, following the "core voter" theory (G. W. Cox & McCubbins, 1986), the incumbent politicians will transfer more resources to the politically loyal regions. Another strategy is described by a "swing voter" theory (Dixit & Londregan, 1996) suggesting that the incumbents will target those groups of voters that are likelier to swing on their side. On the sub-federal level, regional politicians fearing a competition from other political parties may cater more to certain voter groups (Besley & Burgess, 2002), including a key rural constituency. Whereas, incumbent parties in those constituencies where they managed to cement an overwhelming support may have less incentives to cater to important voter groups.

Depending on the degree of threat that the incumbent politicians perceive from the challenging political parties, they may choose different strategies responding to agricultural lobbies. The fact that Russia hosts some of the largest agricultural enterprises in the world has obvious consequences for their political influence locally and even on the federal level. Thus, we examine how politicians may react to a more organized agricultural lobby within a given region. The argument is that larger agricultural producers are in a better position to attract more federal and regional subsidies. Following Olson's (1965) collective action theory, they have better administrative capacity and face lower transaction costs engaging in lobbying activities in comparison to small producers.

To test our propositions, we use a unique 2008-2015 panel data set on federal and sub-federal shares of agricultural subsidies to 78 Russian regions. It allows us to follow two election cycles where the incumbent parties may have faced a dilemma to strategically distribute agricultural subsidies among the regions in order to maximize political support. Russia represents an interesting case since we observe a large variation among comparable regions in terms of the degree of political competition, farming modes and the amount of subsidies received. In addition, autocratic regime with weak rudimentary democratic institutions represents a very interesting setting since these regimes should theoretically face less threat from the challenging opposition.

In general, the evidence suggests that Russian politicians may be allocating and distributing agricultural subsidies with explicit consideration of the goals of political support maximization. In particular, we find evidence that the federal government targets those regions where the support for "United Russia" is the lowest. On the sub-federal level, political competition appears to motivate regional

politicians to earmark more regional co-funding for agricultural subsidies in the more politically competitive regions. Finally, the regions where large-scale farming is a predominant mode of agriculture manage to obtain larger amounts of both federal and regional co-funding.

The rest of the paper is organized in the following fashion. The next section provides an overview of the theoretical framework that we employ to model the behavior of federal and regional politicians. Section 3 puts theory into the context of the Russian system of agricultural subsidies' allocation and intergovernmental relations. Section 4 describes the data and methods utilized. We present the results in Section 5 and then conclude with Section 6.

2. Theoretical Framework

Agricultural subsidies allocation and distribution follows a co-funding scheme where the federal government is guided by a predetermined formula in its share distribution and local governments – mostly by their locally developed programs. On the federal level, distribution occurs with a limited discretion since the federal distribution formula is much more precise. Regional politicians have much more discretion over the local share of co-funding since the law provides them with rough guidelines. As a result, we can model total regional support allocation as a simultaneous game between the center and the regions with ex ante expectations of each other's contributions.

2.1 Federal allocation

The rationale of using redistribution in a setting of political support maximization was developed by Shepsle and Weingast (1981) and further extended to incorporate different types of politicians' strategic behavior by Cox and McCubbins (1986) and Lindbeck and Weibull (1987). Following the logic of these family of models, we assume a federal government that is exogenously incentivized to stay in the office and is able to increase these chances by making a transfer to the regions in a form of a co-funding of the agricultural support portfolio. These transfers enter voters' utility functions together with consumption and some ideological stands. As a result, the theory suggests that politicians can manipulate voters' decisions via transfers. Public choice literature puts forth a debate about whether the politicians will target their "core" supporters or the "swing" voters. Cox and McCubbins (1986) argue that political parties will prefer to reward their loyal supporters and not run the risk of appealing to the uncertain voters since they may not know their utility functions perfectly. On the other hand, Dixit and Londregan (1996) suggest that if the politicians can reasonably predict how much votes their transfers will buy, they will tend to prefer the voters with uncertain ideological position – the "swing voters". Depending on how the voters react to the federal co-funding, will determine whether "swing" or "core" voters are targeted.

The discussion on "core vs. swing" voter strategy is still open with existing empirical support for both the "core" (e.g. Hiskey, 2003) and for the "swing" voters theory (e.g. Dahlberg and Johansson, 2002; Stokes, 2005). The evidence in the Russian context is not conclusive as well.[3] We test these hypotheses using a standard operationalization – closeness of a previous election. Should the "United Russia" face a serious competition in the region during the previous elections, then the region could be considered a "swing" one.

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[3] The evidence that supports the "core voter" theory includes Popov (2004) and Jarocińska (2010); whereas, Treisman (1998) finds that regions with more protests received more intergovernmental transfers.

Voting may not be the only channel through which regional electorate groups can attempt maximizing their receipts of federal co-funding. Weak institutional environment in Russia may be conducive to informal relations between elites and powerful groups (Shleifer & Treisman, 2000). A proxy for regional elite power could be the degree of governor's embeddedness in local elites. Governors have always played a major role in regional politics and may be involved in informal bargaining with the federal government (Petrov, 2000). Embeddedness in local elites may incentivize the governor to follow the interests of local elites, including the interests of local farming community maximizing federal co-funding of agricultural subsidies. Thus, we hypothesize that the governors that were elected and have more experience in the office, should manage obtaining more subsidies for their regions.

We model voters not as a mere observes but as active participants in agricultural policy formation. Voter groups pursuing a certain common interest may actively invest resources trying to influence politicians in order to maximize transfer receipts (Becker, 1983, 1985; G. M. Grossman & Helpman, 1996). Accordingly, interest groups will exert pressure on the politicians hoping for returns in terms of transfers. Pressure effectiveness may be determined by the group size since smaller groups may have more capacity to deal with the "free-riders" (Becker, 1985; Olson, 1965). As a result, smaller groups may face lower transaction costs in exerting pressure. Our prediction is that regions with smaller number of larger farms should be successful in securing larger federal co-funding of agricultural subsidies. In addition, larger farms should have a capacity advantage in dealing with the bureaucratic burden of applying for subsidies.

2.2 Regional allocation

Having less legal constraints in allocating shares of co-funding towards agricultural support, regional governments (just like their federal counterparts) may be incentivized by electoral and gubernatorial mechanisms. First, following the electoral mechanism, regional governments may have incentives to maximize political support for the incumbent party in order to please the party leaders on the federal level (Nye & Vasilyeva, 2015; Ross, 2010). In doing so, their incentives to cater to a certain interest group may be largely shaped by the extent of local political competition (G. Grossman & Helpman, 2001; Hansen, 1991).

We utilize the Cox-Meyerson framework (G. Cox, 1990; G. W. Cox, 1987; Myerson, 1993) in order to develop the relationship between the political competition and regional politicians' incentives to allocate regional share of agricultural subsidies. Candidates maximize the support of their electorate by taking policy positions or promising policy benefits. Politicians rationally choose their positions considering the positions of other candidates. Cox's (1990) argument is that the amount of votes needed to win will decrease as the number of competitors increases. As a result, political actors will appeal to smaller groups of constituents as the number of competitors rises widening ideological distance between the candidates. The model predicts that in the jurisdictions with high political competition local politicians will cater more to narrow interest groups like farming community.

Another useful lens to look at, especially in an environment with weak institutions, is the literature related to government capture. Accordingly, Bardhan and Mookherjee (2000) extending a standard Grossman and Helpman (1996) framework, argue that under certain conditions local lobbies will be under higher uncertainty about which party to capture if no party is overwhelmingly supported ideologically and if the voters are more unpredictable in their voting behavior. This implies that farm interest groups will be reluctant to capture a regional political party should it face a credible reelection threat. However, in a centralized Russian context with a highly vertically integrated structure of the "United Russia", local

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governments may function more as extensions of the central bureaucracies with vertical intra-party accountability (Jarocińska, 2010). These governance systems generate nearly no accountability mechanisms to the regional inhabitants and are prone to capture by local interest groups (Bardhan & Mookherjee, 2006). Nevertheless, Russian local governments may still face a political competition threat due to vertical party accountability: local "United Russia" leaders may risk their careers should they deliver unsatisfactory victory results (Jarocińska, 2010; Marques et al., 2016).

On the other hand, gubernatorial incentives may be generated by the embeddedness of a governor in local elites. The argument was put forth by Nye and Vasilyeva (2015) suggesting that the governors that have more connections with regional electorate should be more accountable to their constituents. Thus, the governors that were elected before 2004 (when appointment was introduced) and possibly reappointed thereafter should cater to local special interest more in comparison to the ones that were appointed by the center. Centrally appointed governors may have less incentives to cater to local constituency since the threat of being fired by the center represents a more important accountability mechanism. We, thus, hypothesize that regions with elected and reappointed governors will manage to incentivize their respective governments to allocate larger shares of regional co-funding for agricultural subsidies.

3. Russian context

Russian agricultural support aggressively pursues the goals of self-sufficiency and attempts to drastically expand production of some products. Most of the subsidies are directly bundled to production and represent a very distorting type of support. Only 13% could be classified as supporting activities for agriculture (infrastructure, education, etc.) representing a relatively small share in comparison to other countries (OECD, 2017). State support has been rather stable over the last two decades despite economic cycle fluctuations. Although the percentage of support to GDP has halved over a decade, it largely represent expansion of the GDP during the 2000s and is still considerably larger than in other industrialized countries.

Russian subsidies' allocation is based on a co-funding scheme between the federal and regional governments. The allocation of the federal funding is guided by the State Program for Development of Agriculture 2013-2020 that determines major directions and priorities of Russian agricultural sector. Region's share of a concrete subsidy (e.g. livestock, crops, etc.) is regulated by laws that stipulate specific distribution formulas. These formulas are in their essence similar to the principles of intergovernmental transfers distribution and would typically contain variables reflecting the amount of available federal funding, the degree of budgetary self-sufficiency, some measures of local agricultural production intensity and some coefficients that are set by the Ministry of Agriculture. The degree of budgetary self-sufficiency is a ratio of a tax potential index over an index of budgetary expenditures and basically measures the extent a region can cover its budgetary needs with the locally generated tax resources. Although transparency of federal funds distribution improved substantially since the 90s, federal government still possesses considerable discretion.[4]

Federal government typically conditions federal co-funding on availability of regional programs of agricultural development that outline major regional agricultural priorities. The size of regional co-funding is regulated to a much lesser extent. For most of the targeted subsidies the size of recommended regional

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[4] Qualitative expert interviews conducted in Moscow and selected regions confirm this discretion.

co-funding is the average value corrected by the regional budgetary self-sufficiency. However, according to the law, it cannot exceed certain boundaries set for each type of subsidies individually. As a result, regional politicians have much wider decision-making power about regional shares of co-funding.

Regional lobbies utilize this autonomy despite the fact that Russian institutional lobbying infrastructure may still be weak. Many enterprises use direct lobbying strategies including consultations with regional administrations, legislatures and the governor (Frye, 2002; Guriev, Yakovlev, & Zhuravskaya, 2010). Large agricultural enterprises, especially the ones operating within more than one region, may even solicit federal authorities. In addition, numerous business associations have emerged facilitating exchange between enterprises and creating a link with the state authorities of various levels (Guriev et al., 2010). Some of the agricultural associations are very independent from the state and some are highly integrated in regional and federal Ministries.

General power relations between the levels of the government have changed dramatically over two decades in Russia. The regions enjoyed large freedoms during Yeltsin period in the 90s. Each region bargained with Moscow over the authority, which resulted in large imbalances between regions (Ross, 2010; Zhuravskaya, 2010). During this period local governments were characterized by an extreme elite capture (Guriev et al., 2010) and ad hoc intergovernmental transfers that generated large geographical fiscal imbalances (Zhuravskaya, 2010). The commencement of the Putin's regime in 2001 is normally associated with vast centralization processes within Russian intergovernmental relations (Reuter & Remington, 2009; Robertson, 2010). The regions were stripped off their anyway limited fiscal independence and were forced to transfer most of the tax revenues to the center with the hope of getting some parts back in the form of transfers. Elite capture of local governments and intergovernmental bargaining survived but the power shifted to the federal level (Guriev et al., 2010; Zhuravskaya, 2010). For instance, penetration of business interests in local legislatures could be illustrated by the fact that just under a half of the members of regional legislatures owned businesses in early 2010s (Reuter, 2010). However, new rules of intergovernmental fiscal relationships improved substantially under Putin's regime (Jarocińska, 2010). Nevertheless, we observe a growing bulk of evidence on the federal governments maximize political via manipulation of transfers (Jarocińska, 2010; Marques et al., 2016), state lending (Schoors & Weill, 2017), and tax arrears (Ponomareva & Zhuravskaya, 2004).

Further important aspects of centralizing trends that occurred in 2010 were securing a dominant position of the "United Russia" and appointment of the governors by the center. During the period of 2007-2015 "United Russia" was the leading political force in all of the regions we are considering in this study. Such a position was in part achieved by creating a vertical accountability system where "lower-standing" politicians had to reproduce successful election results for the "United Russia" in order to stay in power (Jarocińska, 2010; Marques et al., 2016). Consequently, this shifted the accountability incentives from the local electorate to the governments of the higher tiers following the model of "regional bureaucracy" discussed in Section 2.2. Because of these incentives, regional politicians have to cater to local elites in order maximize "United Russia" support. Despite the centralization trends, we observe a substantial variation in the degree of democratization and institutional development among the regions (Guriev & Vakulenko, 2015). This, among other things, strongly depends on the governor. After 2005, all governors were appointed and evaluated by Putin instead of being elected. As a result, many newly appointed governors were not even from the region and would often commute to the region for work with their families staying in Moscow (Nye & Vasilyeva, 2015). Governors had similar indirect electoral incentives as regional party bosses: their performance was evaluated based on their ability to improve

"United Russia's" standing in the region and, in fact, often they would be party members themselves (Reuter & Robertson, 2012).

4. Data and Methods

In order to test our hypotheses about the incentives of the federal and regional politicians in agricultural subsidies allocation, we utilize the data encompassing 78 Russian regions and spanning from 2007 to 2015. We distinguish between the regional and federal shares of co-funding. The data was provided by the Russian Ministry of Agriculture with the assistance of the Nikonov All-Russian Institute for Agricultural Issues and Informatics based in Moscow. Data sources for our independent variables are Russian State Statistical Agency, Russian Central Electoral Commission, Database on Russian Governors of the Institute for Industrial and Market Studies of the Higher School of Economics and the database "SPARK" covering all registered enterprises.

4.1 Variables

As dependent variables, we use total regional and federal subsidies to/in a region i at a period t. This includes all the subsidies towards crop and livestock production, including direct payments, along with the subsidies towards the interest rates of short- and long-term credit. We exclude the support to general services as funds allocation is typically guided by separate development programs. The variables are deflated using OECD deflators and taking 2010 as a base year.

Table 1 demonstrate the descriptive statistics of the variables utilized. We follow existing literature and use the share of votes for "United Russia" during the last elections as a proxy for political competition in the region (Jarocińska, 2010; Marques et al., 2016; Treisman, 1998). Higher share of votes implies lower political competition and the fact that the region hosts predominantly "core" voters. In order to reflect governors' embeddedness in the regional elite, we, first, use experience in the office conjecturing that longer terms open up an opportunity to build connections with local elite. Second, a dummy reflects whether a governor was initially elected or appointed for a post. What is important here for us is that the governor had had electoral accountability within a given region. Thus, even though s/he could have been appointed during 2008-2015 period, we would count the ones that were elected into the office before this period as elected. Turning to the incentives from the lobbies, we use two variables. First, the number of state workers reflects region's general bureaucratic capacity to bargain with the federal government and allocate regional share of the co-funding. Second, we construct a Gini coefficient capturing the inequality in current assets among agricultural enterprises. It is constructed on the whole universe of the enterprises available from the "Spark" database. We expect higher inequality in current assets to be associated with smaller number of large agricultural producers in the region and, as a result, following the logic of Olson (1965), region's superior ability to lobby and attract more subsidies.

Furthermore, we control for the variables stipulated in a typical distribution formula. At the heart of each formula lays the index of budgetary self-sufficiency that is regularly published by the Ministry of Finance. In order to capture budgetary revenues from oil and gas extraction, we include a share of extracting industries in the Gross Regional Product (GRP). Regions hosting these industries should be in a better fiscal position to allocate regional subsidies co-funding. On the other hand, the federal government is likely to react to above average fiscal capacity. Furthermore, we control for region's population, agricultural area and GRP growth.

Table 1. Descriptive statistics

Variable	Description	Mean/ Percentage	Std. Deviation
Dependent variable			
Total regional subsidies	Total amount of regional co-funding (mln RUB)	2093.17	4247
Total federal subsidies	Total amount of federal co-funding (mln RUB)	3752.33	7922.46
Independent variables			
Governor status	Governor appointed (1) or elected (0)	64.42%	47.91%
Governor experience	Number of years governor is in the office	5.55	4.74
Share of ag in GRP	Share of agricultural sector in GRP	8.53%	5.66%
Share of extr in GRP	Share of extracting industries in GRP	8.00%	12.72%
Incumbent support	Share of votes for "United Russia" in previous elections	53.97%	17.15%
GRP growth	GRP growth	2.61%	5.69%
Number state workers	Number of state employees (persons)	20327.88	13047.96
Population	Region's population (thd persons)	1623.36	1279.68
Gini ag enterprises	Gini coefficient based on the current assets of agricultural enterprises	0.74	0.13
Ag area	Agricultural area (k ha)	2811.76	2575.24
Budget self-sufficiency	Index for budgetary self-sufficiency (0 to 1)	0.67	0.40

4.2 Methods

In order to explore the link between the agricultural subsidies and the political economy variables, we estimate a fixed-effects model with lagged variables:

$$Y_{it} = \beta_1 X_{it-1} + \beta_2 S_{it-1} + \beta_3 Z_{it-1} + \alpha_i + u_{it}$$

where Y_{it} is either a total federal or regional co-funding in region *i* at a period *t*; X_{it-1} represents a lagged political competition in a region *i* at a time *t-1*; S_{it-1} is a vector of variables representing proxies for lobbying capacity within the region *i*; $\beta_3 Z_{it-1}$ is a vector of control variables; and, finally, α_i represents region-specific fixed effects and u_{it} is an error term. All the monetary variables are represented in real terms. The nature of the fixed effects model suggests usage of levels of total subsidies in the dependent variables instead of other constructs.[5]

We analyze two models for two different dependent variables but with identical specifications. Political competition is expected to be associated with both federal and regional agricultural subsidies highlighting different mechanisms of influence. For the former, political competition should motivate federal government to distribute subsidies strategically and for the latter it determines the extent of capture of regional government.

Endogeneity problems are inherent for this type of studies. In particular, the subsidies may affect electoral success of the "United Russia" within a region. Moreover, any types of subsidies may affect

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[5] Calculations with the first differences or specific subsidies (e.g. crop, livestock or credit) produce similar results and are available on request.

regional economic performance and, thus, there may the independent variables and GRP growth may be simultaneously determined. In order to minimize potential biases, we lag all the explanatory variables by one period.[6]

5. Results

Before proceeding to the estimation results, let us first get a feeling of how subsidies evolved over the period of interest. Figure 1 demonstrates the dynamics. The first observation is that both federal and regional amounts increased substantially. Up until 2011, both amounts were roughly equal, but thereafter the federal amount was growing at a higher pace. This may be due to centralization of fiscal intergovernmental relations over the last decade and a half. For instance, according to RosStat's official yearbooks, the number of regions that are fiscally self-sufficient[7] went down from 24 in 2005 to 14. These donor regions are either represented by Moscow and St. Petersburg or by some oil- and gas-producing regions like Tatarstan Republic or Tyumen. As a consequence of the centralizing reforms, regional budgets started relying more on transfers from the federal level and agricultural subsidies were not an exception. Reliance on federal transfers may have put the center in a better position to redistribute in a politically motivated way. We find a substantial variance in both federal and regional subsidies (sometimes as large as 20-fold).

The data also shows that the incumbent party in Russia managed to cement its dominance to different degrees across the regions. Figure 2 presents the distribution of votes for "United Russia" during the two elections in our sample: 2007 and 2011. We see that during both elections there is a substantial variation in the support. For instance, during 2007 elections "United Russia" enjoyed the lowest support
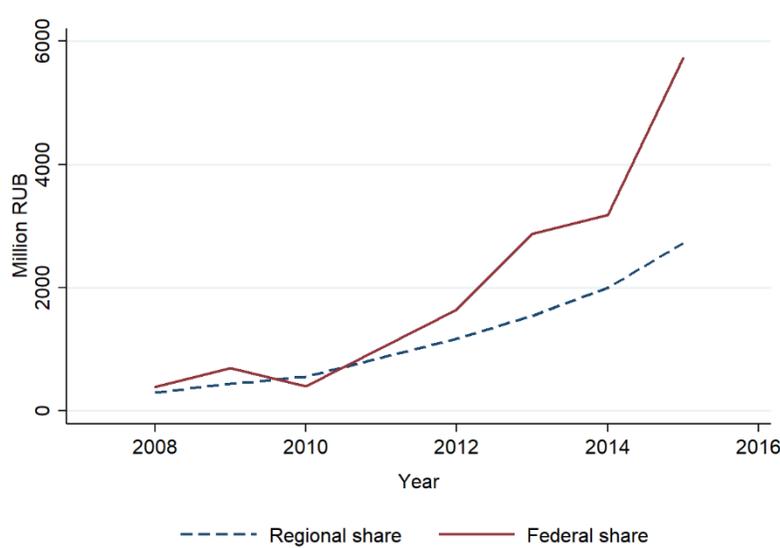

Figure 1. Federal and regional shares of agricultural subsidies in 2010 mln RUB, 2008-2015

in one of the most industrialized regions – Yaroslavlskaya oblast (53.13%). The highest support (over 90%) is typically achieved in the North Caucasus and oil-producing republics (Panov & Ross, 2013). One should treat these figures with caution since these regions are typically described as most authoritarian and

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[6] It is further planned to use instrumental variables technique in order to correct for potential biases.
[7] Tax base is sufficient to generate necessary budgetary resources to at least cover regional expenses.

corrupt (Holland, 2016). These regions are heavily dependent on fiscal help from Moscow and are incentivized to choke any type of political opposition.

Average support of the "United Russia" decreased from 2007 to 2011, from 65.3% (315 seats in the parliament) to 49.3% (238 seats). The popularity was dropping in the light of the 2008 financial crisis that severely hit Russia. Putin's government was struggling to secure even these modest (by Russian standards) results (Enikolopov, Korovkin, Petrova, Sonin, & Zakharov, 2013). However, the variation in the support still persisted along with the Moscow's strong grip over the oil producing regions and Northern Caucasus republics.
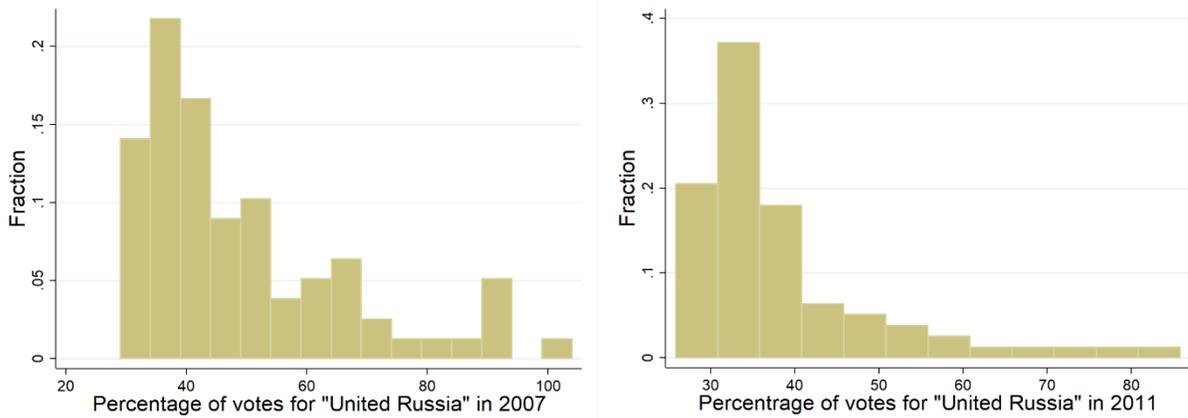

Figure 2. Distribution of votes for the incumbent party in 2007 and 2011 elections.

Let us turn to the estimation results in Table 1 and, first, examine how political competition is associated with the subsidies. The first observation is that the support of "United Russia" in the region is negatively and significantly associated with both federal and regional co-funding. First, the evidence supports the "swing" voters hypothesis since federal transfers appear to be directed to the regions where the support of the incumbent party is lower. Second, we find support to the hypothesis related to the effect of political competition on regional government capture. In particular, in the regions where incumbents faced higher threat from their challengers, we saw larger regional co-funding of agricultural subsidies. The effects are comparable in size both on regional and federal levels but are rather modest in comparison to other factors.

We find a much larger effect associated with the governors' embeddedness in local elites. As predicted by the theory, elected governors (even though they were re-appointed afterwards) are significantly associated with larger regional and federal co-funding of agricultural subsidies. Surprisingly, we do not find evidence about the importance of governors' experience in order to generate incentives to cater to agricultural interest. Thus, electoral mechanism appears to generate strong incentives for the governors to cater to local interest groups responding to their pressure. Interestingly, groups of fewer larger farms appear to be more successful in securing both types of subsidies. We find Gini coefficients based on farms' current assets to be significantly associated with the dependent variables. The effect is particularly large for the specification with the federal co-funding as a dependent variable suggesting that large agricultural enterprises may successfully lobby on the federal level. It is, however, important to point out that larger enterprises may have larger administrative capacity to deal with the hurdles of applying

for funding. In addition, our expert interviews suggest that federal and regional authorities may prefer to deal with larger producers since not dealing with the applications from smaller farms reduces their workload. As a result, "the large farms effect" may consist of large farms' inherent competitive advantages and their lobbying efforts on different tiers of the government. Interestingly, our proxy for region's administrative capacity – number of state employees – exerts a small positive effect on the dependent variables. Applying for federal co-funding may require considerable administrative resources as it involves developing a regional program, submitting documents to the Ministry of Agriculture in Moscow and occasional consultations.

Table 2. Estimation of the determinants of federal and regional co-funding for agricultural subsidies.

Variables	Total federal subsidies	Total regional subsidies
Governor's experience	103.346	14.120
	(0.498)	(0.839)
Governor's status	5311.295***	3053.328***
	(0.000)	(0.000)
Incumbent support	-61.329**	-45.211***
	(0.045)	(0.002)
Share of ag in GRP	1013.055*	166.825
	(0.081)	(0.243)
Share of extr in GRP	-260.749**	100.452
	(0.041)	(0.377)
GRP growth	19.378	-28.923*
	(0.665)	(0.079)
Number state workers	0.231**	0.151**
	(0.018)	(0.033)
Population	-2.338**	-1.156**
	(0.012)	(0.031)
Budget self-sufficiency	-3892.967*	-6912.978***
	(0.052)	(0.000)
Gini ag enterprises	25593.616***	9490.364***
	(0.000)	(0.000)
Ag area	1.206	-0.082
	(0.810)	(0.978)
Constant	-25527.201	127.912
	(0.132)	(0.989)
N	467	467

*Significant at 0.1; **Significant at 0.05; ***Significant at 0.01. P-values are reported in brackets.

Regions' fiscal health appears to be a significant predictor of larger agricultural subsidies. As predicted by the typical variables in the distribution formulas, budgetary self-sufficiency index is found to be negatively and significantly associated with the subsidies on both levels. Federal governments appear to target regions with higher share of agriculture in the GRP whereas on the regional level contribution of agriculture to GRP is not a predictor of local co-funding. Regional governments, being less bound by legal constraints, may simply have budget-maximizing incentives and be restricted only by other rent-seeking industries that compete for funding. On the other hand, federal governments appear to react to regional availability of budgetary resources. In particular, the share of mineral extracting industries (in the Russian

context these are oil and gas) in the GRP is negatively and significantly associated with the federal co-funding of agricultural subsidies.

6. Conclusion

This study contributes to the literature on the political economy of redistribution policies by examining the politicians' incentives to cater to an important group of voters – agricultural producers and rural residents. We modeled politician's behavior in the Russian context both on federal and regional levels and found that the distribution of agricultural subsidies is not only guided by the formulas stipulated in the existing legislation. In fact, politicians may be instrumentalizing these subsidies to maximize their political support.

Examining the incentives of the central government, we contribute to the debate whether it targets the "core" or "swing" voters while redistributing resources. We find support to the "swing" voters hypothesis since the federal government appears to allocate larger co-funding share of agricultural subsidies to those regions where incumbent party faces more competition. In other words, the federal government appears to be hoping to buy votes in those regions where it feels their investments will bring higher marginal returns. This study goes beyond similar studies of Jarocińska (2010) and Marques et al. (2016) who look at allocation of intergovernmental transfers, by focusing on a very specific redistribution problem: agricultural subsidies towards a very concrete interest group – agricultural producers.

Despite the trends of fiscal centralization, we find Russian regional governments to be rather free in redistribution decisions and to be largely driven by the political economy considerations. The theory, on the one hand, suggests that political parties will rationally appeal to a more narrow interest groups when political competition intensifies (G. Cox, 1990). On the other hand, local interest groups may face higher risks seeking rents from a particular party knowing that there is strong political competition in the region (Bardhan & Mookherjee, 2000). Our estimations grant support to the Cox's (1990) hypothesis because larger amounts of regional co-funding of agricultural subsidies are associated with higher competition. "United Russia" may need to cater to different special interest groups should it feel that investments in vote buying could improve their political support in the next elections. Rural electorate may be of a central importance for "United Russia" because their ability to cement regional support has been largely based on their ability to attract the votes of rural residents with the help of strong local leaders (Golosov, 2014). Transfers may simply generate higher marginal utility for poorer rural voters and, thus, represent an attractive target group for the politicians (Magaloni, 2008).

Part of the strategy involving strong local leaders has been gubernatorial administrative vertical public administration. We find that those governors that were appointed by Moscow and were not embedded in local elites via an electoral mechanism are less likely to cater to regional agricultural interests. Conversely, should the governors have been elected (even though they could be reappointed after 2005), the regions are likelier to allocate larger co-funding for the agricultural subsidies. As a result, elected governors not only were vertically accountable to Moscow demanding favorable electoral results for the "United Russia", but also to the local elites that could mobilize local electorate. Interestingly, we do not find evidence that governors can build relationships with local elites over time. Electoral accountability appears to create much stronger ties with local elites in the Russian context.

We find that local agricultural elites are an important stakeholder in local redistributive politics. In particular, regions with highly unequal distribution of farms' economic size appear to be more

successful in obtaining larger federal and regional amounts of agricultural subsidies. However, this association may be attributed not only to the superior lobbying capacity of the large farms but by the preferences of the disbursing agencies of different levels to deal with larger producers.

The results represent an implications agricultural economics as a discipline. Although the agricultural economists still rather rarely utilize political economy theories, our study points in the direction of their potential benefits. Agricultural policy advice should explicitly consider politicians' incentives in order to design effective interventions stimulating growth and minimizing wasteful rent-seeking activities. In the Russian context, vertically integrated party system may exacerbate rent-seeking activities on both levels of the government due to vertical accountability in terms of achieving favorable results for the incumbent party.

This study could be extended in a number of ways as it does not exhaustively analyze the incentives of the political actors. First, future studies call for examining the incentives generated by the presidential elections and the attention that Putin paid to the specific regions (e.g. visits). Second, integration of the agricultural business interests in local legislatures could be an important predictor of the regional rent-seeking.

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