

Local Politicians, Firms, and the Federal Center: The Anatomy of Provincial Protectionism*

Konstantin Sonin

New Economic School and CEFIR, Moscow, and CEPR

May 2, 2002

1 Introduction

Today, there are two large de-facto federal states in transition from command to market economies, China and Russia.¹ Until now, results of these transition have been profoundly different. Why in one of these countries market-preserving federalism (Qian and Weingast, 1995, Weingast, 1995) has taken place, while the other is stuck with market-destroying federalism? What are the specific features of Russian federalism that distinguish Russia from other federal states? Blanchard and Shleifer (2000) note that a crucial difference between Russia and China's transition to market economy is that Russia entered it as a heavily industrialized economy, while China has few large enterprises. This paper argues that this difference lies in the core of Russia's federalism failure: the possibility to extract rents and political support from the existing enterprises in exchange for protection against the federal center results in suppressing intra-regional competition and promotes soft-budget constraints for managers. At a more general level, the paper casts light on interaction of political institutions and economic performance of a federalist system. The theoretical analysis roots to Shleifer and Vishny (1994). In particular, rents extracted from profit-making enterprises

***PRELIMINARY AND INCOMPLETE.** Please do not quote without permission.

¹In fact, China is a unitary state by constitution.

are used in the similar way, i.e. for political benefits of the governor. The approach of the current paper goes further to explain the interrelationship between local politicians, local firms, and the federal center in a general equilibrium framework.

There is an on-going discussion on what forms of federalism are more likely to foster economic development (Weingast, 2000). Qian and Weingast (1997) suggest that the main role a federalist system play is that of a commitment of government to provide public goods and preserve market incentives. We do not challenge this view in any way: we show how actual performance of a de-jure federalism relies upon industrial structure of regions of a federal country. Federalist arrangements that look the same in a written constitution might work well in a rural provinces in China, and be harmful in a heavy industrialized provinces in Russia. Careaga and Weingast (2000) argue that it is not plausible to judge one federal system against another solely on the basis of the level of decentralization. We extend this argument by noting that the level of decentralization is not necessarily a matter of the center's policy or a decision at a certain point. Rather, many federal structures emerged to be far different from those drafted (and written in books). For example, Russian constitution puts appointment of judges into the federal jurisdiction (with the intent to assure their independence). Nevertheless, regional powers have actually almost unrestricted influence over regional judiciary.

In this paper, there is no argument about whether or not the actual Russian federal system is bad for growth.² It is indeed bad. Instead, we focus on the origins of this federal structure and its persistence. In particular, how initial rent-holders, e.g. management of large and often inefficient enterprises in the case of Russia, whose rents would be eliminated if a market-preserving federal system is in place, oppose any positive development in federal relations.³ A recent report of McKinsey Research Institute (1999) on Russian economy states that most fundamental micro regulatory factors are sector level market distortions,

²North and Weingast (1989) and Weingast (1995) highlight the importance of federalist institutions for growth.

³In fact, empowering regional political powers and eliminating central government's direct control of regional enterprises was a part of new Russian leadership strategy during the initial period of reforms. (On this, see Shleifer and Treisman, 2000.)

Most recently, the government has put an emphasis on strengthening the federal relations.

which by creating a non-level playing field allow low productivity companies in Russia to be more profitable (on a cash flow basis) than their high productivity competitors. The report connects this to problems of separation of powers between the federal center and regional authorities: 'The sector level market distortions result from unequal laws and enforcement, originated in most cases by regional or municipal authorities in the absence of clear laws and/or strong control mechanisms at the federal level'. This paper attempts to provide consistent microfoundations for this picture.

There is a number of recent papers reporting opportunistic behavior of Russian local politicians in their relations with the federal center (e.g., Lambert-Mogiliansky et al, 2000), and local business (Frye and Shleifer, 1997, Frye and Zhuravskaya, 1999).⁴ One empirical fact is that in Russia, huge federal tax arrears have been accumulated by large and productive enterprises in strong regions with governors having huge electoral support (Ponomareva and Zhuravskaya, 2000). This paper attempts to explain why the 'bad' equilibrium have appeared to be so stable, and why some suggested policies (e.g., fiscal federalism arrangements such as performance-based transfer policy) have not helped out of the undesirable status-quo.

One may argue that the view of the federal center as a benevolent, although imperfect social planner is far more generous than it should be. In this paper, our analysis is focused on the dark side of federalism, i.e. perverse incentives that separation of power between the center and regions create, rather than on full evaluation of federalism performance in transition countries. Obviously, the same impossibility of the federal center to provide right incentives to the regional firms directly, which lies in the core of our model, is a major motivation for the existence of separation of powers as suggested by Hayek (1945).

The 'protection federalism' works as follows. In equilibrium, governors of rich regions having high political support choose to protect their enterprises from paying federal taxes. The lack of means precludes the federal center from effective policy (tax collection) towards these regions. In a region, the governor's aversion to cooperate with the federal center provides bad incentives for profitable regional firms: they do not pay federal taxes and bribe governors in exchange for protection. There are more restrictions on the entry of new firms,

⁴Chapter 6 of Shleifer and Treisman (2000) is the most comprehensive and thorough analysis of Russian federalism's performance .

and thus lower social welfare, than in an equilibrium without protection. As a result, federal tax non-payments (arrears) are concentrated in regions with large productive enterprises, and political strength of the governor accounts for accumulated tax arrears.

At the regional level, governors are strong in those regions, where there are few large enterprises that do not compete heavily with each other (i.e. belong to different industries). The basic starting point is that one can obtain a huge rent from enterprises, protecting them from the intra-regional competition and the federal center. This allows to provide transfers to bad enterprises, thus maintaining political power, thus maintaining bargaining power with large firms. The governor might oppose entrance of new (profitable) firms since they may reduce his rents via competition, and may provide political support to his political rivals. If there are few strong enterprises in a region, the governor's protection for these enterprises against the federal center leads to more restrictions on entry to the intra-regional market. Such situation might cause additional disincentives for enterprise management to restructure and payment of taxes, since it becomes more costly for governors to control a restructured (or paying taxes) enterprise.

Blanchard and Shleifer (2000) argue that Russia's (as compared to China's) transition story proves that political centralization matters for a federal structure to be efficient (as it was suggested by Ricker, 1964). In this paper, we demonstrate that the industrial structure inherited from Soviet times undermines political centralization in Russia and precludes federalism from providing right incentives to politicians, both local and central, and managers of industrial enterprises. In contrast, in China, political centralization reduces regional administration incentives to protect firms from the federal center. At the same time, there is no incentive to reduce market competition, since there is no local monopolies to extract rents from. In Russia, there are disincentives to soft-budget constraint elimination, since a firm might use excess employment as a substitute for a payment for protection. Since excess employment is likely to be in old enterprises, governors keep old enterprises and restrict entrance of new ones.

An additional problem is coordination between local leaders. They not only compete in protecting enterprises from the federal center as suggested in Treisman (1999), they co-operate with each other against the federal center. Thus, the fact that until recently governors were

(and still have overwhelming influence over appointment of) senators that comprise the upper house of the Russian parliament contributes to the poor performance of federalism in Russia.⁵

The paper does not explicitly model the dynamics of transition from a command economy to the current federal structure characterized by powerful regional elites and relatively weak center. Instead, it highlights the importance of initial conditions. A general message is that federalism does not work without rule of law, supported either by strong independent courts and grass-root traditions (US or Great Britain) or powerful central authority (China).

Basing on Shleifer and Vishny (1993), Berkowitz and Li (2000) model the situation that government agencies of different levels can unilaterally levy taxes on the same tax base, as documented in Shleifer and Treisman (1999). Our model demonstrates how such a mechanism might work when tax rights are clearly defined.⁶ Namely, possibility to avoid or delay payments (e.g. through capture of bankruptcy, see Lambert-Mogiliansky et al, 2000) leads to competition of federal and local authorities over the fixed tax payments that accrue to the federal center, thus again exhibiting properties of 'tragedy of the commons'. Shleifer and Treisman (1999) identify this phenomenon and derive implications without a formal model. While OECD (2000) report acknowledges a number of serious improvements in Russian fiscal federal arrangements, the main problem remains to make such arrangements work in an appropriate way.

Treisman (1999) considers Russian regions involved in Tiebout-like competition in political protection for enterprises. Multi-regional corporations have advantages in obtaining regional protection. Treisman (1999) supports these findings with data. It is plausible that all such companies may have higher tax arrears as a result of direct bargaining with the federal government. Such bargaining might result in an implicit agreement that both regional

⁵Weingast (2000) analyses the Mexican way of dealing with the coordination problem. Local powers faced the following alternative: either to join the (only existing) federal party (IRP), or to be expropriated by the federal government. Two particular features of the program seem to be important: First, the federal center approached regions gradually over time, thus breaking the 'collusive ring'. Second, the subjects of threats and benefits were the governors themselves, rather than broad regional elites.

⁶Berkowitz and Li (2000) assume from the very beginning that there are several independent tax agencies.

and central governments tolerate huge tax arrears/non-payments in exchange for cheap energy (i.e. by providing government bodies with cheap energy). A remaining problem that we try to touch upon here is how such competition might influence governor's incentives to suppress/promote economic development of his region.

The most recent empirical investigation of federal tax arrears in Russia is Ponomareva and Zhuravskaya (2000). Earlier studies include Alfandari and Schaffer (1996), Ivanova and Wyplosz (1999), Schaffer (1998), Treisman (2000). Lambert-Mogiliansky et al (2000) suggests an explanation why the federal center is unable to collect tax payments from regional enterprises. Frye and Shleifer, 1997, and Frye and Zhuravskaya, 1999, report findings on regional over-regulation and bribery. McKinsey report (1999) was a major source of evidence for the current paper. Popov (2001) finds that 'the more votes cast for pro-central government parties in 1995 parliamentary elections and for Yeltsin in the 1996 presidential elections and the lower the tensions with Moscow after the elections, the more favorable was the fiscal balance for the region with the federal center.'

Economic literature suggests a mixed view on the impact of federalism on soft-budget constraints. Qian and Roland (1998) suggest that fiscal federalism may help in eliminating soft budget constraints for managers, one of the most important problems of former market economies (see Maskin and Xu, 1999, for a recent account). Tanzi () and Mookherjee In this paper, we demonstrate that separation of powers between federal and local authorities may promote soft budget constraints.

The rest of the paper is organized as follows. Section 2 introduces the setup of the model. In Section 3, we discuss comparative statics in regional equilibria. Section 4 describes federal equilibria of the model. Section 5 concludes.

2 The Setup

There are the federal center, regions, regional firms and regional politicians. In each region, firms have cash flows and tax obligations to the federal government. They decide whether or not to pay these obligations out of current cash flows and/or whether or not to seek the

governor's protection from the federal government⁷ and the intra-regional competition. The governor protects firms, takes payments from them, and looks toward re-election. Other gubernatorial candidates also (promise to) provide protection to the firms. Employees of firms constitute a part of electorate, and vote for the firm's protector. Regions differ with respect to the size of population that are not employed in firms, the 'unattached voters', and the potential output of their firms.

2.1 Firms

In each region, there is a continuum of firms labeled 0 to \bar{x} .⁸ Firms have identical employment, L .⁹ Firms are heterogenous with respect to their cash flows, which depend on the number of firms operating in the market. Protection provided by the governor or by his rivals limits the number of firms in the market. Viz, the governor decides on the number of firms that can operate in the regional market, x_e . (This is equivalent to establishing a payment for protection, which works as an entrance fee.) For any $x \in [0, \bar{x}]$, let $\pi(x; x_e)$ denote the gross cash flow of the firm x when there are x_e firms in the market. We assume that a firm x enters after all firms $y < x$ have entered, so that $\pi(x; x_e)$ decreases (weakly) with x . For each firm x in the market, the smaller the number of firms protected, the higher the cash flows, so $\pi(x; x_e)$ decreases with x_e .

To describe the industrial structure of the region, we need to make some additional assumptions about the behavior of $\pi(x; x_e)$. As a basic assumption, we maintain that $\pi''_{x_e}(x; x_e) > 0$. In words, this means that a more profitable firm gains more from reduced market competition than a less profitable one.

⁷Lambert-Mogiliansky et al (2000) observes the similarity between the federal government and outside creditors, such as Moscow-based banks for Russian regions, in this respect.

⁸There is a little, if any, loss in generality in assuming that there is a continuum of firms: To analyze a situation with a finite number of firms, N say, one might consider a partition $0 = x_0 \leq x_1 \leq x_2 \leq \dots \leq x_N = \bar{x}$ and treat each segment $[x_{i-1}, x_i]$ as a single firm.

⁹This assumption is not as restrictive as it may seem. Indeed, suppose that there is a region-wide salary that all firms pay to their workers. Suppose that firm has $L_x > L$. Then, in the spirit of Shleifer and Vishny (1994), it may count its excess employment as a part of the bribe: effectively, the governor waives this firm the payment of $\Delta b_x = w(L_x - L)$. Then firms with $\pi_x \geq b - \Delta b_x$ participate (instead of $\pi_x < b$ when all firms have identical employment).

Firms that have entered the market have tax obligations to the federal center.¹⁰ However, tax enforcement is imperfect. Each firm determines whether or not to pay federal tax obligations.¹¹ If the firm y , which has a gross cash flow of $\pi(y; x_e)$, decides to pay taxes, the firm's pay-off is $(1 - t)\pi(y; x_e) - b$, where $b = (1 - t)\pi(x_e; x_e)$, the (net of taxes) pay-off of the last entering firm. If the firm decides not to pay, its pay-off is $(1 - t + (1 - \beta)t)\pi(y; x_e) - b$, where β is a parameter reflecting the bargaining power of the governor against the firm. So, if $\beta < 1$ (and we confine our analysis to this case) any firm prefers not to pay taxes.

In this paper, the protection from the federal center means that the enterprises being protected are allowed not to pay taxes that they owe to the center. However, there is nothing special about tax arrears as benefits provided by the regional administration at expense of the central government. A subsidy to a loss-making enterprise or other favors given out of a deficit budget would have the same implications.

2.2 The Governor and His Rivals

Firms pay to the governor for protection, and the governor uses these means to get re-elected.¹² For the sake of simplicity, we assume that his only goal is to increase his chances to keep the office.

A governor may choose the extent of his cooperation with the federal center, and thus the level of protection for those firms that do not pay taxes. Effectively, he determines 'the last protected firm' x_p , so that all firms $y \geq x_p$ are protected from paying taxes. In return, a protected firm y pays him a share of the rent, $\beta t \pi(y; x_e)$, where β reflects the bargaining power of the governor. When a firm is protected by the governor, he bears a political cost with the votes equivalent $p \geq 0$; therefore, the total cost of protection is $p x_p$.

¹⁰We do not consider any regional taxes. Instead, it is implicitly assumed that a governor can use regional taxes to receive payments from firms. Shleifer and Treisman (1999): "To avoid sharing taxes with the federal government, regional governments also wrote off the regional tax obligations of local companies in return for public services they provide".

¹¹Later on, we maintain a simplifying assumption that T is proportional to the cash flow.

¹²In a plausible extension, the governor may even have a threat that prevents regional enterprises from paying taxes. (See Lambert-Mogiliansky et al, 2000, for a theoretical analysis and empirical evidence of governor's use of bankruptcy laws as such a threat.)

When the governor chooses a price of protection, the final pay-off of the last entering firm, x_e , should be equal to this price. Then, the governor's total collection of 'entry' payments is equal to $P(x_e) = (1 - t)x_e\pi(x_e; x_e)$. The governor's probability to get re-election, which is identical to his utility, is given by

$$\frac{U}{B}P(x_e) + Lx_e + \beta t \int_0^{x_p} \pi(x; x_e)dx - px_p,$$

where L is the number of workers in each of x firms, U is the number of 'unattached' voters, and B is the total amount of means involved in the elections.^{13,14} (The total number of the voters, $L\bar{x} + U$, is normalized to 1.)

Summing up, the governor solves the following maximization problem:

$$\max_{1 \leq x_p \leq \bar{x}} \left\{ \frac{U}{B}(1 - t)x_e\pi(x_e; x_e) + Lx_e + \beta t \int_0^{x_p} \pi(x; x_e)dx - px_p \right\}. \quad (1)$$

Rivals are symmetric to the governor: they provide protection for payments. Each firm has to decide on its protector. If the firm's protector loses the election, then firm can not enter the regional market. (An alternative interpretation might be that firms that are not protected by regional authorities are operating in the shadow sector.)

2.3 The Federal Center

The federal center's main goal is to increase the total social welfare in each region, defined as a sum of consumer and producer surpluses.¹⁵ We simply assume that the social welfare is an increasing function of x , although in general producer surplus might well be decreasing with the number of firms entering the regional market. Thus, the federal center tries to force governors to provide regional firms with more competitive environment. However, the center

¹³We make a simplifying assumption that each candidate considers B , the total spendings on the elections, as given. This is particularly relevant when there are many candidates. In Russian gubernatorial races, it is typical that there are many candidates: Although few of them have real chances to win, it is often that the ultimate losers considerably outspend the winner.

¹⁴In the formula, the term Lx might be interpreted, somewhat loosely, as the number of votes the governor receives due to his efforts to promote regional economic performance.

¹⁵We can also model that the federal center maximizes tax revenues. However, such an analysis would cause substantial technical complications, without bringing new insights.

has no direct control over x . In reality, there are three basic types of federal policy: direct control over firms that do not pay taxes, involvement into the regional political process, and the transfer policy. With the latter, the center can determine transfers to regions, conditional upon their performance and thus stimulate governors. In our model, there is only one parameter reflecting the center's influence over a region, p , the cost of protecting a firm from the federal claims.¹⁶

The federal center can affect the cost of protection for each governor, p_α , by spending scarce financial resources. Given p_α , a firm y in the region α is protected from avoid paying taxes if $\beta t \pi(y; x_e) > p_\alpha$. Let R be the amount of resources available to the center. On the one hand, R is the total amount of taxes collected by the federal center, and thus equal to

$$R = \sum_{\alpha} t \int_{x_p}^{x_e} \pi(x, x_e) dx.$$

On the other hand, R is the amount spent by the federal center on control of governors, $R = \sum_{\alpha} c(p_\alpha)$, where $c(p_\alpha)$ is the cost of maintaining the level of control of the governor at p_α .

3 Regional Equilibria: Firms and Local Politicians

First, we analyse what happens in a single region. Given the results of this section, we will later consider a game regions play against the federal center.

3.1 Tax Arrears and Bribes

A firm y with the cash flow of $\pi(y; x_e)$ has to pay $t\pi(y; x_e)$ in taxes. If all taxes are paid, the firm's y pay-off is $(1 - t)\pi(y; x_e) - b$. If the firm y avoids paying taxes, its final pay-off is $(1 - t + (1 - \beta)t)\pi(y; x_e) - b$, with $\beta t \pi(y; x_e)$ paid to the governor for protection from the federal center and $b = (1 - t)\pi(x_e; x_e)$ paid for entrance. The governor protects the firm y from the federal center as long as $\beta t \pi(y; x_e) \geq p$, i.e. when the profit and/or tax rate are relatively high. Recall that if this condition is satisfied for a firm x , then it is satisfied for any firm $y \leq x$.

¹⁶Below, we discuss difficulties the federal center faces trying to implement a workable performance-based transfer policy.

In sum, given x_e and x_p , there are three types of firms: First, firms that do not enter the regional market, i.e. those with $\pi(x; x_e) \leq \pi(x_e; x_e)$; Second, firms that do enter and pay taxes, $\pi(x_e; x_e) < \pi(x; x_e) \leq \pi(x_p; x_e) = \frac{p}{t\beta}$; and firms that enter and avoid paying federal taxes, $\pi(x; x_e) > \frac{p}{t\beta}$.¹⁷

The first proposition summarizes comparative statics results about an individual enterprise.

Proposition 1 ¹⁸(i) *An individual enterprise is more likely to enter the regional market if it has high profit and/or high employment.*¹⁹(ii) *An individual enterprise's tax arrears are more likely to be high if it has high profit and/or high employment.*

Proposition 1 says that, employment being the same, most profitable enterprises enter the regional market first. To evaluate the effect of employment on the likelihood to be protected, recall that we assumed that if a firm has excess employment, it is waived a part of protection fee. The implications of this simple proposition are supported by data: the reported median productivity of firms with tax arrears is 60.75 (133.62, mean) bln rb/worker compared to 34.43, the median productivity of all firms in RERLD (75.59, mean) in 1997, as reported in Ponomareva and Zhuravskaya (2000). (The 1996 data were 53.96 (126.24, mean) compared to 30.74 (68.01, mean).) Tax arrears at the end of 1997 were significantly higher for firms with high cash flows at the beginning of 1997; are higher for enterprises with high employment.

The results of Proposition 1 can be made more profound if we allow for bargaining between the enterprise and the governor (e.g, as in Shleifer and Vishny, 1994).²⁰ The intuition is that the above factors (high cash flows and/or high employment) strengthen firms' position in bargaining with the governor over the cost of protection. Firms have more incentives to maintain tax arrears, when protection becomes cheaper for them.

¹⁷For a wide range of parameters (p, t, β) , these three groups are non-degenerate. We focus on this case.

¹⁸A formal proof of this and subsequent Propositions are available from the author upon request.

¹⁹To evaluate the effect of employment on the likelihood to be protected, recall that we assumed that if a firm has excess employment, it is waived a part of protection fee.

²⁰We elaborate on this possibility below.

The cost of protection, p , reflects the governor's ability to protect firms of his region. The next proposition describes how the regional equilibrium change if the cost of protection of regional enterprises from the federal center increases.

Proposition 2 *An increase in the cost of protection from the federal center induces a governor to enhance intra-regional competition (his optimal x_e^* increases) and protect less firms from the center (his optimal x_p^* decreases).*

The above Proposition is proved assuming that $\pi_{12}(x, x_e) \geq 0$. If the industrial structure of the region is such that $\pi_{12}(x, x_e) < 0$ (less profitable of the firms that remain in the market gain more from suppressing competition), than the governor would react differently.

Proposition 3 *If less profitable of the firms that remain in the market gain more from suppressing competition ($\pi_{12}(x, x_e) < 0$), than an increase in the cost of protection induces a governor to reduce competition (his optimal x_e^* decreases) and still protect less firms from the federal center.*

What is surprising about the Propositions above is that they allow to obtain definite response on governor's reaction to a change in the federal center policy.

In Lambert-Mogiliansky et al (2000) and Ponomareva and Zhuravskaya (2000), an index that reflects relationship between governors and the federal center, compiled by an investment company MFK Renaissance, appeared to be a significant determinant of the number of governor-controlled bankruptcies and the size of tax arrears, respectively. Also, the latter paper finds that regional enterprises have more tax arrears when regions have higher bargaining power *vis-a-vis* the federal center and higher GRP per capita.

Proposition 4 *Regions with more profitable enterprises are likely to have more tax arrears.*

3.2 Strong and Weak, Regions and Governors

In a region, the governor may be either strong or weak, as measured by the number of votes collected (in equilibrium) at the regional election. We suggest that the main determinant of the potential strength/weakness of the governor is the industrial structure of his region.

If there are several large enterprises with high cash flows that are not competing with each other (e.g., being local monopolies in different industries) and a large number of 'unattached voters', it is likely that the governor would be strong.²¹ In such a situation, the sitting governor might be defeated only in the case of coordinated switch of the largest enterprises (most powerful regional agents).²² If the regional enterprise compete heavily in the market (and thus to extract rent from them it is necessary to exclude their competitors), they are likely to seek protection from different candidates, and whoever the winner is, he is potentially weak.

Proposition 5 *A governor is more likely to be strong in a region where there are few profitable enterprises with high cash flows or/and low competition between the enterprises being protected, and a large number of 'unattached' voters (U is high).*

Formally, we prove that if in some region we compare two industrial structures characterized by profit functions $\pi'(\cdot, \cdot)$ and $\pi''(\cdot, \cdot)$ with $\int_0^x \pi'(t, y)dt \geq \int_0^x \pi''(t, y)dt$ for all $x < y$ (assuming $\int_0^y \pi'(t, y)dt = \int_0^y \pi''(t, y)dt$ for all $y \in [0, \bar{x}]$), then, other things being equal, the first region's governor would collect more votes than the second's one.

The intuition behind this proposition is straightforward. A strong governor has a lot of money and buys cheap votes, since his rivals are weak (in the most simple case he has $x_e^* > \frac{1}{2}\bar{x}$). Enterprises under the governor's control have little incentives to support other candidates, since a switch of each single enterprise does not alter the governors one-hundred-percent chances to be re-elected.²³ Such a strong position allows the governor to protect the enterprises from the federal center, thereby increasing their rents and campaign contributions, and maintain monopoly power of these enterprises. Also, once the governor is strong, his would-be opponents are reluctant to challenge him. Therefore, this situation is self-sustainable: strong position allows to extract rents and increase probability of re-election,

²¹E.g., Samarskaya oblast, Kemerovskaya oblast, Khanty-Mansiyskii AO, St.Petersburg City and Moscow City.

²²E.g., Krasnoyarsky krai and Tyumen oblast.

²³If there is a continuum of firms with identical employment, a switch of one enterprise can not affect the outcome. However, considering a finite number of firms, each of which corresponds to some part $[x_i, x_{i+1}]$ of the continuum, allows to analyse strategic aspects of choosing a protector.

which in turn makes the position even more secure.²⁴ The parameter U , the number of 'unattached voters', might be a proxy for the employment of those enterprises in the region that can not provide political support for a candidate in any organized way.

A weak governor provides little protection to enterprises, which in turn provide him with little, if any, campaign contribution. Thus, the governor relies on employees of his protected enterprises, rather than on buying non-attached votes. This in turn allows enterprises to switch from one candidate to another (again, if we consider a finite number of enterprises). The set of parameters that support that kind of equilibrium assumes x_e^* relative to \bar{x} , and thus low $P(x_e)$ relative to the total of means involved in elections, B .

Proposition 6 *The total payments for protection are high when (i) there are a lot of potentially profitable firms in the region; (ii) the governor is strong.*

The strength of the governor as proxied by the number of votes he received in the last elections allows him to provide more protection to the regional enterprises. Ponomareva and Zhuravskaya (2000) find that the governors that have higher winning margins in past elections tend to provide more protection to firms, and thus their regions maintain higher amounts of tax arrears.

Blanchard and Shleifer (2000) imply that with one (or a few) strong enterprise in a region, there is likely to be state capture. If there are several 'strong' enterprises, the captured governor might be either strong or weak. If these strong enterprises are competitors, then he is likely to be weak, whereas if they could effectively share the market, e.g. when $\pi(x, x_e)$ does not depend on x , then he is likely to be strong. If the governor is strong, his attitude toward competition between other (weak) enterprises might be twofold: he can either rely on maximizing his own utility via bribes (suppressing competition) or via growth (promoting competition). If he is weak, he has no [or has to a smaller extent] latter option, since his re-election is not ensured even if he promotes growth.

²⁴Of course there is little, if anything, special about Russia in this proposition.

3.3 Protection and the Soft Budget Constraint

Suppose for a moment that all (profitable) regional enterprises have the same cash flows. Then the governor's choice would be for firms that have higher employment. Also, there will be a possibility for politicians-and-firms-type (Shleifer and Vishny, 1993) play between the governor and each firm. Suppose that the firm's internal cost of keeping excess labor is $w_f \leq w$, i.e. is below the region-wide wage rate (or, generally, the rate which is applied while converting votes to bribes).²⁵ Especially, large command-economy-type enterprises have low w_f . The reason is that provision of social goods (which might attach workers through in-kind payments as suggested in Friebel and Guriev, 2000) often involves huge fixed costs, which at the beginning of transition were already sunk for old soviet enterprises. Proposition 7 demonstrates firms' disincentives to restructure: if restructuring assumes lay-offs, and it is often the case, the firm loses its bargaining power. Given the contribution of the protected firms, the governor prefers them to have as much employees as they can accommodate, thus reducing productivity. The intuition is that if the political competition is strong, the contested votes, U , are more costly for a politician than the votes he directly controls.

A firm with higher employment might be preferred to a firm with higher cash flow, i.e. a more profitable firm. Thus, protection may also be viewed as a fine imposed on value-creating firms. McKinsey report (1999) states that as a result of subsidies to troubled enterprises, 'financially sound companies end up paying taxes and energy bills "for themselves and the other guy"'.²⁵

Proposition 7 *The regional protectionism provide managers with incentives to maintain excess employment (soft-budget constraints).*

Here is where the result of decentralization may promote soft budget constraints for managers, instead eliminating them as in Qian and Roland (1998). With regional protectionism, less productive firms might be kept in the market, while more productive are rejected access. McKinsey report (1999) finds that one of the main operational reasons for persistent low productivity in Russia is excess employment maintained in the old firms. The output of old

²⁵Friebel and Guriev (2000) imply that this internal cost of maintaing employment might be much lower for the firm than the wage rate.

companies fell by 50 percent, while employment fell by only 20 percent. McKinsey estimates that 10 percent of workers on average are redundant, while another 20 percent are currently stranded in non-viable operations. The report says that 'These inequalities [in competition] tend to favor low productivity incumbents, protecting them from takeovers and productive new entrants. These policies are often put in place to achieve social objectives, namely protecting existing jobs, but in many cases, the suspicion is that they also serve the personal financial interests of government officials in collusion with businessmen.'

4 Federal Equilibria

To analyze general equilibrium aspects of regional protectionism, we consider a game that regions non-cooperatively play against the federal center. Here our emphasis is not on the coordination failure, where all regions choose to protect themselves from the federal center, but on the mechanism that translates protection against the federal center into governor's incentives to suppress intra-regional competition.

The game is played as follows. In each region, firms decide on their political attachment: either they support the sitting governor, or one of his rivals. Simultaneously, they determine whether they are going to have tax arrears, given the cost of protection. Given the level of arrears, the federal center determines its policy toward regions, i.e. p_α for all α . Simultaneously, the governor of each region chooses a level of his relation to the center, i.e. whether or not to provide protection for regional firms. We are interested in Nash equilibria of the game specified above.

In a generic case, parameters are such that there exists two equilibria, one with all regions cooperating with the federal center, and one with regions maintaining high level of protection for their enterprises. First, we consider the case when the federal center has enough resources to punish violators, when needed. Any of these policies, i.e. money spend on increasing the probability of a particular enterprise to be caught avoiding tax payments or/and support of local politicians who are friendly to the federal center, makes the good equilibrium stable. Since the federal center can commit its resources to fighting any governor who deviates from a good equilibrium, no governor would find such a strategy attractive.

Proposition 8 *There is an equilibrium with no protection provided by the governors and enterprises paying their obligations to the federal center.*

Blanchard and Shleifer (2001) suggest that in Russia, large state-controlled energy monopolies is a centralizing force. The McKinsey report (1999) shows limits to this argument: In steel and cement, and confectionery industries, which were case studies in the report, it is found that regional governments often channel implicit federal energy subsidies to companies by letting arrears to federal suppliers accumulate at the local gas and electricity distribution companies. The key ingredient for this scheme to work smoothly is that local energy distribution companies are often under effective control of regional governments. The report concludes that 'these subsidies slow down recovery in many manufacturing sectors by preventing upgrading investments and industry consolidation in and around the viable industrial assets'.

Proposition 9 *There is an equilibrium with all governors protecting their profitable enterprises from federal tax payment and restructuring.*

Proposition 9 may explain the irrelevance of a federal policy in these circumstances. The problem is that in a 'protection' equilibrium, Bayesian update brings no new information about governors type, and this does not allow the center to use any 'performance-based' policy. For a broad set of parameters, this equilibrium is stable in a sense that even if some governors deviate for whatever reasons, the other are stuck in the bad equilibrium. Since in this case the center can focus all its efforts on the deviating region. Correctly anticipating this, the governor is better off pursuing the same strategy (protection) as the others.

The next proposition demonstrates that our 'bad' equilibrium is really bad.

Proposition 10 *In a 'protection' equilibrium, governors support less competitive environment in their regions.*

The next Proposition is motivated by the argument in Shleifer and Triesman (1999). Even if tax bases are not-overlapping, if there is no full enforcement of tax payments, regional enterprises collude with the governors to steal the federal center's share. Thus, 'tragedy of commons' (Shleifer and Vishny, 1993, Berkowitz and Li, 2000) arises even if tax rights are clearly defined.

Proposition 11 *In a federal equilibrium, if the federal center determines the tax rate, t , maximizing its own revenues or social welfare, and governors determine the level of protection, then a non-cooperative Nash equilibrium is inefficient (Pareto-dominated).*

The following Proposition 12 is motivated by Blanchard and Shleifer (2000). They argue that it is the lack of political centralization that is responsible for Russian federalism failure compared to that of China, where the federal center is relatively strong. If the federal center has enough resources or a way to employ the existing resources more efficiently, the problem of regional protectionism would be overcome. Indeed, if the federal center has enough administrative resources to punish those governors that allow enterprises to avoid tax payment, governors would have to rely more on economic performance (either by increased provision of public goods or diminishing regulation) in order to gain votes.

Proposition 12 *If the central authority is strong enough, then there is no inefficient (pooling) equilibrium.*

At the same time, there are countries, where effectiveness of federalism rely on strength of local institutions rather than on power of a central authority (cf. Inman and Rubinfeld, 1998). At least historically, USA is an example of such a country.

Proposition 13 *The smaller is the governors' ability to suppress intra-regional competition, the more unlikely is the inefficient equilibrium.*

If a governor is unable to suppress competition and extract bribes, growth becomes a more attractive choice. Although incentives to protect regional enterprises from the federal center remain, they are weaker than otherwise. This might explain why the phenomenon of regional protectionism is much less important for US, than for other federal countries.

The model allows to study inter-regional competition in protection and obtain results similar to Treisman (1999). Namely, enterprises with mobile base have stronger bargaining power vs. governors of several regions, and thus Bertrand-type horizontal competition between the governors drives down the price they pay for protection. The important advantage of our model is that employs less restrictive assumptions about industrial structure of regions.

5 Conclusion

So far, the results of two large federal states' (China and Russia) transition from command to market have been profoundly different. A crucial difference between Russia and China's transition to market economy is that Russia entered it as a heavily industrialized economy, while China has a few large enterprises. This paper argues that this difference lies in the core of Russia' federalism failure: the possibility to extract rents and political support from the existing enterprises in exchange for protection against the federal center results in suppressing intra-regional competition and promotes soft-budget constraints for managers. At a more general level, the paper studies interaction of political institutions of federalism and economic performance.

References

- Blanchard, O. and Shleifer, A. (2000) Federalism with and without Political Centralization. China versus Russia, mimeo.
- Berkowitz, D. and Li, W. (2000) Tax Rights in Transition Economies: A Tragedy of the Commons, *Journal of Public Economics*, 76, 369-97.
- Friebel, G. and Guriev, S. (2000) Why Do Not Russian Workers Move?, mimeo.
- Frye, T. and Shleifer, A. (1997) The Invisible Hand and the Grabbing Hand, *American Economic Review Papers and Proceedings*, vol. 87, no.2, 354-58.
- Frye, T. and Zhuravskaya, E. (2000) Private Protection and Public Goods: The Role of Regulation, *Journal of Law, Economics, and Organization*.
- Inman, R. and Rubinfeld, D. (1998) Rethinking Federalism,
- Lambert-Mogiliansky, A., Sonin, K., and Zhuravskaya, E. (2000) Capture of Bankruptcy: Theory and Evidence from Russia, mimeo.
- McKinsey (1999) Russia's Economic Performance, report.
- Persson, T., Roland, G, and Tabellini, G. (1999) JPE
- Ponomareva, M. and Zhuravskaya, E. (2000) Federal Tax Arrears: Liquidity Problems, Federal Subsidies, or Regional Protection?, mimeo.
- Qian, Y. and Roland, G. (1998) Federalism and the Soft Budget Constraint, *American Economic Review*, 88 (5), 1143-1162.

- Qian, Y. and Weingast, B. (1997) Federalism as a Commitment to Preserving Market Incentives, *Journal of Economic Perspectives*, 11 (4), 83-92.
- Shleifer, A. and Treisman, D. (1999) Without a Map.
- Shleifer, A. and Vishny, R. (1993) Corruption, *Quarterly Journal of Economics*,
- Shleifer, A. and Vishny, R. (1994) Politicians and Firms, *Quarterly Journal of Economics*,
- Treisman, D. (1999) Tax Evasion and Regional "Fiscal Protection" in Federal States: A Model with Evidence in Russia, mimeo.
- Weingast, B. (1995) The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development, *Journal of Law, Economics, and Organization*, 11, 1, 1-31.
- Weingast, B. (2000) The Theory of Comparative Federalism and The Emergence of Economic Liberalization in Mexico, China, and India, mimeo.