Political Competition in Federations

Thesis by

Mikhail G. Filippov

In Partial Fulfillment of the Requirements

for the Degree of

Doctor of Philosophy

California Institute of Technology

Pasadena, California

1998

October 10, 1997

ACKNOWLEDGMENTS

I would like to express my deepest gratitude to my adviser, Peter C. Ordeshook. Without his support and guidance this work would not be possible. Professor D. Roderick Kiewiet influenced my decision to look into the allocation of grants to states as a form of bargaining output in federal legislative bodies; he directed research and analysis for chapter 3 and also offered invaluable advice on other chapters of this work and in connection with my research outside the thesis. The work on chapter 2 was conducted under the close supervision of Professor Robert S. Erikson. I am extremely grateful to Professor Erikson for taking interest in this project, becoming my coauthor in a related work, and teaching me many things along the way about doing research in political science. I would also like to thank Professor David Grether, whose suggestions led to a substantial improvement of analysis in this work. I am grateful to Professor Jonathan Katz who served on my dissertation committee. Any remaining errors are my responsibility alone.

ABSTRACT

The focus of this work is the centrality of federal bargaining in the competitive political processes of democratic federations and of the necessity for fashioning institutions to channel and regulate that bargaining so that it is not disruptive of 'normal' policy-making. Chapter 1 introduces the argument and points out the insufficiency of the purely public goods provision approach to understanding federal political processes. The key distinction we make in the way federal bargaining can be institutionalized is between the systems that allow bilateral interactions between the center and the unit representatives, versus those where unit representatives must develop some degree of consensus on a proposal before presenting it to the center.

Chapter 2 tests a hypothesis that a party's current place in the (institutionalized) federal bargaining process affects voters' electoral choice and modifies the incentives that political entrepreneurs and political parties face. In application to Canada, which allows bilateral interactions between unit 'representatives' (provincial Prime-Ministers) and the federal 'center', and Germany, where implementation of federal policies is effectively delegated to the sub-national level, we look for evidence of electoral balancing by comparing electoral returns in federal and sub-national elections. We show that electoral dynamics are, indeed, consistent with the hypothesis that voters balance between federal and provincial (federal and Lander) elections in these two federations.

When representatives of federal subjects are limited to joint action, as when they communicate with the center by means of passing ready pieces of legislation that can be either signed or not by the nationally elected executive, the long-term implications of their representational weights in the bargaining process can be assessed. In chapter 3, using the data on allocation of federal grants in the US, we assess the proposition that outcomes of federal bargaining reflect bargaining weights of the participants. More specifically, we show that relatively small US states, being better represented in the Senate, systematically benefit in the process of federal grant distribution.

The fourth chapter addresses the political process in a federation Russia with a still evolving bargaining system and, where the issue of federal bargaining is the focus of national political discourse. We are able to support the hypothesis that federal level policies affect local electoral behavior, as well as do the outcomes of bilateral discourse between federal subjects and the 'center'.

TABLE OF CONTENTS:

ACKNOWLEDGMENTS i

ABSTRACT ii

TABLE OF CONTENTS iv

CHAPTER 1. INTRODUCTION: CONCEPTUAL AND METHODOLOGICAL FOUNDATIONS OF FEDERAL ELECTORAL RESEARCH 1

1.1 The Federal Problem and Why It Requires a Political Solution . 1

1.1.1 An Economic Argument in Favor of the Federal Form of Government 2

1.1.2 The Pattern of Federation Failure in the Twentieth Century 4

1.1.3 The Problem of Free-Riding and an Economist's Solution to It; Multiple Equilibria 9

1.1.4 The Problem of Coordination and Its Manifestation in Federal Political Process 17

1.1.5 Bargaining over Equilibrium Selection as a Necessary Implication of the Need for Federal Conflict-Resolution Mechanisms 25

1.1.6 Political Institutional Imperatives in a Democratic Federation 28
1.2 Analysis in Subsequent Chapters 30
References 38
Tables 41

CHAPTER 2. IDEOLOGICAL BALANCING IN FEDERAL AND SUB-NATIONAL ELECTIONS 43
2.1 "Executive Federalism" - Interaction Between Federal and Provincial Governments in Defining Policies 48
2.2 The Party System of Canada 51
2.3 Canadian Voting Behavior 54
2.4 Model of "Balancing" Elections 56
2.5 Estimating the Effect of Party Control 62
2.5.1 Federal to Federal Elections 67
2.5.2 Provincial to Provincial Elections 70
2.5.3 Changes Over Time 72
2.5.4 Liberal Vote Gain by Party Control 73
2.5.5 The Time-Series of Party Control 75
2.6 The Case of Germany 79
2.6.1 Federal to Federal Elections 83
2.7 Conclusion 86
References 87

Tables 92

Appendix 104

CHAPTER 3. LONG-TERM CONGRESSIONAL REPRESENTATIONAL DETERMINANTS OF ALLOCATION OF FEDERAL FUNDS TO STATES: THE CASE OF THE UNITED STATES 108

3.1 Joint Unit-Center Bargaining Hypothesis in Application to the American Case 108

3.1.1 The Hypothesis 108

3.1.2 The Significance of Federal Transfers in the Well-Being of American States 109

3.2 Previous Research on the Short-Term Distributional Benefits of Over-representation 111

3.2.1 The 'Supply Side' Argument 112

3.2.2 The 'Demand Side' Considerations 114

3.3 Congressional Formulae for Fund Allocation and the Bias in Favor of Small States 118

3.4 Bias in the Per Capita Distribution of Funds 125

3.5 The Test 130

3.6 Conclusion 136

Data Sources 138

References 139

APPENDIX 143

Tables 146

Figures 154

CHAPTER 4. ASYMMETRIC FEDERAL BARGAINING IN A NEW FEDERATION: THE CASE OF RUSSIA 158

4.1 The Background of the Participants of Russian Federal Process: Federal Conflict at the Time of Russian "Formative" Elections 163

4.1.1 Economic Reform and a Jump in Regional Disparities 165

4.1.2 The Initial Criticism of the Post-Soviet Federal Arrangements 171

4.1.3 Constitutional Conflict within the National Government 172

4.2 Deepening of Regional Asymmetries Through Bilateral Bargaining Between the Center and the Units 175

4.3 Multilateral Bargaining 182

4.4 Reaction to Regional Asymmetries in Electoral Choice of Russian Regions 184

4.4.1 Initial Economic Conditions, Lost Safety-Nets and Communist Support 188

4.4.2 Additional Controls 193

4.4.3 'Economic' Strategies in Electoral Campaigns 195

4.4.4 The 1996 Presidential Elections 199
4.4.5 'Political' Variables - Direct Impact of Asymmetries in Federal Bargaining on Regional Vote. 202
4.5 Searching for the Mechanism Connecting 'Bargaining' Variables with Regional Vote 204
4.5.1 Regional Elites: Can They 'Deliver' Votes 204
4.5.1.1 Control of the Regional Media 209
4.5.1.2 Governors' Help in the 1996 Presidential Election 211
4.5.2 The Hypothesis of Stuffed Ballot-Boxes: The 'Mechanical' Delivery of Votes 220
4.5.2.1 Methodological Problems of Revealing Electoral Fraud in Russian Elections . . 220
4.5.2.2 The First Estimate of Electoral Fraud . . 225
4.5.2.3 Electoral Fraud and Turnout 232
4.6 Conclusion 248
References 250
Tables 255
Figures 272

CHAPTER 1. INTRODUCTION: CONCEPTUAL AND METHODOLOGICAL FOUNDATIONS OF FEDERAL ELECTORAL RESEARCH

1.1 The Federal Problem and Why It Requires a Political Solution

Theorists of federalism tend to treat federal units as rational actors when discussing the pros and cons of forming, joining or leaving a federation. Attempts to find rational grounds for the failure of federal stability separatist movements, for example, are closely related to an often-used "efficiency" argument in the context of federal stability. Namely, it is argued that to survive, a federation must advantage all of its constituent units, and, conversely, secession is best explained in terms of a unit's dissatisfaction with federal arrangements relatively to what it believes it can receive as a fully sovereign player. However, if no individual speaks and acts on behalf of a federal unit, the resulting "behavior" of that unit is rarely explainable in terms of some notion of collective rationality. On the one hand, Riker (1975) argues that because the cost of dissolution might outweigh the gains from their demise, "nonefficient" formations can survive. On the other hand, federal units are known to secede even if they bear significant cost from doing so (Horowitz 1985). Non-rationality of collective action combined with distorted incentives to political entrepreneurs who mobilize subnational constituencies to a large degree can be held accountable for that.

This starting section aims to introduce the following general premises for the subsequent case-based analysis of the federal process and the ability of a

democratic federation to reproduce as a long-run institutional organization:

(1) Although the set of relevant decision makers are commonly conceptualized as the set of federal units (plus, perhaps, the federal government itself), in the political context this approach is inadequate. The "behavior" of federal units is dictated by competitive electoral processes within them that generate entrepreneurial incentives of a potentially counter-productive nature from the point of view of a federal unit at large.

(2) The motivations of participants, therefore, cannot be reduced to simple macroeconomic efficiency calculations. Owing to the way in which intra-unit ethnic or religious or other divisions influence political motives, a federal unit can appear to act "irrationally."

(3) Democracy in general, and electoral competition in particular, produce the strongest institutional influence on the performance of a federal organization.

1.1.1 An Economic Argument in Favor of the Federal Form of Government

Mainstream analysis of federal institutions in economics is based on an understanding that greater economic efficiency could be achieved through the 'rational' allocation of economic functions among different levels of government. Once we accept that a free-market economy without a government sector is likely to malfunction owing to a variety of externalities,

public goods, and economies of scale (Musgrave 1959), federalism provides a rationalizable form of governmental intervention into the economy.

Of course, there is a serious practical issue of how to divide functions among levels of government, but, in general, in absence of cost reduction due to the economies of scale and the inter jurisdictional externalities, the option of decentralized federal public good production will be at least as efficient as any centralized solution (Oates 1972). If in addition we assume that larger markets are more economically efficient than smaller ones (i.e., that there exists at least one public good more efficiently produced nationally), adding the need for economic integration to that of decentralized regulation and public good production, federalism becomes an economically superior form for organizing governmental activities.

Simple economic arguments in favor of federalism, however, ignore political issues. As Oates (1972) admits, for an economist, "constitutional and political structures are of less importance: what is crucial for him is simply that different levels of decision-making do exist, each of which determines levels of provision of particular public services in response largely to the interests of its geographic constituency." In other words, for an economist, federation is a union of different geographic units jointly allocating a budget. Such a union needs not be anything else but an economic alliance or confederation with mutually open markets and at least some joint financial resources to allocate. The allocation of resources has to be based on criteria of mutual economic benefit, for which no political structure is really needed. Moreover, political

process imposes "transaction costs" and is a drain on economic efficiency.

1.1.2 The Pattern of Federation Failure in the Twentieth Century

The importance of politics is perhaps no better illustrated than at the time of democratic transition. In the second half of this century all non-democratic federations collapsed or experienced serious political problems shortly after democratic reforms were introduced. In late 50's and 60's almost all African and Asian federations collapsed after a few years of independence (see Table 1.1). In the early 90's all East-European federations (Czechoslovakia, the USSR, and Yugoslavia) ceased to exist once democratic political process in these countries started.

A common explanation for such federal failure assumes that former non-democratic federations were inefficient, or, at least, that they have been perceived as inefficient by some of their participants. Consider, for example, a group of federations formed after the World War II, where, following Riker and Lemco (1987), we take a state to be a federation if it calls itself one (in the Constitution)[1], and limit our selection of states to those that encountered political challenges posed by mass democracy, including the post-communist Czechoslovak, Yugoslav, and Soviet regimes.[2]

---

[1]Congo is an exception; its constitution had never been amended to mention federalism, because federal features, originally bold, continued to weaken toward the end of its existence.

[2]Such a selection of federal states corresponds to Friedrich's definition of federalism as "a kind of division of separation of power ... applied on a territorial

In each of these federations, democracy was introduced with the concept of a universal franchise as a firmly established democratic norm. Thus, politicians were necessarily exposed to the imperatives of mass electoral campaigns before the terms of the federal bargain fully crystallized (Deutsch 1961, Huntington 1968). New democratic federations universally experience regional, ethnic, linguistic, or religious conflict (Frank et al. 1968, Dikshit 1975, Rabushka and Shepsle 1972). Table 1.1 lists failed post-war federations and illustrates the consistency of the pattern. All federations are either successful and last for a long period of time (Table 1.2) or, if unsuccessful, disappear shortly after their inception. Importantly, all unsuccessful federal regimes attempted the use of elements of democratic political process - elections, referenda, constitutionalism.

Non-democratic federations could preserve national unity, even if they were economically inefficient, by forcing sub-national units to comply with the federal rule. Long-term stability can be provided as long as a strong federal center can extract more resources from sub-national governments than is needed to maintain the mechanisms of compliance (coercion). Thus, for every sub-national unit, the benefits from the federal union are below its share in its

---

basis." As Duchacek (1991) points out, such a definition excludes all authoritarian systems (e.g., the former Soviet Union, or Czechoslovakia) from the federal category since they are all committed to the prevention of any division, separation, or other dilution of centralized power. Although the complete and unconditional exclusion of authoritarian regimes from the set of federations can be questioned, to treat democratic and non-democratic federations differently seems reasonable.

cost, but there is also a significant political cost P that the center imposes to prevent a successful secession. The Soviet Union, for example, extracted enough resources from its republics to spend billions of dollars on wasteful military and space programs, but was nevertheless able to maintain federal stability, ostensibly, through the fear of punishment of any dissent. Federal stability of such a type resembles a colonial relationship.

Democratic political reform, if it occurs in such a non-voluntary federation, quickly destroys the mechanisms of coercion that sustained federal or imperial stability. Local political leaders acquire independent legitimacy as they win competitive local elections. The new democratic state simply cannot rely on the old political institutions and enforcement mechanisms, such as powerful security agencies and military force. If inefficient, such a federation should fall apart once the coercive pressure is gone and the political cost of secession is reduced.

The preceding argument, however, is insufficient, in that it assumes that economic relationship between the center and the sub-national units remains unchanged with democratization. It ignores the fact that everywhere democratization also changes the state's economic role, reduces the scope of government activities, and introduces democratic control over state budget and expenditures, making the state more efficient in producing a public good because electorally unsanctioned expenditures become eliminated. In general, nothing precludes the new democratic state from restricting its involvement only to mutually beneficial and efficient from the units' point of view economic and

social projects. In this respect, the economic justification of federalism should apply in full, and the previous history of non-democratic wastefulness must be irrelevant. Regardless of what happened in the past, a new federation has as good a chance of becoming an economically efficient union as anything else. The ratio of benefits to costs could be changed with the state transformation. Alternatively, even if the old federation dissolves at some point for some political reasons, its former members could form a new union at a low cost by using the old federal infrastructure, if the union is mutually beneficial and economically efficient. The latter served as an argument in favor of the dissolution of the former Soviet Union and creation in its place of the new Commonwealth of Independent States.

Correspondingly, the dissolution of a democratic federation cannot be taken as evidence of any preexisting inefficiency, nor does it imply that the population in general preferred dissolution.[3] It mostly reveals the shortcomings of the design of preexisting political institutions in the face of new circumstances. The quick disappearance of Soviet, Czechoslovak and

---

[3]E.g., Skalnik (1997) reports that in March 1992 respondents in the Czech and Slovak republic reported the following opinions among Czechs and Slovaks on the preferred form of Czech-Slovak State Relationship (in percent).

	Unitary State	Federation	Confederation	Independence	No Opinion
Czech Republic	34	27	6	11	22
Slovakia	13	24	32	17	14
Czechoslovakia	27	26	15	13	19

Apparently, the secession was the second choice for a majority of Czechoslovak voters (Elster, 1995).

Yugoslav federations as soon as elements of democracy were introduced reflects the inability of old institutional forms to adapt to rapid changes in the demands being placed on them and to properly motivate the leading decision-makers. To identify the causes of separatism and the dissolution of federations, then, we need to address those internal processes that account for the "actions" of every subject of a federation (state or province), and not restrict analysis the assessment of how efficient interactions among them at the federal level are.

[Table 1.1 is about here]

Out of 14 federations that currently exist for longer than the average duration of a failed federation (7.7 years) and where elements of electoral competitiveness are present, only 4 were formed in the post-war period: India, Pakistan, Malaysia, and Nigeria (see Table 1.2). We would like to call them democratic, although serious limits on democratic process are present in all of them. Pakistan had a long history of successive military regimes. Malaysia has a two-chamber federal legislature in which the members who are nominated to the upper chamber by the central government outnumber those who are elected. The Constitution also provides for a Conference of Rulers (princely hereditary heads of the nine states which have such an institution, and governors, appointed by the central government in the rest), and the executive Head of the Federation, who is "very much a constitutional monarch" (Dikshit 1975, 133). In Nigeria democracy is only a promise, which may or may not be realized. The main features of the Indian political system were formed long before independence, while the interim period witnessed a significant erosion of

democratic practices and of such a crucial attribute of democratic politics as a competitive party system (Kohli, 1990), until its recovery in the last decade.

[Table 1.2 is about here]

1.1.3 The Problem of Free-Riding and an Economist's Solution to It; Multiple Equilibria

Implicit in blaming federation failure on economic inefficiency is the premise that the greater the promise of cooperative gain, the greater is the likelihood of cooperation. The most apparent problem here is the incompleteness of such a premise, which derives from ignoring the extent to which the preconditions for prosperity will be realized in reality. The power of the state can undermine any economic program or policy. Unless political interests are compatible with the economic structures sufficient to occasion prosperity, that prosperity will not be realized or will not be sustained. The Soviet Union is again a case in point, where the dissolution, arguably, resulted as much from the political calculations of its chief instigators (e.g., Russia's president Yeltsin's intention to remove the federal president Gorbachev from power, Kravchuk's desire in Ukraine to secure his domestic political position by taking advantage of the nationalist sentiment in Ukraine) as from the economic failings of the Union - failings that were hardly resolved by the USSR's dismemberment that in many ways magnified the economic plight of its republics.

But there are other less obvious problems with the above premise. First,

other things being equal, prosperity and efficiency, understood as improved prosperity for all, erodes the power of a democratic 'enforcer' - the center. Suppose a `federation' consists of two federal subjects, suppose also, that if both `comply' and cooperate by paying their full share of taxes, T, each receives a benefit, B. But if one subject unilaterally defects so as to avoid paying, the benefit afforded by the federation to each subject declines to $B/2$. Finally, suppose that defections are punished in the fixed amount P. Figure 1.1a portrays this situation and shows that absent any punishment (if $P = 0$), as long as $T < B < 2T$ the situation is a Prisoners' Dilemma in which the dominant choice for both subjects is not to comply even though both prefer the outcome ['comply,' 'comply'] to ['don't comply,' 'don't comply']. On the other hand, if punishment is sufficiently severe, i.e., if $P > T\text{-}B/2$, then compliance becomes a dominant strategy.

	To comply	Not to comply
To comply	*B-T, B-T*	*B/2-T, B/2-P*
Not to comply	*B/2-P, B/2-T*	*-P, -P*

Figure 1.1a

Suppose that, following the advice of international economic organizations, the federal government transforms its policies so as to increase the efficiency of its operation and programs. At this point there can be a number of possibilities. One possibility is that B simply increases for a given T due to a technological change, in which case, if the increase is sufficiently great (if $B > 2T$), the Prisoners' Dilemma disappears even with zero punishment, and compliance is

no longer a problem. But another possibility is to suppose that the economy expands at a constant level of technology and an increase in efficiency must be accompanied by an increase in expenditures, i.e., only the net benefits increase. If such a transformation, say, doubles the net benefits so as to yield the game in Figure 1.1b, then the compliance now is assured only if $P > 2T\text{-}B$.

	To comply	Not to comply
To comply	$2(B\text{-}T), 2(B\text{-}T)$	$2(B/2\text{-}T), 2(B/2)\text{-}P$
Not to comply	$2(B/2)\text{-}P, 2(B/2\text{-}T)$	$-P, -P$

Figure 1.1b

Notice, that in order to sustain compliance at an increased level of prosperity a greater punishment is required, which is to say that, in this instance at least, the increased efficiency of the federal government actually renders federal stability more difficult to sustain. Another troubling feature of federal economic enforcement is that redistribution aimed to even out economic inequalities lowers the incentives for cooperation even further. Suppose a federal subject, I, $I = 1$ and 2, can generate X_i units of benefit from its own resources, let $X_1 \geq X_2$, and suppose that if neither player cooperates, their respective payoffs correspond to this benefit. Let the national government be able to tax a compliant region at the rate t. The government divides its resulting budget (0, tX_i or $t(X_1+X_2)$), between subsidizing the poorer state and the production of the public good that benefits both players - in the ratio of α and $1-\alpha$ respectively. Finally, suppose that governmental investment in the public good has a multiplier associated with it so that one unit spent by it on legitimate

activities produces *b* units of benefit to each region. The two-person game, then, is as shown in Figure 1.2.

	Don't cooperate	Cooperate
Don't cooperate	X_1 X_2	$X_1+(1-\alpha)btX_2$ $X_2-(1-\alpha)tX_2(1-b)$
Cooperate	$X_1(1-t)+t(1-\alpha)bX_1$ $X_2+t\alpha X_1+t(1-\alpha)bX_1$	$X_1(1-t)+(1-\alpha)bt(X_1+X_2)$ $X_2(1-t)+[t\alpha+(1-\alpha)bt][X_1+X_2]$

Figure 1.2

Notice that `don't cooperate' dominates `cooperate' for player 1 (row chooser) as long as $b(1-\alpha) < 1$. For player 2 (column chooser), if 1 fails to cooperate, then 2 should not cooperate when $b < 1$, whereas if 1 cooperates, 2 cooperates as well (not cooperating is better than cooperating if $\alpha+b(1-\alpha) < 1$, which is never the case because 1's cooperative strategy is conditioned on $b(1-\alpha) > 1$, and $\alpha>0$). Several conclusions follow.

1. The preference of the recipient of the resource transfer (column chooser) is unchanged by the magnitude of that transfer: Compliance cannot be bought as long as there is no punishment for noncompliance; therefore, a satisfaction with the federal arrangement that could not be successfully challenged in a local campaign can never be bought. The recipient's sole concern is that its marginal benefit though the public good outweighs its marginal contribution, as if no transfer were taking place.
2. At the same time, incentives of the economically stronger participant to

cooperate are lowered compared to the case without redistribution. The row chooser, who without redistribution prefers to cooperate only if $b > 1$ - if the national government's `productivity', b, is greater than 1 - now must also take the loss from redistributive policies into account. It fails to contribute whenever $b(1-\alpha) < 1$, even though it might be that $b > 1$.

3. Even if a subsidy is automatically withdrawn as a punishment for non-compliance (with the central government pocketing the unredistributed resources), i.e., column chooser's payoff in the lower left cell of Figure 1.2 is $X_2 + t(1-\alpha)bX_1$, whether cooperation will occur depends on the constraints that row chooser faces. Even if row chooser cooperates, column chooser prefers to cooperate only if $X_2<\alpha(X_1+X_2)+b(1-\alpha)X_2$. But recall that row chooser cooperates only if $b(1-\alpha)>1$, and thus the condition always holds. The binding constraint for full cooperation remains $b > 1/(1-\alpha)$. So nothing is changed if the poorer region is threatened with a withdrawal of the subsidy designed to encourage its cooperation.

Correspondingly, when the federal government attempts redistributive policies, full cooperation may not be sustainable even when the individual marginal benefit of the public good exceeds marginal cost for each participant. The general conclusion, then, is that although a drastic increase in productivity can induce cooperation, mere efficiency cannot do so. Absent some system of selective reward or punishment, a federal government that is `merely efficient' will continue to confront the general problem of compliance and cooperation.

Moreover, the federal units' behavior is affected only by parameters *b* and α (and by *P* in Figures 1.1a and 1.1b), even though the success of a central government's economic development plan may be influenced by *t*, X_1 and X_2. But even if we take an especially narrow economic view of these parameters, their values will be heavily dependent on political things. The parameter *b*, the 'technology' of the federal public good production, for instance, is a function not only of `economic' policy - regulating the `right' industries and providing for a budget balanced `optimally' between various categories of spending (all of which is determined by political things), but also of the degree of corruption that pervades public sector activities. And it goes virtually without saying that subsidies α and the structure of punishments and rewards will be determined politically and to the officeholders maximum electoral advantage in sub-national units as well as nationally. In 1995, for instance, Russian president Yeltsin sought the support of regional bosses in the upcoming parliamentary and presidential elections not by rewarding compliance with his policies as much as he pursued a federal policy of `rewarding' noncompliance. Direct federal subsidies were not allocated only on the basis of economic need, but also on the basis of the perceived likelihood that doing so would shore up his political support. We return to this general point in Chapter 4 below.

Thus, absent selective punishments (and rewards), cooperation and compliance require a degree of productivity in the provision of public services that may not be met even under the most favorable circumstances, and sustaining even a mutually desirable federation by democratic means requires

mechanisms other than merely direct economic incentives to federal units. In other words, purely economic instruments generally fail to completely answer the question of the ultimate source of enforcement and federal stability.

Coercion of federal units by the federal center with a purpose of enforcing the provision of the public good is not a plausible framework for analyzing democratic federations and the relationships in them among governments of different levels. Although theoretically applicable to the Prisoners' Dilemma type of situations, coercion by a government of another sovereign government - and unit governments in democratic federations possess independent from the center sovereignty - amounts to nothing else but war. Considering punishment of failures to act cooperatively in such a context, one must immediately recollect Nigerian and Ethiopian civil wars, Yugoslav federal army invasion of Croatia, and the eliminationist effort of Russia's federal troops in Chechnya. This is clearly not the role a theorist of democratic federalism grants to the federal state. Even if underlying circumstances are those of the infamous Prisoners' Dilemma, something other than coercion must transform it into some other game where cooperation is sustainable as an equilibrium outcome, before the democratic federal government can appear on the stage at all. Thus, the consensual decision to cooperate must be reached before the federal state comes into existence, and cannot be achieved other than through the formal system of incentives, i.e., by institutional means. Institutional arrangements that allow the federation to form, correspondingly, must be self-enforceable. Later we return to the discussion of the ways in

which such self-enforceability can be attained in an institutional system.

If enforcement and 'punishment' of defections (in contrast with rewarding compliance) are outside the scope of a democratic federal state, then what remains are the role of executing the institutional prescriptions (and by doing this - allowing the incentive mechanism embedded into the constitutional rules to become a reliable environment for all participants of the federal process), and, possibly, if cooperative equilibria in a game played by constitutional rules are many, the coordinating role in selecting among them. Problem of federal coercion, in other words, must be solved in principle at the constitutional stage that transforms the interaction among participants into one where there are cooperative equilibria - by changing the payoff structure.

Whether or not, when equilibria are many, federal government is involved in the equilibrium selection process determines the nature of the federal interaction as the game among N or N+1 'players.'

A solution to the federal problem of compliance requires that formal rules are such, that free-riding is made an unattractive option. And the federal state comes in as an executor of the formal rules, if unchallenged in this capacity by regional representatives through political mechanisms. However, aside from punishment in order to overcome the Prisoners' Dilemma, there is also another function that the federal center performs, namely, that of solving the problem of federal coordination when equilibrium selection is required - in the process of federal bargaining.

1.1.4 The Problem of Coordination and Its Manifestation in Federal Political Process

The coordinating function of the center is not in any way subordinate to its enforcement role, since the multiplicity of equilibria need not be less of a destabilizing factor than individual unwillingness to contribute toward public good production. The problem of federal coordination can exist in absence of the problem of federal compliance and precedes it historically, because free-riding cannot start until some agreement on the levels of contributions is reached by the participants. For example, the punishment mechanisms, especially if constitutionally defined, can take different forms, from selective to universal, including the extreme one of complete reversion, when the public good is not provided at all if at least one participant refuses to participate in its provision.[4] In such a case, free-riding is not an option as it leads to the termination of the federal program. But, even in the most favorable case when the federal program is highly productive ($B/2-C > 0$), so that there is no Prisoners' Dilemma and free-riding is not a dominant option, under reversion there are two equilibria in pure strategies. Either all units contribute resources

[4]In fact, such a drastic mechanism does not necessarily have to be punishment per se; it is also possible, that for some reasons (e.g., electoral) the center cannot afford to go ahead with a program if even one member of the union has not explicitly committed to it. Electoral College and thus elected presidency in this regard may be an equivalent in a two-party system of such reversion mechanism.

and benefit from the federal program, or all choose not to contribute.[5]

	To comply	Not to comply
To comply	B–C; B–C	0; 0
Not to comply	0; 0	0; 0

Figure 1.3.

Here already there is room for the role of the central government to coordinate actions of sub-national units to insure that the "efficient" equilibrium out of the two possible prevails. In this example, though, it is both evident on what option the center should focus the participants' attention, and likely that as a Pareto dominant, the cooperative equilibrium might prevail on its own. Things are not always that clear, though. And already this two-by-two example illustrates that there is a separate problem of coordination which can plague even very efficient federations and require political resolution. The issue of free-riding may not be central to the federal problem in some federations, as they

[5]The decision rule that we describe is the simplest version of the minimal provision mechanism. When a federation provides public goods, it has to determine the level of public good production and the way of sharing costs among the sub-national units. A mechanism is a function that describes the decision-making based on expressed units preferences. In the case of the minimal provision mechanism, each subject reveals its maximal demand of public good according to the given cost function, and the minimum announced desirable levels of production is selected as the level of public good production by the federal government. Of course, such a mechanism may be based on many feasible cost sharing rules - for example, equal cost sharing or proportional cost sharing rule. It has been shown that for any exogenous cost sharing rule, the minimum provision mechanism is the unique mechanism that satisfies the requirement of voluntary participation, makes it a dominant strategy for participants to reveal their true preferences over public good provision (strategy-proofness) and, in addition, is such that any feasible level of public good provision is attainable by the mechanism (full-range property). For more discussion and the proof see Ohseto (1997).

may never advance beyond the equilibrium selection stage - never formulate the exact terms of the federal agreement.

More generally, when multiple equilibria exist, different sub-national units may prefer different equilibria, thereby inducing *federal bargaining* with respect to *equilibrium selection*. Thus, multiplicity of possible equilibria poses an immediate threat to federal stability. In an efficient federation, each participant would be justified in seizing an opportunity to bargain for better terms for itself, as long as the allocation it seeks is associated with some equilibrium in the game.

To illustrate this point, consider another example. Suppose that the federal program is provided only if the federal government is able to collect a fixed amount ($5 billion) in taxes. Also suppose that two sub-national units (the argument is easily generalizable to an N-unit case) receive an equivalent of $4 billion of benefits each from the federal program, with the total net benefit of $3 billion. With these parameters, the federal program is economically efficient, but neither individual unit can provide it alone and, therefore, all sub-national units must agree to split the cost. Again, as under the reversion mechanism, complete free-riding is impossible.

A continuum of possible equilibria could be sustained, as long as the sum of total contributions equals $5 billion (on the contract curve). And there is one additional "bad" equilibrium, when no joint federal program is provided. As both sides have different preferences over the possible equilibria, they have to negotiate and "bargain" to jointly select a particular outcome. Once an

equilibrium outcome is selected, no side would prefer to deviate from it (while they still prefer to switch to another possible allocation). Figure 1.4 simplifies the situation to allow the two federal units to choose only one out of four possible strategies: to comply with requirements of the federal program and pay $3 billion, to pay $2.5 billion or to pay $2 billion. Also the sub-national government may choose to make no contribution to the program at all.

	To contribute $3 billion	To contribute $2.5 billion	To contribute $2 billion	Not to contribute at all
To contribute $3 billion	$1; $1	$1; $1.5	$1; $2	$0; $0
To contribute $2.5 billion	$1.5; $1	$1.5; $1.5	$0; $0	$0; $0
To contribute $2 billion	$2; $1	$0; $0	$0; $0	$0; $0
Not to contribute at all	0; -$3	$0; $0	$0; $0	$0; $0

Figure 1.4.

There are four Nash equilibria in this game; three are a discrete equivalent of the contract curve in the original example: the first player pays $2 and the second pays $3, both pay $2.5, the first player pays $3 and the second pays $2. The fourth equilibrium is when no agreement is reached and both players choose not to contribute. Players have strict preferences over possible equilibria and will try to access the coordination mechanism in order to bargain for better terms.

Different criteria and arguments could be used to coordinate players' actions: fairness, economic necessity, history of previous contributions. In fact, unless we are ready to make some ad hoc assumptions, we cannot predict the outcome of equilibrium selection. The outcome when the first player pays $3 billion and the second pays $2 billion may not be viewed by the first player as "fair," but it will not defect from the agreement until the process of equilibrium selection starts again. The big question is whether, even after once settled, federal terms are perceived as negotiable by the participants. More specifically, as the political process in a federation is mediated by elected officials of different levels, the question is whether or not such officeholders will offer their constituents their services in reopening the process of federal bargaining.

In the presence of multiple equilibria there is no guarantee that participants of the federal bargaining would succeed in equilibrium selection at all. It follows, that without interference the federal agreement could be quite stable once it has been fully implemented, while at the same time it can fall apart, possibly, without a replacement, if the sides merely decide to raise the issue again. Another consequence of the coordination problem is that in practice it may be efficient to impose a federal agreement involuntarily, pressing all sides to it, because it may be politically impossible for sub-national leaders to accept any mutually beneficial compromise.

Any new opportunity to renegotiate federal terms inevitably renews the second-tier game of division of the federal benefits in the form of equilibrium selection. Destructive renegotiation may come as a result of polarizing political

pressures for it in the course of elections, or it can be caused by "external" factors, such as democratization of the post-authoritarian and post-totalitarian states or independence received by the post-colonial states. The opening for federal renegotiation may also be created constitutional provision allowing change in federal terms, such as a clause that explicitly allows renegotiation of terms by referring to 'Constitutional laws' to be passed, or the one that guarantees the right and outlines the rules of secession. Secession itself or its threat can be viewed as a form of altering the terms of the initial bargain, since it is a powerful tool with which to extract concessions from the rest of the federation. In fact, all federations that constitutionally defined secession mechanisms have already collapsed, i.e., the Soviet Union, Yugoslavia, Czechoslovakia, Ethiopia, and Burma. This fact is perhaps best illustrated by events in the Soviet Union, Czechoslovakia and Yugoslavia where the introduction of democratic processes undermined and delegitimized the old systems of rules (communist constitutions) and opened the door for new federal bargaining at the time of the institutional reform. Similarly, Ethiopia lost its province of Erithria as a result of a referendum after the weakening of its Marxist government. Pakistan lost its Eastern part after an attempt to draft a new constitution. The process of revising the constitution led to the dissolution of the West-Indian Federation. Political troubles in Nigeria were directly related to the electoral process. The number of illustrations can be easily extended to support the more general argument that the presence of institutional flexibility opens the door for dangerous renegotiation.

The dangerous contexts of renegotiation would explain why all federation failures have occurred early in each corresponding federation's history. All federations that ended (and formed) after the World War II collapsed quickly (see Table 1.1). The Central African Federation and the French African Federation dissolved immediately after independence, with little consideration of economic losses for the parties involved. The Federation of Mali and Senegal existed for only a few months, and the same is true for the Federation of Iraq and Jordan. The West Indian Federation and the United Arab Republic collapsed after a few years of existence. If one adds to this list the former communist countries - USSR, Czechoslovakia and Yugoslavia - counting time since democratization, we can argue that there is a critical and dangerous period for federation survival of several years after its creation, a period in which the new federal organization is particularly vulnerable to the attempts at 'improving' the terms of the federal bargain.[6] The political explanation of the disruptive influence of renegotiation-prone periods in federations' histories lies in the incentives that federal bargaining opportunities create for politicians. This logic is further enhanced when a unit-level constituency itself is divided and successful political campaigning within a unit requires that politicians take an

[6]US history reveals this as well. The constitutional provision that 'importation of such persons ans any of the state now existing shall think proper to admit, shall not be prohibited by the congress prior to the year one thousand eight hundred and eight' (part 1 Section 9 Article 1), strengthened by the requirement that '...no amendment which may be made prior to the year one thousand eight hundred and eight, shall in any manner affect the first and the fourth clauses in the ninth section of the first article' (Article 5) are but an attempt to prevent renegotiation of a particularly contentious issue.

extremist stand with respect to advocating their constituents' perceived interests in the union, hoping thus to receive a unified unit's vote.

An economist might argue that a strong center is, nonetheless, the surest way to sustain cooperation at the efficient level, and that our design should merely focus on making renegotiation difficult. This argument, though, would be flawed, since many regional leaders nevertheless succeed even in 'strong' federations at securing special 'breaks' for their federal units. The arguably 'strong' Russian Federation interacts with many of its subjects by means of signing bilateral treaties filled with unique and asymmetric arrangements.

Of course, a strong Soviet-type federation would have had 'social efficiency' somewhere in its objective function, though it would also have defined it in accordance with its own point of view. But, suppose, our strong federal center is elected, and that securing support of federal units (as mobilized to vote in elections by regional elites) is essential for its reelection. Suppose, also, that the center's strength is due to the fact that it unilaterally decides economic (tax) policy throughout the federation (a reasonable supposition, closely matching recent fiscal reform efforts of Russian government, for example), but it is incapable to keep dissatisfied units in the federation by non-violent means once net benefits to them from public good provision fall to or below zero.

As long as requests from federal units come in small groups or individually, and not as a collective demand (in which case it is irrational for

them to make a request, as their individual welfare cannot be increased by it), the center can accommodate them with regard to the current status quo. Of course, it is electorally damaging when lifting someone's burden, to raise the tax burden of someone else in compensation, especially if a similar concession was previously granted to that someone. What might result is the national incumbent who in a round of bi-lateral concessions receives an electoral advantage, while the level of public good provision falls below efficient levels. Advocates of the 'strong center' as the guarantor of efficiency need to specify how they see the electoral basis of a strong democratic center. It is possible that they do not have elections in mind in conjunction with thus enforcing efficient levels of public good provision.

1.1.5 Bargaining over Equilibrium Selection as a Necessary Implication of the Need for Federal Conflict-Resolution Mechanisms

The need for equilibrium selection is generated by a combination of two necessary attributes of democratic federations. The first is the presence from the very beginning of an institutional mechanism that transforms the federal game from a Prisoners' Dilemma into something that admits self-enforceable mutually beneficial solutions - the mechanism, which is fixed, formalized, and itself is a necessary condition of federalization. The second attribute is the necessity of leaving within such a formal institutional mechanism the window of flexibility that allows for conflict-resolution (Ostrom, 1990:100-2). Indeed, marginal adjustments in the exact federal arrangement must remain possible,

otherwise the whole union could collapse due to random and temporary special circumstances within some of the participants that make their full compliance with the requirements impossible or especially difficult. In fact, insisting on full compliance in such circumstances may not be viewed as fair. Thus, though for the most part federal coordination is supplied by constitutional means at the stage of equilibrium selection, there must always remain room for what we call 'residual coordination,' within which the ongoing conflict-resolution can be accomplished and which can change the outcome of equilibrium selection, if only temporarily.

It is in the area of 'residual coordination' that the strategic federal interaction (also called federal bargaining) takes place. The form it assumes depends on several parameters. The first is the scope of coordination left uncovered by constitutional provisions. The second are institutional forms that are provided or evolve over time specifically for the purpose of conflict-resolution. These institutional forms as a matter of principle may either involve or ban the federal center from the process of conflict-resolution, shaping the ongoing 'residual' bargaining as either *N* or *N+1* participant interaction. Finally, the form conflict-resolution takes depends on individual level incentives supplied to its participants throughout the federal system of government and elections. Different specific circumstances of a country imply what the acceptable, safe levels of constitutional flexibility are. This flexibility, in turn, must be sufficient to meet the conflict-resolution demands, and a gap between the two is a logical possibility. For example, if conflict-resolution is expected to

be a singular focus of political attention within the units as well as nationally, e.g., in an ethnically divided federation, its safe scope may be very limited when stability properties of the process of residual coordination are weak. Decisions, for example, on how to allocate the burden of an economic reform or distribute sizable foreign aid, are best not made under such circumstances. When government offices themselves become a valuable national resource (as they are in many poor democratizing nations), their assignment also becomes just another problem of division at the inter-unit level. In such fragile circumstances the form of disruption of the federal 'bargain' often is the 'capture' of the center by the strongest federation member and subsequent coordination to that member's full advantage. Correspondingly, an argument can be made for narrowing, at least initially, the scope of residual federal coordination, even at risk of not being able to accommodate some special needs.

The range of 'residual coordination,' however, does not *qualitatively* change the nature of the federal 'game.' The most consequential alterations in the game are brought about by institutions which specify whether or not (and how) the separately elected 'center' participates in it.

Finally, the importance of the third component - the participants' incentives - derives from the multi-level nature of the game around the provision of a federal collective good stressed by Bates (1988) and Ostrom (1990). The difference between the multi-level logic of communal appropriation of commons' resources (Ostrom, 1990) and the multi-level logic of the federal political process, though, is that while the first unravels top to bottom, where

one common must protect its interests among many while still solving the problem of over-depletion of the resulting allotment by its own members, the federal process, on the contrary, is structured bottom to top. Due to the democratic, i.e., electorally based nature of the federal game, the preferences of units' representatives come from the unit-level competitive electoral processes, and may include potentially transcending the national level political aspirations of unit politicians. As federal units are represented by elected officials who all are subject to strains of competitive campaigns, the units' 'preferences' are expressed as dictated by the determinants of unit-level electoral environments. According to Ordeshook and Shvetsova (1995), aside from the particulars of a specific constituency's preferences, much will depend here on how highly politicians value the future. This includes their own ability to reach future agreements on federal issues and reputations that one day would allow successful contention of national offices (something that an intensely particularistic stand in regional elections can undermine). On the other side of the scale are their most immediate unit-level reelection concerns.

1.1.6 Political Institutional Imperatives in a Democratic Federation

Based on individual economic incentives of subjects of federal agreements, even when ignoring politics altogether, we must admit that a voluntary federal union is likely to be unstable. A mechanism of enforcement and coordination is needed to sustain federal stability. Elsewhere it has been argued that such a mechanism, moreover, must be self-enforcing. But

self-enforcement does not imply in any way that participants unconditionally voluntarily abstain from disrupting the federal union - it is possible that they may choose to be "good citizens" only because other players' actions force them to follow such a strategy. Among equilibria there can be asymmetric arrangements, that some units though would choose to abide would nevertheless find very unfair. For example, when several units have already agreed to form a federation, such a union could impose additional cost on non-members while at the same time effectively raise required contribution levels for late arrivals.

In the presence of multiple equilibria and when constitutional issues are being discussed, there is no guarantee that federal bargaining will succeed in selecting any equilibrium without a destructive interim stage, as federal units clearly have conflicting preferences. The same federal arrangement that would be stable in a fixed institutional system with no renegotiation opportunities, would not, in all likelihood, survive renegotiation. This implies, among other things, the desirability of a speedy adoption of, possibly, expert-drafted (and not unit- or group-negotiated) constitutional documents. This may imply that the constitution will be brief and, on things other than the basic and inviolable principles of state organization, necessarily vague. That is not, though, to be 'cured' by the follow-up of 'constitutional' laws and general open-endedness of the constitutional process. After all, in a federation additional ground can be covered through the constitutional process within federal units, as long as the latter is clearly subordinated to the solid and few guidelines in the federal

constitution (Ordeshook and Shvetsova, 1995).

However, an important concern that remains after the initial constitutional process is completed, is that political mobilization in a federation in the future does not become centered on the demands for renegotiation.

1.2 Analysis in Subsequent Chapters

When conflicting groups or federal units are treated as subjects that posses individual rationality, the only way to interpret it, without entering an obvious conflict with the social choice assessment of the collective rationality, is attributing full decision-making power to the 'leadership' of a group. Meanwhile, the latter, in a democratic setting, is controlled through the electoral link between the 'leadership' and its constituency. The content of the electoral mandate as determined in competitive elections and reenforced by the prospect of reelection and not the vague group interest is what directs the actions of 'leaders' or, simply put, officeholders. Thus, we must focus on the way subject representation in a federation is organized. Representational content of an office defines the purpose for which an electorate elects any individual officeholder and thus the promises with which the candidate himself and his competitors can lure the voters. We assume that the content of a specific electoral mandate and the considerations that become important in a campaign for the office are closely connected.

The literature describes two types of federal representative organization: (1) a case when federal subjects are effectively represented directly within the

national bodies so that addressing unit's needs at the federal level requires electing politicians willing to do that from the unit's constituency to the national office directly, producing national representatives responsive primarily to their constituencies and not to their political organizations, e.g., national parties, and (2) a system of federal representation where a unit's distinct interests are articulated and defended before the federation by its sub-national government that, if necessary, addresses or confronts the federal government as the outside force (Loewenstein 1965: 405-7, Gibbins 1982: 45-6). In this light, the perception by politicians and voters of a particular electoral mandate is based on how the role of the office is viewed within a larger institutional environment. Things that determine the content of a mandate are institutional to a large extent. The electoral process conducted within the framework of specific rules (e.g., mandating territorial versus proportional representation) and in view of constitutionally supplied electoral imperatives (such as government formation in Westminster systems, etc.) is arguably the strongest influence on the long-term perceptions with regard to the mode of unit representation. But institutions are not the only relevant influence. Expectations that national officeholders should engage in negotiations over the federal unit's well-being with the unit-level politicians who would serve as the unit's champions may originally be induced by pre-existing factors, e.g., past experience. But through influencing individual actions, such expectations may lead to the adjustment of the components of the political and institutional system in the direction of the dominant view in the electorate and/or among the elites. In this sense, the type of federal subject

representation would not be based exclusively on institutional causes. This, however, does not imply that for a given political system one type of representation or the other could not be promoted by institutional and constitutional selection.

Institutional criteria for determining the type of unit representation include the presence of territorial electoral representation, the existence of the legislatively meaningful upper chamber, the disconnectedness of the fates of the executive and the legislature in electoral terms and the lengths of staying in office, presence of legislative oversight, and such things as explicitly negotiated agreements between the center and individual subjects, institutions for intergovernmental conferences and other forms of negotiation, existence of a system of special committees or other permanent bodies to regulate center-subjects affairs, establishment of subject representational quotas in national governmental institutions, etc. Within a single political system, components of both types of representation can simultaneously be present; thus, the exact classification would always remain a matter of a degree. It is important, however, that when the federal subjects' representatives in the national government are free to act on behalf of their territorial constituencies, there is no foundation for a conflict between local and national (legislative) electoral campaigns. The possibility, however, remains for local mobilization against the nationally (not territorially) elected executive branch, if such exists.

In this work we adopt an approach that the essence of the federal process is *federal bargaining, understood as bargaining over the selection*

among many equilibria possible for a given federation. As the process of equilibrium selection is inherently redistributive due to the constraint on the joint resources that a federation possesses, its participants have conflicting preferences over the possible allocations, even though once selected, each of those is implementable by virtue of being one of the equilibrium outcomes. A specific form in which the discourse between and among the elected officials representing units' interests in the federation and the center is institutionalized affects the nature of this discourse, the tendencies in electoral politics, and the outcomes of federal bargaining. We see two basic institutional possibilities within which federal bargaining over equilibrium selection can be conducted. The first limits representatives of all units to joint interactions with the center, where the consensus in some form must first be reached among them and only then addressed to the center in the form of a request or a bill that needs to be signed (as in the US). Alternatively, it may be possible, or, in some cases (e.g., Russia) explicitly stipulated, that representatives of individual units can enter bilateral interactions with the center on behalf of their constituents and that the concessions obtained within those interactions are unit-specific and do not spread to other federal units by the force of the precedent.

In what follows, we address on the basis of four cases different forms that bargaining over equilibrium selection assumes under different institutional circumstances, and assess the implications of different forms of bargaining for the nature of the federal process and to the content of the electoral mandates for local and national officeholders (the cases of Canada and Germany in

Chapter 2), federal policies (the case of the USA in Chapter 3), and, with regard to our last case - Russia - for the prospects for democratic federal stability (Chapter 4).

In this collection of cases we consider the most general type of variation in the way bargaining over federal equilibria is institutionalized. The variation that we address is between federations where representatives of federal units can interact with the center bilaterally versus those where the procedure of unit-center interaction is formalized and requires a decision to be reached among the units before the center is presented with a request (thus, no bilateral deals with the center are permitted). Admittedly, there are other dimensions of variation, and the impact of federal institutions (not only of institutions that constrain bargaining) on the federal process is complex. However, the one that we identify and on which basis we selected our cases not only has (in theory) immediate strategic implications for the participants at all levels, but also is clearly identifiable.

A few definitions are necessary at this point. Governmental forms employed in different countries vary substantially, and we must impose general criteria to have the compatibility needed for comparisons. By federal center as contrasted with unit representatives, we understand officeholders each of whom possesses national legitimacy. This means that the center (1) must be elected nationally, and (2) must not be a collective body, but an individual officeholder or a small group of officials with a single source of legitimacy (e.g., the cabinet). National parliaments in party list PR electoral systems are disqualified,

because, even if elected by the constituency at-large, each MP belongs to a party which represents a (small) subset of electorate against the rest of it, and thus their legitimacy is not national. However, when the federal center is the Prime Minister and the cabinet that he heads, and their office is conditional on the parliamentary confidence, the parliament that defends on the strength of party discipline in it can come very close to being a part of the federal center or, in other words, not being an assembly of local representatives. Thus, a parliament in a Westminster system would be fully identified with the center (cabinet).

Many officeholders at once may have a claim on representing their federal units before the center. When this is the case, qualitative judgement is required to determine the weight of each form of representation. To give an example, in the United States congressional representatives in a structured simultaneous way represent their constituents' interests through the legislative process before the nationally elected executive endowed with serious legislative powers. At the same time, state Governors represent their constituents' interests as well, when they find some particulars of execution of federal programs being delegated to the state level and left at their discretion.

The first hypothesis that we test in chapter 2, in principle, applies to both forms of institutionalization of federal bargaining, though the concrete manifestations can be different in each. The centrality of federal bargaining to the federal political process implies that it is reflected in the incentives and behavior of politicians, political parties, and voters. In particular, federal

bargaining as an interaction between different offices (where unit representatives can act either jointly of separately) over the selection of an (equilibrium) arrangement as favorable for their constituents as possible creates incentives for voters to select different parties to control these offices. The related hypothesis is that not only the (presumably) constant characteristics of a party, such as its ideology and policy stands, affect the voters' choices, but also the party's current position in federal bargaining (such as being in government or in opposition nationally, or in control of the presidency when it is the only nationally elected center). Thus, in testing this hypothesis in application to federations that allow bilateral interactions of unit representatives with the center, we look for evidence of electoral balancing by comparing electoral returns in federal and sub-national elections in Canada and Germany. We show that the electoral dynamics is, indeed, consistent with electoral balancing taking place between federal and provincial and between federal and Lander elections in these two federations.

When federal units' representatives are constrained in their interactions with the federal center to joint actions only, as when they communicate with the center by means of passing ready pieces of legislation that can be either signed or not by the nationally elected executive, their representational weights in the bargaining process are firmly institutionalized and their long-term implications can be assessed. In chapter 3, using the data on allocation of federal grants in the US, we empirically support the proposition that outcomes of the federal bargaining reflect the bargaining weights of the participants. More specifically,

we show that relatively small US states, being better represented in Congress, systematically benefit in the process of federal grant distribution.

The fourth chapter addresses the political process in a federation with a still unstable type of bargaining institutionalization, where the issue of federal bargaining is the focus of national political discourse, namely, Russia. There exists a consensus over the ability of political leadership of the sub-national units there plays in 'delivering' votes in national elections. The hypothesis that we address is that the influence of regional politicians on the vote within their constituency at the federal level is yet another artifact of federal bargaining being reflected in the electoral process, rather than the mafia-style political manipulation on their part. We fail to find support to claims of the 'mechanical' nature of 'delivering' votes - by means of massively stuffing ballots. Instead, we find evidence in support of the willingness of regional electorates, when federal bargaining is the focus of the national political process and partisan attachments are not formed, to view local politicians as strategic leaders in coordinating their national vote. We also are able to support a complementary hypothesis on Russian data, namely, that the federal level policies affects local electoral behavior as well. More specifically, it is found that regionally felt implications of nationally executed policy decisions in economic sphere systematically bias regional voting patterns. Thus, new electorates respond to the actions of both sides to the federal bargaining as a federal party system is forming.

References

Aranson, Peter H. 1995. "Federalism as Collective Action," paper presented at The Public Choice Society, Long Beach, March 1995.

Chandler, William M., 1987. "Federalism and Political Parties," in Bakvis and Chandler, eds. *Federalism and the Role of the State.* Toronto: University of Toronto Press.

Chandler, William M., 1986. "Challenges to Federalism: Comparative Themes," in Chandler and Christian W. Zollner, eds., *Challenges to Federalism: Policy Making in Canada and the Federal Republic of Germany.* Ontario: Institute of Intergovernmental Relations, Queens University.

Chen, Yan and Peter C. Ordeshook. 1994. "Constitutional Secession Clauses," *Constitutional Political Economy.*

Conradt, David P., 1986. *The German Polity.* New York: Longman.

Deutsch, Karl. 1961. "Social Mobilization and Political Development," *American Political Scinece Review* 55. 493-514.

Gibbins, Roger. 1982. *Regionalism: Territorial Politics in Canada and the United States.* Toronto: Butterworth and Co.

Johnston, Richard. 1980. "Federal and Provincial Voting," in D.J. Elkins and R. Simeon, eds. *Small Worlds: Provinces and Parties in Canadian Political Life,* Toronto: Methuen.

Huntington, Samuel. 1968. *Political Order in Changing Societies.* New Haven: Yale University Press.

Horowitz, Donald L. 1985. *Ethnic Groups in Conflict.* Berkeley: University of California Press.

Horowitz, Donald L. 1991. *A Democratic South Africa?* Berkeley: University of California Press.

Kramer, Larry. 1994. "Understanding Federalism," *Vanderbilt Law Review*, 47, 5, 1485-1561.

McCormick, Peter. 1989. "Provincial Party Systems, 1945-1986," in Alain G. Gagnon and A. Brian Tanguay, eds. *Canadian Parties In Transition*,

Musgrave, Richard. 1959. *The Theory of Public Finance.* New York. McGraw-Hill.

Oates, Wallace. 1972. *Fiscal Federalism.* New York. Harcourt Brace Jovanovich Inc.

Ordeshook, Peter C. 1995. "Reexamining Russia: Institutions and Incentives," *Journal of Democracy*, 6,2: 46-60.

Ordeshook, Peter C. and Olga Shvetsova. 1995. "If Madison and Hamilton Were Merely Lucky, What Hope Is The For Russian Federalism?" *Constitutional Political Economy.*

Ohseto, Shinji. 1997. "Strategy-Proof Mechanisms in Public Good Economies." *Mathematical Social Sciences* 33 157-183.

Polishchuk, Leonid, 1996. "Russian Federalism: Economic Reform and Political Behavior," mimeo, California Inst. of Technology, Humanities and Social Sciences.

Riker, William H. 1964. *Federalism: Origin, Operation, Significance.* Boston: Little Brown.

Riker, William H. 1975. "Federalism." In Fred Greenstein and Nelson Polsby *Handbook of Political Science vol.5: Governmental Institutions and Process.* Reading, MA: Addison-Wesley.

Riker, William H. and Jonathan Lemco. 1987. "The Relations Between Structure and Stability in Federal Governments," in W. Riker, ed., *The Development of American Federalism*, Norwell, Mass.: Kluwer.

Skalnik, Carol. 1997. *The Czech and Slovak Republics: Nation Versus State.* WestviewPress.

Tullock, Gordon. 1994. *The New Federalist.* Vancouver: The Fraser Institute.

Wallich, Christine I. ed. 1994. *Russia and the Challenges of Fiscal Federalism.* Washington, D.C.: World Bank.

Wright, Deil. 1982. *Understanding Intergovenment Relations.* Second Edition. Brooks/Cole.

Weaver, R. Kent.1992. "Political Institutions and Canada's Constitutional Crisis," in R. Kent Weaver (ed.) *The Collapse of Canada?* The Brookings Institution, Washington, D.C.

Tables:

Table 1.1 Federations that collapsed since the World War II

A. Dissolved federations		B. Federations turned unitary states	
Mali Federation with Senegal	1959-1960	Indonesia	1949-1950
United Arab Republic	1958-1961	Ethiopia	1952-1962
West Indian Federation	1958-1962	Burma	1948-1962
Central African Federation	1953-1963	Libya	1951-1963
Pakistan (with Bangladesh)	1947-1971	Malaysia (with Singapore)	1963-1965
USSR (1922)	1989-1991	Uganda	1962-1967
Yugoslavia (1946)	1989-1991	Congo	1960-1969
Czechoslovakia (1969)	1989-1992	Nigeria	1960-1970
		Nigeria	1970-1983
		Cameroon	1961-1972

Table 1.2 Existing federal countries formed before and after 1945 that survived longer than 8 years

Federations formed prior to 1945	Federations formed after 1945
Argentine	India
Australia	Pakistan
Austria	Malaysia
Brazil	Nigeria
Canada	
Germany	
Mexico	
Switzerland	
Venezuela	
United States	

CHAPTER 2. IDEOLOGICAL BALANCING IN FEDERAL AND SUB-NATIONAL ELECTIONS

In the first chapter we argued that different institutional forms of federal bargaining create specific policy and electoral incentives for politicians and voters. Here we specifically analyze electoral incentives for voters when federal bargaining takes place between different federal and sub-national offices. Our major premise, the validity of which we test on the case of Canada (and reconfirm for Germany) is that if voters take into account policy interactions between different governmental institutions, they may prefer to select different parties to control these institutions. Such incentives work toward the mutual independence of federal and provincial parties, especially in electoral arena and may lead to disintegrated party system in the federation, which, as Riker (1964) argued may be regarded as the main variable intervening between the social conditions and the specific nature of the federal bargain in a federal country.

The possibility of balancing federal policy through different elections was analyzed in details in the context of the US politics (Fiorina 1992; Alesina and Rosenthal 1989, 1995). According to the moderating elections hypothesis as applied to the US politics, the American electorate achieves moderate policy outcomes by dividing the control over different governmental offices - the presidency and Congress - between different parties. This balancing manifests itself in a well-recorded phenomenon of divided government and in the midterm vote losses for a presidential party. Indeed, presidential parties' vote shares

declined in all the 19 midterm elections since 1918. Fiorina (1992) suggests that moderate voters have incentives to cast split-ticket votes as a mean of creating divided government and achieving more moderate policy outcome. Alternatively, Jacobson (1990) argues that American voters use different criteria to select candidates for different offices. For example, according to Jacobson, Republicans are viewed by voters as doing a better job as executives controlling governmental spending, while Democrats are better legislators and protectors of particular district interests. Voters, according to Jacobson, would prefer to see Democrats sending benefits to their district while the same voters would support Republican executive restricting congressional spending activities across districts and reduce taxes. Erikson (1988, 1990) concludes after comparing different explanations for the midterm loss that the data suggest that voters punish the party in power, regardless of its performance. Midterm elections seem to be used by voters (whether consciously or not) to balance the powers of different national institutions in the U.S. (Erikson 1988, 1990, Fiorina 1992, Alesina and Rosenthal 1995).

As Alesina and Rosenthal (1995) assert when they develop a general formal theory of institutional balancing, the "balancing" connection between elections of different levels may not be unique to the US political process, but may be present in other democratic countries, especially in federations. Brady, Lohmann and Rivers (1997) analyze federal and Land elections in Germany, looking for evidence in support of the moderating elections hypothesis. They confirm that, similarly to midterm elections in the United States, federal

incumbent parties almost invariably lose support in German Lands during the periods between federal elections (see also Anderson and Ward 1995). Studies of by-elections in Britain, Canada, and Australia, while showing a certain negative relationship between parties' electoral success in the general and other types of elections, do not make any inferences regarding voters' intention to balance policy. They all share a view of midterm elections (in fact, of any additional elections occurring between the general elections) as "referenda" of sorts on the government performance (Cook and Ramsden 1973; Mughan 1986, 1988; Curtice and Payne 1991; Anderson and Ward 1995).

In a more general context, when students of European democracies look at electoral performance of incumbent parties in coalition governments, they find a tendency for the parties in government to lose votes. In 22.8 percent of analyzed cases, *all* parties that participated in governmental coalitions lost votes in subsequent elections. And this is despite the fact that in the postwar period 54.2 percent of European parties with the greatest electoral gains did not enter resulting government coalitions, which rules out a simple statistical explanation of the phenomenon of the vote loss by incumbents (Budge and Keman 1990).

In this essay we begin by testing the moderating elections hypothesis in application to Canada with the idea that provincial elections there play a role of 'balancing' national policy. In doing so, we compare provincial vote in federal elections with the outcomes of subsequent provincial elections in all Canadian provinces between 1949 and 1995. In order to account for the specifics of

Canadian institutional and party systems, we develop the model of federal electoral balancing parallel to the model of Alesina and Rosenthal (1995).

Canada is a particularly interesting and challenging case for testing the "balancing" theory, because long before the idea of policy balancing was advanced in application to American politics, Canadian political scientists not only introduced the concept of policy balancing, but attempted to test the proposition empirically and then rejected it. It was a Canadian political scientist who in the late 50's first explicitly articulated the idea of "balancing" elections as an explanation for a widely observed split-ticket phenomenon in Canada. Noting that while Liberals dominated the Canadian federal government for twenty years, their provincial control was limited to only two or three provinces, Underhill (1955, 1960) suggested that as if "by some instinctive sub-conscious mental process, the Canadian people have apparently decided that...they will balance one party dominance in Ottawa with effective opposition in the provincial capitals" (1955: pp. 39-40). Similarly, Wrong (1957) wrote that, "...many Canadian voters chose to counter the power of the national administration not by electing a strong federal opposition but by voting against the Liberal party in provincial elections." The balancing idea entered the conventional wisdom, with one prominent textbook observing that "[t]he records suggest at least that provincial electorates have shown a decided tendency to fall away from the party which gains control of the Dominion parliament" (Dawson, 1970, p. 486).

While the idea of balancing was intuitive and attractive on theoretical

grounds, it was eventually rejected by most Canadian political scientists as lacking empirical support. In perhaps the single most influential article on Canadian balancing, Scarrow (1961) rejected the hypothesis on empirical grounds. Scarrow's basic objection was that instances of split-ticket voting by provinces at the provincial versus federal level were no greater than split-ticket voting for governor versus the president at the U.S. state level.

Survey analyses did not reveal that voters actually intend to balance policy. For example, voters, when asked why they switch the vote in provincial elections, did not mention policy balancing considerations. Respondents who stated agreement with the notion of balancing theory were no less stable in their voting than objectors to it (Wilson and Hoffman 1970). And respondents rarely recalled instances when they followed balancing principles themselves (Perlin and Peppin 1971).[1] To Canadian observers the "so-called" balance theory had become a discredited idea. In our view, Canadian studies rejected the balancing theory too quickly and without adequately examining the available evidence. In our view, the best test for policy balancing hypothesis that can be done using aggregate electoral returns is to show that federal parties suffer additional electoral losses when they control the federal government. And our analysis reveals that Canadian electoral dynamics is consistent with such a

---

[1] Two explanations were suggested for why surveys fail to reveal individual level balancing dynamics. First, not all voters should have policy balancing intentions, but only those who are in the ideological center or between parties. Therefore, before any individual level analysis can be done, analysis should separate voters according to their ideological views. Second, as a rule, surveys are specially designed to reveal individual intentions to balances policy.

proposition.

The structure of this chapter is as follows. Section 2.1 briefly describes Canadian federal institutions, section 2.2 - the party system, and section 2.3 - the individual-level electoral facts consistent with the principal logic of the balancing model. Section 2.4 outlines the model and formulates the hypothesis. Section 2.5 contains data analysis. Section 2.6 replicates the analysis for the case of German elections. Section 2.7 is a conclusion.

2.1 "Executive Federalism" - Interaction Between Federal and Provincial Governments in Defining Policies

Customarily, most critical political decisions in Canada are reached through negotiations between federal and provincial executives, in which either the "first ministers" or federal and provincial ministers responsible for a particular policy area meet together to work out a policy change. These informal Canadian institutions of negotiation are broadly defined by the special term - "executive federalism" (Simeon 1972, Weaver 1992). Such executive interactions, although not mentioned anywhere in its constitutional documents, are described as the most important element of the country's institutional system. Canadian constitution can be viewed as a hybrid of the British and American constitutional traditions (Simeon 1993), in the sense that the Canadian constitution is both a written one, like the U.S. constitution, and an unwritten one, like British constitution. That unwritten provisions of Canadian Constitution are as significant as the written constitutional text, especially on

issues of federalism gives, it great flexibility: federal-provincial conferences where constitutional constraints on bargaining are loose can lead to major constitutional adjustments (Gibbins 1982). In fact, Smiley (1962) argues that the federal aspects of the Canadian constitution have come to be less what the Supreme Court says they are, than what the federal and provincial Cabinets and bureaucracies in a continuous series of formal and informal relations have determined them to be.

Moreover, it came to be widely recognized that the interests of provinces and localities in Canada are represented and protected not so much by the members of the federal Parliament or Senate, but through an ongoing interaction between federal and provincial ministers and impressive bureaucratic machinery.[2] The Canadian federal system - many argue - has developed in the direction of interstate federalism where regional and provincial interests are represented primarily by the governments of the constituent units, and because the intergovernmental conflict is extensive, it has to be resolved through intergovernmental negotiations and bargaining. Therefore, real policy questions are decided through interactions between federal and provincial governments. (By contrast, the U.S. can be characterized as an intrastate federation where national political institutions facilitate the representation of territorial and state interests directly at the national level. The Senate, the House of Representatives, and a popularly elected President all have sufficient

---

[2]By some accounts there were 67 federal-provincial administrative committees in 1957, 119 in 1967, nearly 500 in mid-1970s, and around 1000 in mid-80s (Smiley 1976, Kernaghan 1985, Warhurst 1987).

opportunities and electoral stimuli to be directly responsive to regional and local interests and the needs of particular constituencies).

It is not only through executive interaction that provincial governments can affect federal policy decisions. The provinces control enough resources to counteract federal policy at the implementation stage. Because provinces and municipalities control nearly two-thirds of all public expenditures in Canada and about eighty percent of all public capital investments, a determined province can exert a significant counter-influence on fiscal policy of the federal government and jointly with large agencies and public utility corporations can have a major impact on domestic capital market and - through foreign borrowing - on capital flow and exchange rates (Leslie 1987). Thus, Ontario provincial government counter influenced federal fiscal policy in 1970 and 1971. At that time, the federal government was seeking to offset inflation and was practicing a policy of fiscal restraint, with particular discretionary attention directed at the urban areas of Ontario. However, in the view of the Ontario government, unemployment was the more serious threat at the time, and a deliberate effort was made - through the 1970 and 1971 budgets - to stimulate the economy, particularly in the basic investment sector (Leslie 1987). On another occasion, in the 1980s, at the time when federal government was issuing direct grants to municipalities, the Quebec government was encouraging municipalities to rationalize their finances instead (Brown 1994).

While responsibilities of the two levels of government - federal and provincial are separated in certain policy areas and are shared in others, there

is a significant overlap in governmental programs. The Economic Council of Canada reported in 1979 that in few areas of policy-making could either federal or provincial government act in isolation. Brown (1994) finds a half to two-thirds of governmental activities falling into the areas of both federal and provincial involvement (Brown 1994). Within these overlapping activities the objectives of the two levels of government often differ. The history of policy objectives differences have been recorded in the fields of regional development strategy (in Quebec), petrochemical development, transportation policy, assistance to industry, labor market training, energy development, and environmental protection (Brown 1994).

In summary, not only are interactions between federal and provincial governments in Canada extremely important in determining policy outcomes, but to some degree they serve as the mechanism of checks and balances in the Canadian political institutional system. Both federal and provincial governments are important in defining the outcome.

2.2 The Party System of Canada

Historically, two parties have alternated in control over the federal government in Canada - the Federal Liberal Party and the Progressive Conservative Party. The Liberal party dominated in federal elections from 1896 until 1957, being in government for all but fifteen years of this period. The Liberals were dependent for this success on their electoral dominance in Quebec, which they managed to maintain through an informal process of

alternating francophone Quebecers and Anglophones from other provinces as party leaders and federal Prime-Ministers.

A minor presence in the political system is New Democratic Party formed in 1961 as a direct from the Cooperative Commonwealth Federation (CCF), a socialist orientation party which goes back into the 1930s. The CCF/NDP has generally contested seats across the nation, in most if not all provinces. In 1974, for the first time it contested every seat, just as did the Liberals and the Progressive Conservatives. Another minor Canadian party, the Social Credit, on the other hand, generally confined itself to contesting a limited number of seats - principally in the West, and later in Quebec. Following the decline of its support in Quebec, this party virtually disappeared in 1984, elections receiving only 0.1 percent of the popular vote (Feigert 1989). The Reform Party of Canada was established in the Fall of 1987 as a political tool to represent the interests of Western Canada. Despite its impressive electoral success in the 1993 federal election, the Reform Party so far has failed to establish strong positions in non-western provinces.

Most scholars of Canadian political process agree, that with some degree of oversimplification, Canadian parties can be placed on a one-dimensional left-right ideological continuum, with the NDP on the far left, the Liberals to the right, and the Conservatives to the right of the Liberals (Elkins 1980). In order to place them ideologically, scholars compared Canadian parties based on their platforms (Irvine 1987), record of activities and advocated policies (Richard and Robert 1980), opinions and values of party

activists (Goldfarb and Axworthy 1988, Archer and Whitehorn 1990, Blake 1988, Nadeau and Blais 1990). Thus Blake (1988) uses surveys to examine ideological differences between the delegates to the federal Liberal and Progressive Conservative leadership conventions. He finds that on average activists of the two parties held significantly different opinions on most matters of policy. Of course, there was some overlap in opinions, due to the variation in each party. Archer and Whitehorn (1990) show a considerable division between Canadian political parties in the expressed attitudes of their activist convention delegates on major issues. These divisions persist across policy areas. On most issues, New Democrat activists clearly are on the ideological left, Progressive Conservatives on the ideological right while the Liberal party delegates tend to locate themselves in the ideological center.

In provincial elections, almost in every Canadian province two major political parties each regularly and routinely received 30 percent or more of the vote (McCormick 1989). The only exceptions were Alberta, where politics traditionally was dominated by one party, and Ontario, where three parties, the Liberals, the Conservatives and the NDP, were relatively strong. Since the 1940s the Liberals were present in all provincial elections and were a major political party in seven or eight provinces (McCormick 1989).[3] The Conservatives were relatively successful in five provinces in the 1940s and in eight provinces by the 1980s. The conservative party was not present in

[3]In 1990s the Liberal party obtained more then 20 percent of the vote in all provincial elections.

Quebec since the 1930s. There it cooperated with the Union Nationale, which in the 1980s was replaced by Parti Quebecois. The NDP was successful in provincial elections in British Columbia and Manitoba. Social Credit was a major provincial party in Alberta and British Columbia.

Parties with the identical names in federations may advocate different policies nationally and locally. Nevertheless, in the case of Canada such federal-provincial differences mostly restricted to specific policy disputes, but the left-right ideological differences have not usually assumed a federal provincial dimension neither for the Conservatives nor the Liberals. In particular, it had been observed that both levels of the Liberal party have occupied a fairly centrist ideological position (Dyck 1991).[4] Overall, there are no indications that policy stands of the federal parties and their provincial counterparts are significantly different, or that Canadian voters can identify such differences.

2.3 Canadian Voting Behavior

Following the original Michigan social-psychological model of electoral behavior, numerous studies have assessed the strength of party identification in the Canadian electorate. Most of these studies found little evidence of existence of stable party identification (Gidengil 1992). This concept seems to

---

[4]At the same time due in part to policy disagreements, Ontario and Alberta Liberals set up separate provincial organizations. The Liberal party offers separate federal and provincial party memberships in Quebec, Ontario and Alberta.

be much less useful in the Canadian context than it is in the American. One reason for it could be that Americans at the polls face a complex multi-tiered ballot, and voters who use their party identification as an information shortcut can greatly simplify their task of voting. For Canadians, whose ballot is restricted to the choices for one office at one level of government, electoral task is much easier. Separate federal and provincial ballots combined with the practice of elections always separated in time make one's party affiliation less useful (Gibbins 1982). Thirty-five percent of electorate did not identify themselves with a party (Johnston et *al.* 1992). Thus Canadian voters display relatively high levels of volatility in their voting choice, which would correspond to low levels of party identification. Up to 41 percent of respondents have changed their party identification during the panel study of 1974-80 (LeDuc, Clark, Jenson and Pammett 1984a). According to the 1974 Canadian federal election study, around 18 percent of party identifiers had split their identification in federal and provincial politics - a figure that ranges from a low of 4 percent in Prince Edward Island to 35 percent in British Columbia. Overall, more than 60 percent of respondents were either weak in the intensity of their partisanship, unstable in their partisanship over time, or inconsistent between the federal and provincial elections (LeDuc, Clark, Jenson and Pammett 1980, Blake 1982, 1985). The 1979-1980 election study found that only 61 percent of respondents during this short period of time maintained the same party identification with respect to both federal and provincial levels of government (Clark and Stewart 1987). For example, in the 1979 federal and provincial elections in British

Columbia, 65 percent of voters made different partisan choices, even though the campaigns were concurrent and the elections were held only 12 days apart (Blake 1985). Different patterns of voting in federal and provincial elections may be viewed as a well documented peculiar feature of Canadian federalism (Blake 1982; Stevenson 1987; Uslaner 1990).

The degree of partisan volatility between provincial and federal elections in Canada requires explanation. Consistent with observations about Canadian politics from the past (Underhill 1955, 1960; Wrong 1957; Muller 1968, Dawson 1970), we propose a simple spatial model of "balancing" elections that demonstrates that it is rational for some voters to support different parties federally and provincially, and then we test our model with electoral data from the period 1949-1996.

2.4 Model of "Balancing" Elections

The model of institutional balancing has been developed in application to American politics to explain the midterm vote-loss effect (Alesina and Rosenthal 1995; Fiorina 1992). We want to use a parallel approach to explain the Canadian data. However, there are institutional differences between the US, for which the balancing model was originally designed, and Canada - differences, that require the reformulation of the model before we can proceed with the analysis. Due to the parliamentary mode of government at both levels and the widespread practices of the joint executive decision-making, in the Canadian case we do not have the two branches of the national government interacting

over policies. Instead, we observe the interaction between governments of different levels - federal and provincial, but within the same executive branch.

Two implications for the model follow from this fact. First, the elections to both interacting institutions are essentially single-member district contests between parties for the right to nominate the government, with the policy stand of each resulting government corresponding to the platform of the winning party. Second, because these are governments of different orders, and due to the rules operating in the Canadian national and provincial elections, the elections of two types are never concurrent, and the institutional counterpart of a government currently being elected is always fixed. For example, when selecting provincial government, voters always know which party controls the federal government. While in the American case the governmental overlap occurs only during the midterm elections, but not in the presidential years.

When reformulating the model, we are looking at voters in a hypothetical province voting sequentially in federal and provincial elections. Each election results in formation of a government at a corresponding level, which is completely characterized by the policy platform of the party that wins elections and thus controls the cabinet formation. In other words, unlike in Alesina and Rosenthal (1995) where in a moderating congressional election it is the proportion in which the vote is divided that determines the policy position of the legislature, in the Canadian case of the two-tier parliamentary government we deal with two winner-takes-all elections, analytically equivalent to two

presidential posts being filled. Moreover, provincial voters know that, once elected, strongly partisan governments of the two orders will then interact to form federal policy (or, at least, the version of the federal policy that this province's population will get to experience). That is, the provincial government will be able to negotiate specific concessions for itself, as well as to affect the development of the federal legislation of general nature in the direction of its policy preference.

Following standard assumptions of spatial models of elections, we assume that in a policy space voters vote for policies nearest their ideal points. Voters' ideal points are distributed continuously. Two parties compete in both national and provincial elections and choose distinctive positions. (More restrictions are required for the case of three party competition which we consider in the Appendix.)

The crucial assumption is that policy in the way it affects the province is determined as a linear combination of the platforms of the two governments, with the provincial winner's policy ideal entering with a weight of α, where for simplicity α is restricted to $0 < \alpha < 0.5$. In other words, we assume that the federal government has greater impact on a resulting policy than the provincial government.

Notice that if we take the possibility of balancing into account, the actual choice becomes from among four possible policy outcomes (two in each election). In a schematic unidimentional policy world, given that we restricted parameter α to be less than one-half, and if the Liberals are to the left of the

Conservatives, policy outcomes appear from left to right in the following order:

- the left-most policy $L_f L_p$ is the outcome when the Liberals control both federal and provincial governments,
- more moderate policies, $L_f C_p$ and $C_f L_p$, are the outcomes when the government is divided between the Liberals and the Conservatives, and
- the right-most policy $C_f C_p$ is the outcome corresponding to the conservative control of both levels of government.

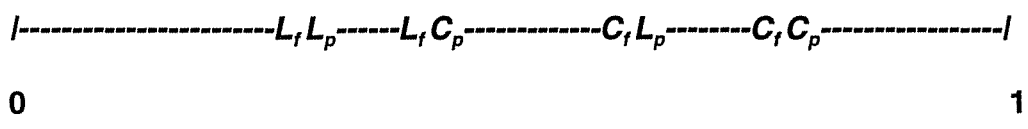

Figure 2.1. Policies resulting from different partisan combinations of national and provincial governments

Midpoints between the four policies are the cutpoints, separating the liberal and conservative voters in different elections (except for the pairs $L_f C_p$ and $C_f L_p$, and $L_f L_p$ and $C_f C_p$ – there is no election where the choice is between those outcomes). For example, the vote for the Liberals in provincial elections when the Conservatives control the federal government is to the left of $(C_f L_p + C_f C_p)/2$, because these voters prefer the divided government while voters to the right prefer the unified conservative control.

The other cutpoints are

$(L_f C_p + C_f C_p)/2$ - in federal elections when C is in power in the province;

$(L_f L_p + C_f L_p)/2$ - same, when L is in power in the province, and

$(L_f L_p + L_f C_p)/2$ - provincial election when L is in power nationally.

Given the assumption that $0 < \alpha < 1/2$, the cutpoint $(C_f L_p + C_f C_p)/2$ is always to the right of $(L_f C_p + C_f C_p)/2$ (because $C_f L_p$ is to the right of this cutpoint), and cutpoint $(L_f L_p + C_f L_p)/2$ is to the right of $(L_f L_p + L_f C_p)/2$.

$$(L_f C_p + C_f C_p)/2 > (L_f L_p + C_f L_p)/2,$$

$$(L_f L_p + C_f L_p)/2 > (L_f L_p + L_f C_p)/2.$$

Assuming that voters' preferences within the province are fixed, but that the outcome of the federal election is decided by other provinces, this simple model leads us to conclude that in a province:

$$F(\frac{C_f L_p + C_f C_p}{2}) > F(\frac{L_f C_p + C_f C_p}{2}) > F(\frac{L_f L_p + C_f L_p}{2}) > F(\frac{L_f L_p + L_f C_p}{2})$$

, i.e.,

1) Liberal vote is the highest in provincial elections under Conservative federal government.

2) The next highest is Liberal vote in federal elections under Conservative provincial government.

3) The one after that is Liberal vote in federal elections, when they also control the province.

4) And Liberal vote is the lowest in provincial elections under Liberal federal government.

These observations hold true for any continuous distribution of voters preferences, including the case of the multi-dimensional issue space as long as voters' preferences over issues are separable.

To illustrate the argument, consider the following interpretation. Suppose that the Liberal party is the federal incumbent. In the next provincial election voters have a choice - to let the Liberals control both levels of government or to 'balance' the Liberals by giving the Conservatives control over the provincial government. In fact, the balancing effect is equivalent to an electoral competition where an incumbent party's position is fixed, but another party can move closer to it in provincial competition. When the Liberals control the federal government, provincial Conservatives offer voters a relatively more moderate and attractive policy of a divided government. And only those who prefer to have the Liberals at both levels would vote for them provincially. Similarly, when the Conservatives control the federal government, more voters are ready to vote for the Liberals in provincial elections in order to balance federal Conservative policy. Balancing may take place over all policy issues where the Liberals and the Conservatives disagree and where federal-provincial

interactions exist. As we noted before, in the Canadian case, such interactions take a form of negotiations between federal and provincial executives.

Notice that, according to our model, the decline in the Liberal vote in provincial elections does not lead to additional losses in the following federal election. Also the model does not predict that the policy balancing would lead to split partisan control of the two orders of government. It merely predicts that federal incumbent party would be relatively less successful in provincial elections. In particular, based on the model, we expect to find that vote for the national incumbent in the provincial election is lower when the party controls the federal government, but though a federal incumbent loses votes provincially, it regains its support in the next federal election.

2.5 Estimating the Effect of Party Control

Our primary data come from *Canada Votes* (Scarrow 1962) and *Canada Votes: 1935-1988* (Feigert 1989), as well as from various editions of *Politics: Canada*. We take electoral statistics for ten Canadian provinces between 1949 and 1995. During this period, 15 federal and 127 provincial elections were held. For testing the hypothesis, we identify those provincial elections that follow a federal election (fall in between the two federal elections). As a result, our data set includes 127 observations - from 12 to 14 observations per province.

Between 1949 and 1996 two parties controlled the federal government in Canada - the Liberal Party and the Conservative Party. There was also one minor federal party - the New Democratic Party which ran candidates in all

districts since 1971. Another minor Canadian party, - the Social Credit, on the other hand, generally confined itself to contesting limited number of seats - principally in the West, and later in Quebec. The Reform Party of Canada was established in the Fall of 1987 as a political tool to represent the interests of Western Canada. Despite its impressive electoral success the Reform Party so far has failed to establish strong positions in non-western provinces. Depending on the treatment of minor parties, the Canadian federal party system had been characterized as a two party system, a three party system, or as a two major and two minor parties system.

In provincial elections between 1949 and 1996, in almost every Canadian province two main provincial political parties each regularly and routinely received 30 percent or more of the vote (McCormick 1989). The only exceptions were Alberta, where politics traditionally was dominated by one party, and Ontario, where three parties - the Liberals, the Conservatives and the NDP were relatively strong. Since the 1940s the Liberals were present in all provincial elections and were a major political party in seven or eight provinces (McCormick 1989).[5] The Conservatives were relatively successful in five provinces in the 1940s and in eight provinces by the 1980s. The conservative party was not present in Quebec since the 1930s. There it cooperated with the Union Nationale, which in the 1980s was replaced by Parti Québécois. The NDP was the most successful in provincial elections in British Columbia and

[5]In the 1990s the Liberal party obtained more then 20 percent of the vote in all provincial elections.

Manitoba. Social Credit was a major provincial party in Alberta and British Columbia.

Our main dependent variable is the vote for the Liberals in provincial elections. We want to show that the Liberal vote in provincial elections declines when the party controls the federal government. We repeat the analysis for the Conservative party versus the "left" block of parties in which we include the New Democratic Party and the Liberals. If we show electoral losses in provincial elections for the Liberal federal incumbent, we should also be able to identify another party or a group of parties which gain votes at the Liberals expense.

There are several reasons to start with the vote gains and losses of the Liberals. Out of the 17 federal elections that we include, the Liberals have won or were able to form the government in all but 6 (those of 1957, 1958, 1962, 1979, 1984 and 1988). Of these the Progressive Conservative Party formed majority governments only three times.

It is important to remember that when a challenger party replaces the federal incumbent, its popularity among voters must be increased. In fact, we estimate that between 1949-1993 when the Liberals controlled the federal government in provinces their vote in federal elections was higher on average by 5.5 points, compared to the results of previous federal elections. When the Liberals controlled the federal government for more then one consecutive period, their vote in federal elections continued to increase compared to the previous federal election (which they won) on average by 3 points. On the other hand, when the Conservatives won federal elections they gained on average

almost 7 points compared with the previous federal election. In general, the increase in popularity at the federal level should correspond to a greater vote for the federal incumbent in provincial election. However, according to our argument, the balancing effect should be reducing the federal incumbent's vote in provincial elections even as its federal vote continues to increase. All other things equal, the smaller the increase in the popularity of the federal incumbent the greater impact of balancing forces we should observe. It will be easier to identify this effect if we use data on the vote dynamics of a long-term federal incumbent.

Second, the Liberal Party seems to be better represented in provinces and have provincial counterparts in all of them, although it is weak in Alberta and British Columbia. Notably, the Liberal Party support both in federal and provincial elections was distributed quite unevenly in time as well as across provinces, even when the Liberal Party dominated federal Canadian politics. The difference between a provincial vote for the Liberal Party in federal and subsequent provincial elections was also very unstable. Significant variation in the vote, both across elections and across provinces, is essential for testing our hypothesis. For example, If the support of a party was stable in provincial elections, and fluctuated in federal elections, then its success in federal elections must be trivially followed by the greater decline of electoral support (in fact, by a return to its normal stable level) in provincial elections.

There are several ways to estimate the effects of the federal incumbency on the provincial vote. One way is to regress the provincial vote on the prior

federal vote in the province, plus a dummy variable for federal party control. An additional test is regress the provincial vote on the prior provincial vote while controlling for the federal incumbency. Alternatively, we can define a new dependent variable (the Liberal "vote gain") as the difference between the earlier and later provincial vote and compare the vote changes under the Liberal and Conservative federal control.

We start with the analysis of the direction of changes in the provincial vote. Two outcomes are consistent with our argument. The party can loose votes provincially when it controls the federal government or gain provincially in the periods when it fails to win federally. It turns out, that the Liberal party lost votes when in power federally or gained provincial votes when federally out of power between two subsequent provincial elections in 80 cases. Changes between 47 provincial elections are inconsistent with the hypothesis. In the eastern provinces there are 33 correctly and 18 incorrectly predicted cases, in the western provinces there are 38 correctly and 26 incorrectly predicted cases, and in Quebec - 8 and 4 cases.

However, simply counting the conforming cases says nothing about the magnitude of the provincial losses during the federal incumbency. Therefore, in the next step we compare the actual vote differences between provincial elections and federal elections, as well as between the subsequent provincial elections in the two states of the worlds -- when the Liberals controlled the federal government and when they were out of power. Table 2.1 shows that when we regress these differences on the dummy variable indicating the

periods of Liberal federal incumbency the estimated sign of the coefficient at the dummy variable is negative (as predicted) for *all* provinces, but estimates are not always statistically significant. Pooling all provincial data we record statistically significant losses both in the pooled sample and in the subsample of eastern and western provinces (see Table 2.1).

2.5.1 Provincial to Federal Elections

In our next test we define the dependent variable as the percent of voters supporting the Liberal Party in province *i* during a provincial election at time *t*. The support of the Liberal Party in provincial elections varied between 0.5 percent and 66.3 percent across provinces and time. The first independent variable is the percent of voter supporting the Liberal Party in the same province during the preceding federal election. The range of this variable is between 12.7 and 71.9 percent.

Figure 2.2 plots a regression line for the results of provincial elections and previous federal elections. The figure highlights the fact that when the Conservatives controlled the federal government, in most cases in the next provincial election the Liberals received higher support then the regression line would predict (these elections are indicated by squares). At the same time, when the Liberals controlled the federal government, they often did worse in the provinces then the regression prediction. To account for this effect, we include in our analysis the second independent variable - a dummy variable indicating periods of Liberal Government in Ottawa.

According to our hypothesis, if we assume that the Liberal vote share in provincial elections is positively correlated with the Liberal vote in the same province in federal elections but declines at the time of the Liberal Government, our statistical specification should be:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}, \quad (1)$$

where:

Y_{it} - province *I*'s votes for the Liberal Party during the provincial elections at time *t.*

X_{1it-1} - province *I*'s votes for the Liberal Party during previous federal elections (*t -1*)

X_{2it} - a dummy variable equal one during the periods of the Liberal majority government and zero otherwise.

Several statistical methods are designed to deal with cross section and time series data (Hsiao 1986). The first step in all of them is to estimate a simple OLS model. OLS estimates for pooled data are reported in Table 2.3. Both b_1 and b_2 coefficients are statistically significant at 0.01 levels. If we had no suspicion that some OLS assumptions may not hold in our data, this test would allow us to sustain the hypothesis that when in power, the party's vote in provincial elections declines. According to the pooled OLS estimates, when the Liberals were a federal majority governments, their losses in provinces amounted to 12.6 percentage points of the vote.

In order to account for the time-series cross-sectional nature of the data in our sample and the influence of province specific factors (possibly captured

by the error term), we also apply the fixed effect method (Hsiao 1986). Our model then takes the form:

$$Y_{it} = \beta_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}, \qquad (2)$$

where β_i 's are intercepts, different for each province *I*.

Again, we find that the party in government suffers electoral losses in subsequent provincial election. Predictably, the losses estimated by the fixed effect method are lower than the OLS estimate - 6.8 percentage points (see Table 2.3).

To avoid yet another problem potentially present in the time-series cross-sectional data, namely, a possibility of province-specific variance component,[6] consider again the specification (1), but now, instead of assuming that β_0 is fixed for all provinces, assume that they are independent random variables with a mean β_0 and variance σ^2_μ.

Our initial model is now transformed into

$$y_{it} = \beta_0 + \beta_1 x_{1it} + \beta_2 x_{2it} + (\mu_i + \varepsilon_{it}), \qquad (3)$$

where β_0 is a common intercept for all observations and μ_i's are "random" intercepts for each cross-sectional group of observations.[7]

Notice that this model is unbalanced in the sense that there are N cross-sectional units observed over varying periods T_i for $I = 1, \ldots N$. The time-

---

[6] Breusch-Pagan test shows that provincial differences in variances in our data are highly statistically significant.

[7] It is easy to show, that the variance-covariance matrix in (3) is not a scalar-identity type, therefore, the assumptions of the OLS model are violated, and OLS is not an efficient estimator. Instead, we must use the Generalized Least Squares estimator, which takes into account the form of variance-covariance matrices *V* and Φ (*V* is a diagonal element of Φ): $\beta = (X'(\Phi^{-1}X)^{-1}X'\Phi^{-1}y$.

series for the ten provinces contain between 12 and 14 observations. Baltagi and Chang (1991) provide a comprehensive review of different ways to estimate the random effect unbalanced model. We use the estimator suggested in Searle (1971).

As Table 2.3 shows, the random effect model also supports our hypothesis that when in power nationally, the Liberal party suffers electoral losses in provincial elections. Based on the unbalanced random effect model, we estimate that the Liberal Party loses 8.6 percentage points of electoral support in provinces when it controls the federal government.

As Table 2.3 reports, all three statistical methods - OLS, fixed effect and unbalanced random effect - produce quite similar results and support our hypothesis that Canadian provincial elections perform a function of neutralizing the national incumbent. The Liberal Party suffers greater electoral losses provincial elections when it also controls the federal government.

2.5.2 Provincial to Provincial Elections

So far our evidence is that with the latest provincial vote in federal elections held constant, a national victory for the Liberals predicts a major loss of about 7-12 points in the next provincial election. This loss, however, represents the change from the federal election to the next provincial election. It is not difficult to believe that the size of this loss exaggerates the actual penalty for being the party in power in Ottawa. If the federal outcome is an abnormally

sized Liberal victory or defeat, then the following provincial outcome may partially reflect a return to "normal," or ordinary regression to the mean. We need to sort out the actual penalty for federal control from the typical ebb and flow of partisan change.

Toward this end we report a second analysis, where again the provincial vote for the Liberal party is the dependent variable. The independent variables are the Liberals' percent of the vote in the prior provincial election, plus the usual dummy for federal control. The specification becomes:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}, \quad (1a)$$

where:

Y_{it} - province *I*'s votes for the Liberal Party during the provincial elections at time *t.*

X_{1it-1} - province *I*'s vote for the Liberal Party during previous provincial election (*t-I*)

X_{2it} - a dummy variable equal one during the periods of the Liberal majority government and zero otherwise.

We expect coefficient β_2 to be negative, which would correspond to the decline of the Liberal Party support between two consecutive provincial elections during the time when it controls the federal government. Before we proceed with cross-section time-series analysis, in order to ensure that data demonstrate consistent patterns, we estimate equation (1a) for every province separately. Statistical analysis conducted separately for each province has an obvious limitation due to the low number of available observations.

Nevertheless, for all provinces the sign of coefficients β_2 at the dummy variable (which indicates the periods of Liberal majority) is negative, as predicted though estimates are not always statistically significant (see Table 2.4).

As before, when pooling data across provinces we apply three statistical models - OLS, fixed effect and unbalanced random effect. All methods produce similar and statistically significant results supporting the balancing hypothesis. In the periods of Liberal government the Liberal Party's support declines between consecutive provincial elections by more than 4 percentage points. The findings for OLS, fixed effects, and "unbalanced random effects" are shown in Table 2.5.

Our estimate of the size of the balancing effect has declined some, as our test has changed from the federal-to-provincial vote shift to the provincial-to-provincial vote shift. We observe that the Liberals gain about 4 to 5 percentage points more provincially when the Conservatives control the government in Ottawa. Unlike the equation with the federal vote on the right-hand side, the new results are well-buttressed against the possibility of regression to the mean. Because the provincial vote and the lagged provincial vote straddle the federal contest, each is equally likely to reflect the normal voting pattern of the province.

2.5.3 Changes Over Time

In the next test, we evaluate the hypothesis that the magnitude of electoral losses for the federal incumbent was changing over time. The

standard method is to assume that the relationship between the dependent and independent variables changed after the certain period of time and to perform the test of structural changes. In our case, we divide observations into two more or less equal subsamples- before and after the 1974 federal elections. To perform the test we rerun our analysis for the Liberal party with two subsets of independent variables - one for 1949-1974 and another subset for 1974-1996. The standard F-test was used to estimate structural change. For models 1, 2, 3, 1a, 2a and 3a we cannot reject the hypothesis that coefficients on independent variables are the same in the two periods.

2.5.4 Liberal Vote Gain by Party Control

The clearest and simplest demonstration of a party-in-power effect is to regress the mean vote change on the winning-federal-party dummy alone. Table 2.6 presents some findings. As column 1 shows, a Liberal federal victory implies a relative 5.0 percentage points decline in the Liberal vote from the provincial contest immediately before the federal election to the provincial contest immediately after. This repeats our central finding that being the ruling party means further electoral suffering at the provincial level.

Column 2 shows an exaggerated 12.9 point loss to the federal winner from the federal contest to the provincial contest. To highlight the exaggerated nature of this federal to provincial loss, column 3 shows that the winning federal party gains 6.9 points from the prior provincial vote to the federal contest. Winning federally means generally gaining over the previous provincial vote.

But the gain is not as great as the subsequent loss. The difference between the 12.9 loss and the 6.9 gain of course approximates the 5.0 coefficient from column 1 - the estimated effect of the federal outcome on the provincial vote before-after change.

Again, we must ask: is this really evidence of "balancing?" One rival hypothesis is that in general - not just in provincial elections - being the governing party is a negative political baggage. By this rival notion, to govern is to increase the prospect of losing the next election, whether provincial or federal. If so, we would see a pattern whereby the Liberals' national vote in federal elections would be a negative function of being in power. But interestingly, the national vote in Canadian federal elections is not statistically related to either the prior federal vote or (dichotomously) whether the party currently controls the Ottawa government. And, though not statistically significant, the party-in-power dummy actually predicts the province's next federal vote with a positive sign when the latest provincial parliamentary vote is controlled.

To see this, return to Table 2.6, and observe column 4. For the equation of this column, the dependent variable again is the Liberal vote gain from the provincial to the next federal election. This time, unlike for column 3, the dummy variable reflects party control during the run-up to the federal election, not the federal election winner. Although not statistical ly significant, the party-in-power dummy actually predicts the province's next federal vote with a positive sign. The coefficient indicates Liberal control means a three point

Liberal gain. In other words, the previous provincial outcome underestimates the governing party's vote strength in the next federal election.

Thus, the political decline that the federal governing party suffers in the provinces is limited to the provincial contests alone. This is similar to the U.S. case where midterm loss for the presidential party does not translate into political trouble at the next presidential election. The argument is not that the ruling party is punished for its governance (that depends), but that the ruling party is punished specifically in the provincial elections.

2.5.5 The Time-Series of Party Control

We have estimated the effect of the intervening federal outcome on the provincial vote for the provincial parliament. One intuition is that we should see an effect not only of the federal outcome but also a special effect of change in the federal outcome -- from Conservative to Liberal and back again. Over the time period covered by the data there have been only six switches of federal power, one lasting but one year. If we restrict our attention to just these cases by our usual methodologies, the signs of the effects remain the same but the magnitudes decline slightly and the coefficients fall short of statistical significance.

One naive model is that provincial electorates give the "in" party a single punishment shock upon assuming power that continues until it loses power in Ottawa. Our evidence supports a different model. Once in control in Ottawa, a party begins a progressive decline in its provincial fortunes. This decline

continues even as the party wins successive federal elections. The party's provincial decline is reversed only when it loses control of Parliament in Ottawa, and a resurgence begins.

To see this, we performed an interrupted time-series design on the provincial vote, 1949-1996. First, we residualized provincial vote outcomes by regressing them upon province dummies and taking the residuals as deviations from the provincial means. We regressed these residuals on the time in years, plus the number of years (starting with 1957) of cumulative Conservative control. The regression is:

Residual Lib. Vote = 7.43 -0.98(T) + 2.53(CT) + e

(t) (7.49) (6.83)

N= 127; Adj. R squared = 0.301; S.E.E. = 7.48

where T is years since 1949 and CT is cumulative years of Conservative control.

The negative coefficient for time indicates that when the Liberals control Ottawa, the provincial vote declines over time. The positive (and highly significant) coefficient for conservative control indicates that for every additional year of conservative control, the Liberal vote improves over the baseline decline under Liberal control. The positive coefficient for conservative control is higher in absolute magnitude than the negative coefficient for time. The positive differential indicates that the Liberals gain provincially during episodes of Conservative control.

The see-saw line in Figure 2.3 reflects the prediction from the equation

predicting the residual vote from time and cumulative control. Each switch in control reverses the direction of the provincial trend. Most recently, the 1993 Liberal victory has been followed by declining Liberal fortunes.

2.5.6 Who Gains Votes?

The next step in our analysis is to identify parties which relatively gain in provincial elections when the Liberal party controlled the federal government. By polling data for all provinces we estimate that during periods of the Liberal federal incumbency the Conservative party on average gains between 6.6 and 3.4 percentage points (with t-statistics 2.7 and 2.2), controlling correspondently for the results previous of federal and provincial elections and including provincial dummy variables. However, the polled analysis conceals significant differences between different regions of Canada. For the western provinces alone the conservative gains are estimated to be lower and statistically insignificant - the federal control dummy variable coefficients are only 4.6 and 1.9 (with t-statistics 1.3 and 0.8). On the other hand, in the eastern provinces the two models estimate the conservative party gains being between 7.4 and 5.8 points (with t-statistics equal to 3.0 and 2.9). Recall, that for Quebec alone, based on 12 observations we found electoral losses of the Liberal party are between 7.6 and 8.9 points and statistically significant. However, the Conservative party did not directly compete in Quebec provincial elections until the 60s, but instead cooperated with Quebec based party Union Nationale. Moreover, in the 70s the electoral fortune of the Conservative party in Quebec

provincial elections sharply declined with the success of Parti Québécois. Counting vote for Union Nationale as the vote for the Conservatives, we estimated their gains to be statistically insignificant. However, we also found that between 1970-1993 in provincial elections Parti Québécois gained extra 8.8 points compared with the results of the previous elections in the periods of the Liberal federal control (with t-statistic equal to 2.2).

We also found that in the east provinces the New Democratic Party suffered certain electoral losses (3.1 and 2.8 points) compared with the previous federal and previous provincial elections during the periods of the Liberal Party federal incumbency (t statistics equal to -3.1 and -2.7 correspondently). The New Democratic Party also suffered certain losses in Ontario, but its estimator is not statistically significant. These observations suggest that two parties - the Liberal party and the New Democratic Party jointly suffer electoral losses in provincial elections during periods of the Liberal federal incumbency. In other words, the two national parties on the left from the center could suffer losses in provincial elections to parties on the right from the center when the Liberal party controlled the federal government. In order to test for such a possibility we, estimate equation (1a) for the combined vote for the Liberal Party and the New Democratic Party and found that coefficient of the dummy variable is negative for all provinces, but Manitoba. More specifically, the magnitude of the losses is estimated to be 6.4 points (t=-1.8) for Newfoundland, 2.5 points (t=-0.7) for P.E.I., 4.2 points (t=-1.1) for Nova Scotia, 8.9 points (t=-2.4) for New Brunswick, 9.6 points (t=-2.9) for Quebec, 8.9 points

(t=-2.5) for Ontario, 1.5 points of gains (t=0.7) for Manitoba, 5.1 points (t=-0.4) for Saskatchewan, 9 points (t=-1.1) for Alberta and 11 points (t=-2.1) for British Columbia. When we polled data for eastern and western provinces separately, we found no differences between two regions: dummy variable coefficients are - 5.0 (t=-2.8) for the eastern provinces and -5.2 (t=-2.1) for the western provinces (controlling for the fixed effects). And when we polled all provinces together, controlling for the fixed effects, we obtained the estimate of the dummy variable coefficient -5.1 (t=3.5)[8].

2.6 The Case of Germany

In the following section we apply the approach used above in application to the case of Canada to compare the results of German federal and *Länder*[9] elections. The fact of electoral losses in Land elections has been well documented by German scholars (Dinkel 1977; Fabritius 1978, for review of these studies in English see Gabriel 1989). According to the German scholars, "elections in the Länder serve increasingly as 'midterm' elections in national politics" (Gabriel 1989). It has been argued that all major transfers of power at the national level since 1949 have in fact been anticipated by developments in land-level politics (Conradt 1993). Political parties and media treat Länder

---

[8]As before, the first model - the comparison with the results of the previous federal elections - produces higher estimates of the losses for the two parties, with no apparent geographical pattern. When run for each province separately, the coefficient of the dummy variable is negative for all provinces, but Saskatchewan.

[9]A German state is called a *Land*; the plural form is *Länder.*

elections as if they are very important by-elections for the federal parliament (Scharpf 1995). For example, the resignation of Willy Brandt in 1974 was related to poor SPD showings in Länder elections after 1972. The collapse of the Schmidt government in 1982 was preceded by losses in Länder elections. Conradt (1993) suggested that the volatility of party support in Länder elections is largely the result of campaign strategies adopted by parties, which have increasingly used Länder polls as tests of current support for national policies.

Recently, Lohmann, Brady and Rivers (1997) compared several alternative hypothesis explaining the Land elections vote decline (party identification, retrospective voting, and moderating elections), and their study found that the data on federal and provincial elections between 1960 and 1989 are consistent with all three alternatives. Below we analyze federal and Land electoral results between 1949 and 1994 by the same techniques that we used to analyze the Canadian data, in order to compare German electoral dynamics with the results obtained with regard to Canadian elections.

The German federal system is traditionally described as an example of intrastate, cooperative, and consensual federal policy interactions and implementations. While nominally *Länder*[10] possess only limited jurisdictions in sphere of law and order, local government and cultural affairs, they are responsible for and effectively control the implementation in broad areas of federal policy ("joint tasks") on their territory. In other words, the German federal system concentrates legislative powers in the hands of the federal offices,

[10] There were 11 Länder until unification and 16 after.

leaving most administration and implementation functions to the Länder.

While the first chamber of the federal parliament, the Bundestag, is directly elected in nation-wide elections, the composition of Bundesrat, the federal chamber of the parliament is not directly elected but controlled by the Länder governments.[11] Bundesrat has a veto power over legislation that affects the Länder.[12] The Länder also play important role in elections of the president of the Federal Republic and in selecting the members of the federal constitutional court. In effect, national policy in Germany does require the simultaneous agreement of both a parliamentary majority supporting the federal government and a majority of votes of state governments (Scharpf 1995).[13] The national government must promote and actually achieve a certain political consensus to implement federal policy.[14] One consequence attributed to this fact is a certain lack of political innovation (Gabriel 1989), as political innovations can be expected only if an innovation-oriented federal government can exercise control

---

[11]Only Land cabinet members may serve as Bundesrat members (article 51 of the Basic Law).

The Basic Law distinguishes between two types of legislation: consent bills and objection bills. No consent bill can be promulgated without the agreement of a majority of the Bundesrat. In this category fall constitutional amendments, legislation affecting state revenues and taxes, and the Länder's administrative capacity and sovereignty. Consent bills currently cover more than 50% of all legislation. For all non-consent bills, the Bundesrat's approval is not required; however, the Bundesrat has the right to raise an objection which can be overridden by a corresponding absolute majority in the Bundestag.

Each Land votes as a block and the number of votes each Land possesses varies with population. The Basic Law guarantees each Land a minimum of 3 votes and before unification votes per Land ranges from 3 to 5, after unification – between 3 and 6.

[14] Thus, in 1992 the Lander agreed to ratify Maastricht Treaty only after the federal government agreed to institutionalize and legalize procedures of their participation in EC making.

over policy implementation.

During the first two decades in West Germany the parties controlling the federal government usually had a majority in Bundesrat. However, after 1969 elections the social-liberal coalition government of Willy Brandt confronted Bundesrat in which land governments controlled by the federal oppositional parties had a majority. Opposition found it increasingly attractive to use its blocking majority in the Bundesrat on a wide variety of issues, and federal-land relations became highly politicized. They remained so, even after 1982, when the Christian-liberal coalition government again had the support of a majority in the Bundesrat, and especially when the social-democratic majority took control over the second chamber. Sometimes, under conditions of divided control it was necessary to 'bribe' opposition Länder to achieve the national policy objectives (Scharpf 1995).

Mutual dependence of federal and Länder governments in policy selection and implementation forces local politicians, when they want to oppose federal policy or the way it is administered, to direct their criticism to their Land government, rather than to the federal government (Ordeshook 1996). Changing the composition of Länder governments could effectively modify policy. For example, federal nuclear energy policy was actively opposed by several "pro-green" Land governments at the state of implementation.

With the exception of Bavaria, all Länder have unicameral legislatures with an executive responsible to it. Similarly to the federal government, coalition governments have been common in Länder.

As in the case of Canada, the hypothesis we test is that the federal parties suffer additional electoral losses when they control the federal government. We compare electoral returns of federal and Länder elections in Germany between 1946 and 1995 controlling for the federal incumbent party. During this period, 13 federal and 142 Länder elections were held. Again, for the purpose of testing the hypothesis, we identify those Länder elections that follow a federal election (fall in between the two federal elections). As a result, our data set includes 126 observations - from 12 to 15 observations per Land.

2.6.1 Federal to Federal Elections

In order to test our balance hypothesis, we combine cross section and time series data on electoral results in 10 German Länder during federal and Länder elections between 1949 and 1995. Our dependent variable is defined as the percent of voters supporting the Christian Democratic Union (Christian Social Union) in Land *l* during the sub-national election at time *t*. The first independent variable is the percent of voters supporting the CDU/CSU in the same Land during the preceding federal elections. The second independent variable is a dummy variable indicating periods of the CDU/CSU control in Bonn. The two independent variables taken together are supposed to be able to predict the magnitude of 'balancing', reflected in the independent variable.

In accordance with our hypothesis, we assume that the CDU/CSU vote share in Land elections is positively correlated with the CDU/CSU vote in the same Land in federal elections but declines at the time of the CDU/CSU

Government, and our statistical specification becomes:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}, \qquad (1a)$$

where:

Y_{it} - Land *i*'s votes for the CDU/CSU the during the Land elections at time *t*.

X_{1it-1} - Land *i*'s votes for the CDU/CSU during previous federal elections (*t -1*).

X_{2it} - a dummy variable equal to one during the periods of the CDU/CSU governments and zero otherwise.

Before we proceed with cross section, time-series analysis, in order to ensure that data demonstrate consistent pattern over time, we estimate equation (1) for every Land separately. Statistical analysis conducted separately for each province has an obvious limitation due to the low number of available observations. Nevertheless, for eight provinces the sign of coefficients at the dummy variable β_2 (which indicates the periods of the CDU/CSU majority) is negative, as predicted and estimates are statistically significant in most cases (see Table 2.7).

OLS results pooled data for federal and Land elections are reported in Table 2.9. Both β_1 and β_2 coefficients are statistically significant at 0.001 levels. According to the pooled OLS estimates when the CDU/CSU controlled majority governments, their losses in Lander amounted to 7.4 percentage points of the vote.

In order to account for the time-series cross-sectional nature of the data

in our sample and the possibility of province specific factors unknown to us (captured by the error term) influencing provincial vote, we also apply the fixed effect technique where we assume that the factors which influence the relationship between the variables, but which are unknown (captured by the error term), are unique and constant for each cross-sectional unit. Our model then takes the form:

$$Y_{it} = \beta_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}, \qquad (2)$$

where β_i 's are intercepts, different for each province *i*.

Once again, we find that the party in government suffers electoral losses in subsequent Land election. Similarly to the case of Canada, we also report a second analysis, where again the Land vote for the CDU/CSU is the dependent variable but the independent variables are the CDU/CSU ' percent of the vote in the prior Land election, plus the usual dummy for federal control. We expect coefficient β_2 of the dummy variable be negative, which would correspond to the decline of the CDU/CSU support between two consecutive Land elections during the time when it controls the federal government. We again apply two statistical models - OLS and 'fixed effect.' All methods produce similar and statistically significant results supporting our hypothesis. Similarly to the Canadian case, we find evidence in support of the balancing effect, while our estimate of the size of the balancing effect has declined some, as our test has changed from the federal-to-Land vote shift to the Land-to-Land vote shift. We observe that the CDU/CSU gain about 4 to 5 percentage points more sub-nationally when the SDU controls the government in Bonn. Equations for

individual Länder are reported in Table 2.8. The findings for OLS and fixed effects are shown in Table 2.10.

2.7 Conclusion

The primary objective of this study was to conceptualize and evaluate on the basis of electoral data the balancing properties of provincial elections in Canada. We can now conclude that in Canada, like in other federal countries studied elsewhere (e.g., the USA and Germany), voters can balance and moderate the policy of national government by rejecting the party which is in power nationally the control over provincial governments. We find a very close relationship between the preceding national election and the subsequent provincial elections. Several statistical tests confirm that the incumbent party at the federal level loses votes in provincial elections. This result closely corresponds to the prediction of the "balancing" election model when adjusted to the specifics of Canadian political institutional environment. While in Erikson (1988, 1990) and Alesina and Rosenthal (1995) the balancing argument in the US context is made with respect to the executive-legislative policy interaction, in Canada these are the multiple orders of governments that can be shown to interact in the policy development, which in the non-concurrent system of elections is reflected in the cyclic patterns of federal-provincial voting.

References

Alesina, Alberto and Howard Rosenthal. 1995. *Partisan Politics, Divided Government, and the Economy*, Cambridge.

Anderson, Christopher and Daniel Ward.1995. "Barometer Elections in Comparative Perspective," mimeo. Houston: Rice University.

Archer, Keith and Alan Whitehorn.1990. "Opinion Structure Among New Democratic Party Activists: A Comparison with Liberals and Conservatives," *Canadian Journal of Political Science,* XXIII: 1.March., pp.101-113.

Baltagi, Badi and Young-Jae Chang.1994. "Incomplete Panels," *Journal of Econometrics*, 62: 67-89.

Blake, Donald.1982. "The Consistency of Inconsistency: Party Identification in Federal and Provincial Politics," *Canadian Journal of Political Science* XV: 4 (December) pp.691-709.

Blake, Donald with David J. Elkins and Richard Johnson.1985. *Two Political Worlds: Parties and Voting in British Columbia,* Vancouver: University of British Columbia Press.

Blake, Donald.1988. "Division and Cohesion: The Major Parties," in G. Perlin (ed.) *Party Democracy in Canada,* Scarborough: Prentice-Hall.

Brady, David, Susanne Lohmann and Douglas Rivers.1995. "Party Identification, Retrospective Voting, and Moderating Elections in a Federal System: West Germany, 1961-1989," mimeo 1992, revised April 1995.

Brodie and Jane Jebsib.1980. *Crisis, Challenge and Change: Party and Class in Canada,* Toronto: Methuen.

Brodie and Jane Jebsib.1988. *Crisis, Challenge and Change: Party and Class in Canada Revised,* Ottawa: Carlenton University Press.

Brown, Gordon.1994. "Canadian Federal-Provincial Overlap and Presumed Government Inefficiency," *Publius: The Journal of Federalism,* 24 (Winter) 21-37.

Budge, Ian and Keman Hans.1990. *Parities and Democracy: Coalition Formation and Government Functioning in Twenty, States* Oxford; New York: Oxford University Press.

Curtice, John and Clive Payne.1991. "Local Elections as National Referendum: in Great Britain," *Electoral Studies* 10:1 3-17.

Clarke, Harold, Jane Jenson, Lawrence LeDuc and John Pammett (1990) *Political Choice in Canada,* Toronto: McGraw-Hill Ryerson.

Clarke, Harold D. and Marianne C. Stewart.1987. "Partisan Inconsistency and Partisan Change in Federal States: The Case of Canada," *American Journal of Political Science*, Vol. 31 No. 2 382-407.

Cook, Chris and John Ramsden.1973. *By-Elections in British Politics,* London: Macmillian.

Dawson, R. MacGregor.1970. *The Government of Canada,* 5th edition Toronto: University of Toronto Press.

Dielman, T. 1989. *Pooled Cross-Sectional and Time Series Data Analysis,* New York: Marcel Dekker.

Dyck, Rand.1991. "Links Between Federal and Provincial Parties and Party Systems," in David Elkins (ed) *Representation, Integration and Political Parties in Canada,* Canada: Royal Commission on Electoral Reform and Party Financing.

Elkins, David.1980. "The Structure of Provincial Party Systems," in David J. Elkins and Richard Simeon (eds.) *Small Worlds: Provinces and Parties in Canadian Political Life*, Toronto: Methuen Publications.

Erickson, Lynda and Carty R K.1991. "Parties and Candidate Selection in 1988 Canadian General Election," *Canadian Journal of Political Science* XXIV:2 (June).

Erikson, Robert.1988. "The Puzzle of Midterm Loss," *Journal of Politics* 50: 1012-1029.

Erikson, Robert.1990. "Economic Conditions and the Congressional Vote: A Review of the Macrolevel Evidence," *American Journal of Political Science* 34 373-399.

Feigert, Frank.1989. *Canada Votes,* Durham: Duke University.

Fiorina, Morris.1992. *Divided Government,* New York: Macmillian.

Gibbins, Roger.1982. *Regionalism: Territorial Politics in Canada and the United States,* Toronto: Butterworths.

Goldfarb, Martin and Thomas Axworthy.1988. *Marching to a Different Drummer,* Toronto: Stoddart.

Hsiao, C.1986. *Analysis of Panel Data,* Cambridge University Press Cambridge.

Irvine, William.1987. "Canada 1945-1980: Party Platforms and Campaign Strategies," In *Ideology, Strategy and Party Change,* eds. Ian Budge, David Robertson and Derek Hearl (eds), Cambridge: Cambridge University Press 73-94.

Johnston Richard, Andre Blais, Henry Brady and Jean Crete.1992. *Letting the People Decide: Dynamics of Canadian Election,* Stanford: Stanford University Press.

Kernaghan, Kenneth.1985. "Intergovernmental Administrative Relations in Canada," In *Public Administration in Canada: Selected Reading*, ed. Kenneth, Kernaghan Fifth edition Methuen.

LeDuc, Lawrence, Harold D. Clarke, Jane Jenson, and Jon H. Pammett.1984. "Partisan Instability in Canada: Evidence from a New Panel Study," *American Political Science Review* 78: 470-484.

Leslie, Peter.1987. *Federal State, National Economy,* University of Toronto Press.

McCormick, Peter.1989. "Provincial Political Party Systems, 1945-1986," In *Canadian Parties in Transition,* eds. Alain Gagnon and Brian Tanguay.

Mughan, Anthony.1986. "Toward a Political Explanation of Governments Vote Losses in Midterm By-Elections," *American Political Science Review,* 80:3, 761-775.

Mughan, Anthony.1988. "On the By-Election Vote of Governments in Britain," *Legislative Studies Quarterly* 13:1, 29-48.

Muller, Stephen.1968. "Federalism and the Party System in Canada," In *Canadian Federalism: Myth or Reality*, ed. Peter Meekison Toronto: Methuen.

Nadeau, Richard and Andre Blais.1990. "Do Canadians Distinguish Between Parties? Perceptions of Party Competence,"*Canadian Journal of Political Science* 23 317-333.

Noel, S.J.R..1971. *Politics in Newfoundland,* University of Toronto Press.

Perlin, George and Patti Peppin.1971. "Variations in Party Support in Federal

and Provincial Elections: Some Hypotheses," *Canadian Journal of Political Science* IV, No 2 (June) pp. 280-286.

Pinard Maurice.1975. *The Rise of a Third Party: A Study in Crisis Politics,* Montreal: McGill-Queen's University Press.

Robin, Martin.1972. *Canadian Provincial Politics, the Party Systems of the Ten Provinces*, edited by Martin Robin Scarborough and Ontario: Prentice-Hall of Canada.

Scarrow Howard.1960. "The Federal-Provincial Voting Patterns in Canada," *Canadian Journal of Economics and Political Science*, 26 289-301.

Schartz, Mildred A. 1974. "Canadian Voting Behavior," In Richard Rose, ed. *Electoral Behavior, A Comparative Handbook* NY: The Free Press, 543-617.

Searle, J.L. 1971. *Linear Models*, New York: Wiley.

Simeon, Richard.1972. *Federal-Provincial Diplomacy: The Making of Recent Policy in Canada,* Toronto and Buffalo: University of Toronto Press.

Simeon, Richard.1977. "Regionalism and Canadian Political Institutions," In *Canadian Federalism: Myth or Reality*, ed. J. Peter Meekison Agincourt: Methuen pp. 292-304.

Simeon, Richard and Robert Miller.1980. "Regional Variations in Public Policy," In *Small Worlds : Provinces and Parties in Canadian Political Life*, eds. David J. Elkins and Richard Simeon Toronto: Methuen Publications.

Simeon, Richard.1993. "Canadian Public Administration and Government," In *Public Administration: Canadian Materials*, eds. Randy Hoffman and Victor MacKinnon Captus Press.

Smiley, Donald.1962. "The Rowell-Sirois Report, Provincial Autonomy, and Post-War Canadian Federalism," *Canadian Journal of Economics and Political Science* 28: 54-69.

Smiley, Donald.1979. "An Outsider's Observations of Federal-Provincial Relations Among Consenting Adults," In *Confrontation and Collaboration - Intergovernmental Relations in Canada Today*, ed. Richard Simeon Toronto: Institute of Public Administration of Canada.

Stanbury, W. T.1993. *Money in Politics: Financing Federal Parties and Candidates in Canada*, Toronto Dundurn Press, 1993.

Stewart, Ian.1986. "Friends at Court: Federalism and Provincial Elections on Prince Edward Island," *Canadian Journal of Political Science* XIX:1 (March) 127-150.

Wrong, Dennis.1957. "The Pattern of Party Voting in Canada," *Public Opinion Quarterly* 21 Summer 252-64.

Wilson, John and David Hoffman.1970. "The Liberal Party in Contemporary Ontario Politics," *Canadian Journal of Political Science* 3:181.

Weaver, R. Kent.1992. "Political Institutions and Canada's Constitutional Crisis," in R. Kent Weaver (ed.) *The Collapse of Canada?* The Brookings Institution, Washington, D.C.

Underhill, Frank H.1955. "Canadian Liberal Democracy in 1955," in G. Ferguson and Frank H. Underhill (eds.), *Press and Party in Canada* Toronto: Ryerson.

Underhill, Frank H. 1960. *In Search of Canadian Liberalism,* Toronto: Macmillian.

Uslaner, Eric.1990. "Splitting Image: Partisan Affiliations in Canada - Two Political Worlds," *American Journal of Political Science* 34: 4 (November), pp. 961-981.

Tables:

Table 2.1. The Change in Vote for the Liberal Party Between Elections, by Province

Province	I		II		Number of observations
	Change in Vote between Provincial and Previous Federal Elections		Change in Vote between Provincial and Previous Provincial Elections		
	Intercept	Dummy, indicating Liberal Federal Government	Intercept	Dummy, indicating Liberal Federal Government	
Newfoundland	1.7	-7.8**	1.7	-4.3	14
P. E. Island	9.5**	-4.2	2.3	-2.1	12
Nova Scotia	2.8	-2.4	2.7	-4.7	13
New Brunswick	13.3**	-14.8**	4.3	-6.4	12
Quebec	15.8* *	-23.6*	3.9	-4.8	12
Ontario	5.7*	-19.6**	0.6	-0.6	13
Manitoba	3.6	-16.1**	3.0	-6.4	14
Saskatchewan	3.3	-2.3	7.1	-8.9	12
Alberta	6.6*	-22.0**	5.1	-5.0	12
British Columbia	2.3	-18.0**	9.9**	-11.0**	13
Eastern Provinces	5.8**	-6.3**	3.5*	-4.1**	51
Western Provinces	4.3*	-15.6**	4.58**	-5.8**	64
All Provinces	6.0**	-12.8**	3.7**	-5.0**	127

* $p < 0.1$; ** $p < 0.05$ two-tail test.

Note: Data are from the years 1949-96. The dependent variable is the change in the Liberal Party vote between provincial elections and the previous federal elections (column I) and between provincial elections and the previous provincial elections (column II) in percents.

Table 2.2 The Vote for the Liberal Party in Provincial Elections, by Province

Province	Intercept	Provincial Vote for the Liberal Party in previous Federal Elections	Dummy, indicated Liberal Government	Number of observations
Newfoundland	2.5	0.98**	-7.72**	14
Prince Edward Island	33.86**	0.42	-2.08	12
Nova Scotia	25.3*	0.43	0.11	13
New Brunswick	69.3*	-0.39	-1.96	12
Quebec	54.4* *	-0.02	-7.76*	12
Ontario	57.8*	-0.59*	-1.40	13
Manitoba	7.7	0.84**	-14.3**	14
Saskatchewan	17.8	0.26	6.45	12
Alberta	21.6*	0.12	-12.6	12
British Columbia	14.9	0.30	-7.47	13

* $p < 0.1$; ** $p < 0.05$

Note: Data are from the years 1949-96. The dependent variable is the Liberal Party vote in provincial elections (percent).

Table 2.3. The Vote for the Liberal Party in Provincial Elections pooled 127 observations

	Model		
	Pooled OLS Analysis	Fixed Effect Method	Unbalanced Random Effect Method
	Equation (1)	Equation (2)	Equation (3)
Intercept	3.79** (2.3)	Multiple	21.7** (4.8)
Provincial Vote for the Liberal Party in Previous Federal Elections	0.96** (11.4)	0.39** (3.3)	0.56** (5.1)
Dummy variable equal 1 if period of the Liberal Government	-12.6** (-5.7)	-6.84** (-3.2)	-8.57** (-4.2)
Corrected R-square	0.51	0.68	N/A

* $p < 0.05$; ** $p < 0.01$

Note: *t*-values are in parentheses. Data are from the years 1949-96. The dependent variable is the Liberal Party vote in provincial elections (percent).

Table 2.4. The Vote for the Liberal Party in Provincial Elections, by Province

Province	Intercept	Provincial Vote for the Liberal Party in previous Provincial Elections	Dummy, indicated Liberal Government	Number of observations
Newfoundland	11.0	0.80**	-3.1	14
Prince Edward Island	35.5*	0.33	-1.1	12
Nova Scotia	10.6	0.69**	-1.9	13
New Brunswick	61.3**	-0.16	-5.4	12
Quebec	64.7**	-0.23	-8.9**	12
Ontario	46.5**	-0.21	-7.6**	13
Manitoba	10.9	0.70**	-6.0	14
Saskatchewan	9.3	0.85**	-5.93	12
Alberta	16.7**	0.38	-6.2	12
British Columbia	11.4	0.66*	-7.2	13

* $p < 0.1$; ** $p < 0.05$

Note: Data are from the years 1949-96. The dependent variable is the Liberal Party vote in provincial elections (percent).

Table 2.5. The Vote for the Liberal Party in Provincial Elections, Pooled 127 Observations

	Model		
	Pooled OLS Analysis	Fixed Effect Method	Unbalanced Random Effect Method
Intercept	8.11** (4.5)	Multiple	8.92** (4.5)
Provincial Vote for the Liberal Party in Previous Provincial Elections	0.87** (21.4)	0.67** (8.9)	0.85** (18.9)
Dummy variable equal 1 if period of the Liberal Government	-4.79** (-3.5)	-4.37** (-3.2)	-4.78** (-3.5)
Corrected R-square	0.79	0.79	N/A

* $p < 0.05$; ** $p < 0.01$

Note: *t*-values are in parentheses. Data are from the years 1949-96. The dependent variable is the Liberal Party vote in provincial elections (percent).

Table 2.6. Liberal Vote Gain (Various Measures) by Party Control of Federal Government

	(1) Provincial Election Vote Minus Prior Provincial Election Vote	(2) Provincial Election Vote Minus Prior Federal Election Vote	(3) Federal Election Vote Minus Lagged Prior Provincial Election Vote	(4) Federal Election Vote Minus Prior Provincial Election Vote
Intercept	3.7 (3.1)**	6.2 (3.6)**	-2.8 (-1.6)	-0.6 (-0.3)
Liberal Party Control	-5.0 (-3.5)	12.9 (-6.2)**	6.9[a] (3.1)**	3.2[b] (1.4)
Adjusted R-squared	.083	.238	.078	.001
N	127	127	104	104

* $p < 0.05$; ** $p < 0.01$
Note: *t*-values are in parentheses. Data are from the years 1949-96.

a. This shows 6.9 point Liberal provincial-to-federal gain in elections where the Liberals win the federal election.

b. This shows 3.2 point Liberal provincial-to-federal gain in elections where the Liberals enter in federal control.

Table 2.7. The Vote for the CDU/CSU in Länder Elections, by Land

Land	Intercept	Länder Vote for the CDU/CSU in Previous Federal Elections	Dummy, Indicated CDU/CSU Government	Number of Observations
Baden	31.7	0.44	-8.5**	12
Bavaria	7.9	0.9	-7.6**	12
Bremen	-6.0	1.2	-3.6	13
Hamburg	49.7	-0.33	-4.2	13
Hesse	2.7	1.0	-8.5**	13
Lower Saxony	20.8	0.64	-10.0**	12
North Rhine-Westphalia	14.8	0.71	-5.9**	13
Rhineland-Palatinate	40.1	0.23	-5.6*	12
Saarland	45.3	0.04	-9.3**	11
Schleswig-Holstein	6.2	0.99	-9.4*	13

* $p < 0.1$; ** $p < 0.05$

Note: Data are from the years 1949-95. The dependent variable is the CDU/CSU vote in Länder elections (percent).

Table 2.8. The Vote for the CDU/CSU in Länder Elections, by Land

Land	Intercept	Länder Vote for the CDU/CSU in Previous Land Elections	Dummy, Indicated CDU/CSU Government	Number of Observations
Baden	34.3	0.39	-6.8**	11
Bavaria	33.7	0.46	-8.5	12
Bremen	15.2	0.54	-3.1	13
Hamburg	13.1	0.72	-5.5*	12
Hesse	21.4	0.58	-8.6**	13
Lower Saxony	19.1	0.63	-5.6**	12
North Rhine-Westphalia	25.5	0.44	-3.2	13
Rhineland-Palatinate	39.5	0.24	-4.7	12
Saarland	49.4	-0.05	-9.8**	11
Schleswig-Holstein	21.7	0.58	-5.1	13

* $p < 0.1$; ** $p < 0.05$

Note: Data are from the years 1949-95. The dependent variable is the CDU/CSU vote in Länder elections (percent).

Table 2.9. The Vote for the CDU/CSU in Länder Elections pooled 124 observations

	Model	
	Pooled OLS Analysis	Fixed Effect Method
	Equation (1)	Equation (2)
Intercept	8.0** (3.3)	Multiple
Länder Vote for the CDU/CSU in Previous Federal Elections	0.89** (17.1)	0.76** (8.7)
Dummy variable equal 1 if period of the CDU/CSU Government	-7.3** (-7.4)	-7.7** (-7.6)
Corrected R-square	0.75	0.75

* $p < 0.05$; ** $p < 0.01$

Note: *t*-values are in parentheses. Data are from the years 1949-95. The dependent variable is the CDU/CSU vote in Länder elections (percent).

Table 2.10. The Vote for the CDU/CSU in Länder Elections, Pooled 122 Observations

	Model	
	Pooled OLS Analysis	Fixed Effect Method
	Equation (1)	Equation (2)
Intercept	13.9** (5.7)	Multiple
Länder Vote for the CDU/CSU in Previous Federal Elections	0.74** (14.8)	0.52** (7.7)
Dummy variable equal 1 if period of the CDU/CSU Government	-4.2** (-3.7)	-5.7** (-5.0)
Corrected R-square	0.70	0.73

* $p < 0.05$; ** $p < 0.01$

Note: *t*-values are in parentheses. Data are from the years 1949-95. The dependent variable is the CDU/CSU vote in Länder elections (percent).

Figures:

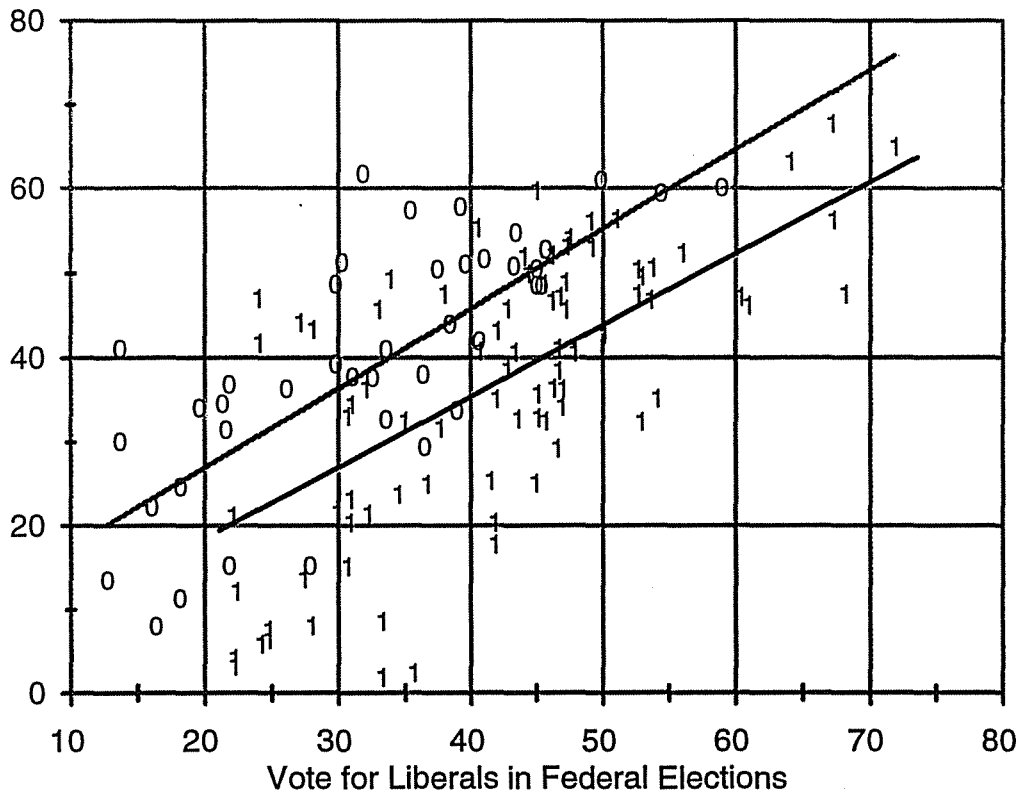

Figure 2.2. Provincial Vote for the Liberal Party in Provincial and Federal Elections during Liberal and Conservative Governments.

Note: Zeros indicate years of Conservative government; ones indicate years of Liberal government.

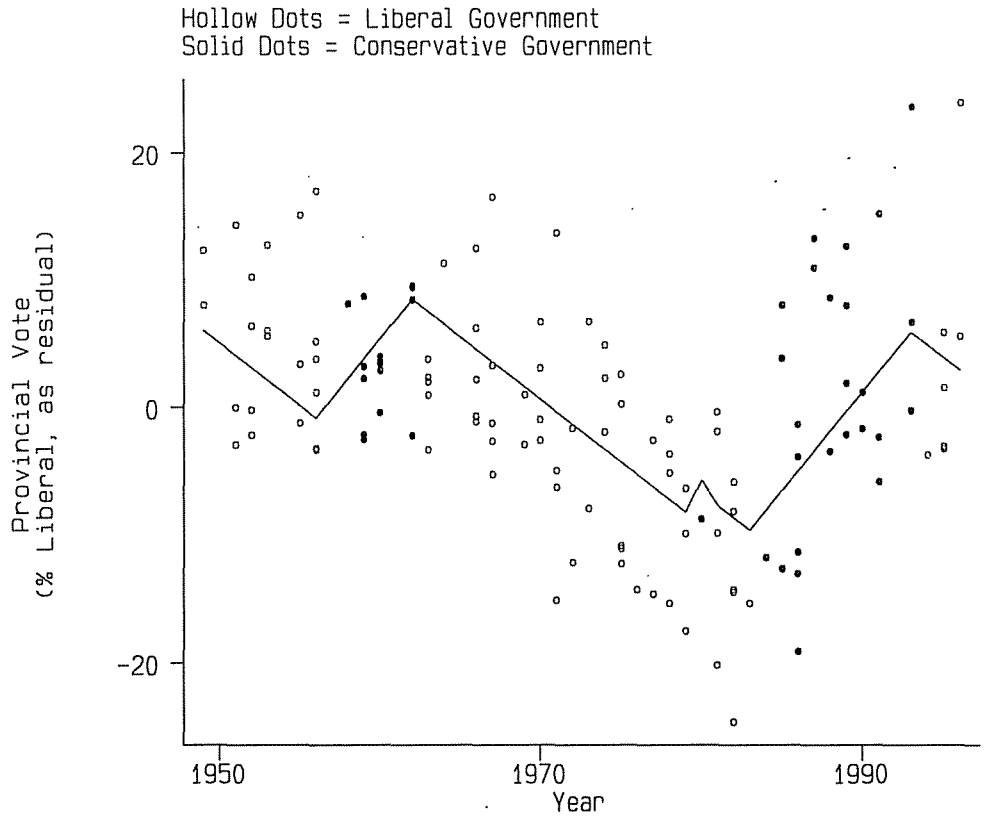
Hollow Dots = Liberal Government
Solid Dots = Conservative Government
Provincial Vote
(% Liberal, as residual)
20
0
-20
1950
1970
1990
Year

Figure 2.3

Appendix: A Model of "Balancing" Elections in a Three-Party Contest

By applying the logic parallel to that in section 2.4, it is easy to show that in a three party contest out-off center parties can suffer greater vote losses in provincial elections when they also win nationally. But the three-party balancing model results in less clear-cut conclusions about the dynamics of the vote of the centrist party. Much depends on the relative strengths of different parties in policy balancing and distribution of voters preferences. Thus, the results that we show here are conditional on certain combinations of parameter values and are to be viewed as illustrations of what is possible in terms of the interelectional vote dynamics, rather as predictions of what in fact is going to happen to the centrist party in any provincial election with a three party electoral system. It is the statistical test in the essay above that tells us which out of many possibilities materialize. Here our purpose is to show that the centrist incumbent's vote loss due to intergovernmental policy balancing is rationalizable in a three-party competition, as well as it is in a two-party contest.

Once again, provincial voters sequentially vote for two governments - first, federal, and then provincial, where the choice in federal and provincial elections is out of three parties - *D*, *L*, and *C*. Party *L* is located between *D* and *C*. Party platforms, as well as voters' ideals points, are located in a one-dimensional left-to-right policy space, and voters derive higher utilities from policy outcomes nearer their ideal points. We assume that party platforms and the distribution of voters' ideal points in a province remains unchanged between federal and provincial

elections, but that the outcome of federal elections may change over time as many other provinces participate in federal elections. A party that wins an election unilaterally forms the government of that order, and its policy platform becomes the policy position of such a government. Finally implemented policy, however, is a weighed combination of the policies of federal and provincial governments. Parties *L* and *C* balance each other's policy in a symmetric way: when one controls the federal and another, the provincial government, the weight of the provincial incumbent in determining policy is β. The third party, party *D*'s ideal point enters the final policy equation with the weight of α, different from the corresponding weights of the two major parties. We want to show that it is possible that when *L* is victorious nationally, its vote shrinks relatively more in the following provincial election.

First, consider the case when *L* wins nationally and voters choose between *D*, *L* and *C* in provincial elections to balance the policy. When *L* controls the federal government, *C*'s provincial government can deliver the balanced policy of the divided government, $L_f\, C_p = \beta C + (1-\beta)L$. A cutpoint separating voters supporting the policy of unified *L*'s control, $L_f L_p$, and those who prefer the policy of divided government $L_f C_p$ is $\frac{\beta C + (1-\beta)L + L}{2} = \frac{\beta C + L(2-\beta)}{2}$. On the other hand, when *L* controls the federal government, the third party positioned to the left to the center, party *D* can propose the balanced policy $L_f D_p = \alpha D + (1-\alpha)L$ with a cut-point between the two policies of $\frac{\alpha D + (1-\alpha)L + L}{2} = \frac{\alpha D + L(2-\alpha)}{2}$.

Therefore, if policy balancing takes place, the vote for the centrist party *L* equals

$$F(\frac{\beta C + L(2-\beta)}{2}) - F(\frac{\alpha D + L(2-\alpha)}{2}).$$

Alternatively, when party *C* controls the federal government, *L* offers the balanced policy $C_f L_p = \beta L + (1-\beta)C$, with a cutpoint between the supporters of party *L* and party *C* at $\frac{\beta L + C(2-\beta)}{2}$. While provincial victory of party *D* in this case would lead to the balanced policy $C_f D_p = \alpha D + (1-\alpha)C = \alpha(D-C) + C$, with a cut-point between party *D* and party *L*'s voters at $\frac{\beta(L-C) + C + \alpha(D-C) + C}{2}$. Therefore, *L*'s provincial vote is:

$$F(\frac{\beta L + C(2-\beta)}{2}) - F(\frac{\beta L + C(2-\beta) - \alpha(C-D)}{2}).$$

The balancing will lead to the centrist incumbent's vote losses in provincial elections if:

$$F(\frac{\beta C + L(2-\beta)}{2}) - F(\frac{\alpha D + L(2-\alpha)}{2}) < F(\frac{\beta L + C(2-\beta)}{2}) - F(\frac{\beta L + C(2-\beta) - \alpha(C-D)}{2}).$$

For example, for a uniform distribution of voters' ideal points, party *L*'s vote in provincial elections declines due to its federal incumbency if

$$\frac{\beta(C-L)}{2} < \frac{\alpha(C-L)}{2}.$$

As we assumed that party *C* is to the right from *L*, the above holds when $\alpha > \beta$.

In application to Canada, the condition $\alpha > \beta$ means that the third party on the left, presumably, the New Democratic Party, can change the final policy in application to the province in a more radical way than any of the parties rotating in the national government. Notice, that this account of electoral losses for the centrist party in a three party-competition can be immediately extended to the case of multi-party competition by placing more additional parties on the extreme left or extreme right.

CHAPTER 3. LONG-TERM CONGRESSIONAL REPRESENTATIONAL DETERMINANTS OF ALLOCATION OF FEDERAL FUNDS TO STATES: THE CASE OF THE UNITED STATES

3.1 Joint Unit-Center Bargaining Hypothesis in Application to the American Case

3.1.1 The Hypothesis

The spatial distribution of federal funds in the view of most political scientists is driven by the distribution of power within Congress among various state delegations and individuals. It has been argued that states with better institutional representation have an advantage in obtaining federal funds (Arnold 1979). The impact of short-term advantages of institutional representation, such as the benefits associated with committee assignments, seniority, and leadership positions has been extensively analyzed (see Rundquist, Lee and Luor 1995; Stein and Bickers 1995). Much less attention has been paid to the broader and more long-term impact of representational differences. For instance, larger states may benefit from being represented by more numerous congressional delegations (Browning 1973). At the same time, as Arnold (1981) argues, smaller states have the advantage of being disproportionately represented in the Senate. In this chapter we analyze the empirical validity of Arnold's hypothesis and estimate the long-term benefits to smaller states in the distribution of federal funds. Our hypothesis in application to American federal organization is that states' representatives in the legislature interact with the nationally elected executive

center jointly. This institutional restriction makes the outcome of the congressional process the only possible request the 'center' can consider. Consequently, bargaining outcomes for states should be related to their bargaining weight in the legislature, with over-represented states favored in the recourse allocation.

The number of congressmen and senators per million of state population is taken as a proxy for the long-term advantage of smaller states in legislative representation. We begin by showing that between 1966 and 1990 smaller states, indeed, consistently obtained greater per capita amounts of federal funds. Moreover, as the major portion of federal funds is distributed on the basis of congressionally approved allocation formulae, it is important to note that the formulae of the largest grants are based on criteria that favor smaller states. However, diagnostics indicates that a simple statistical analysis of the institutional determinants of the per capita distribution of federal funds to the states alone may produce unreliable results (see Appendix, Table 3.5, and also Uslaner 1976). In order to strengthen our conclusion against such a possibility, we also demonstrate a bias in favor of smaller states by comparing proportions of state budgets coming from federal money. We introduce and test a hypothesis that better represented states tend to obtain a greater proportion of their total revenue from the federal governmental sources. We find the analysis of states' revenue data for the period between 1966 and 1990 strongly supportive of this hypothesis.

3.1.2 The Significance of Federal Transfers in the Well-Being of American

States

Federal or central governments make transfers to governments of sub-national levels to assist them in funding their activities in many countries. For example, in Australia in the late 80's federal transfers to the states formed nearly 50 percent of the states' total revenues; in Germany, Canada, Switzerland, and Austria similar transfers constituted respectively about 16, 21, 27, and 28 percent of states' budgets (Costello 1993).[1] In the United States, if estimated by comparable methods, federal transfers currently constitute about 20 percent of state revenues.

The number of federal grants in the US started growing in the mid-60s, after Lyndon Johnson and the large Democratic majorities of the Eighty-ninth Congress (1965-66) increased grants-in-aid to states and communities in health, housing, manpower training, education, urban planning, and many other fields. In just two years the number of separate grant-in-aid authorizations increased from 221 to 379.[2] In 1973 the number of such programs neared 500, and reached a high of 593 in 1993. However, one has to be careful interpreting these numbers. The ACIR compilation shows that in 1993 approximately 546 of the 593 grants were "micro programs," which, combined, received only about 10 percent of all federal

---

[1]Local governments in unitary countries are even more reliant on central governmental grants as a source of finance, comprising 50 to 60 percent of their total revenues.

[2]U.S. Advisory Commission on Intergovernmental Relations, Characteristics of Federal Grant-in-Aid Programs to State and Local Governments: Grants Funded FY 1993, Washington, D.C.: U.S. Government Printing Office, 1994, p.14.

aid dollars. Expenditures for federal grants were $8.3 billion ($44 per capita) in 1963, $43.1 billion ($204 per capita) in 1973, and 166.9 billion ($647 per capita) in 1993. Medicaid, which has been the single fastest growing grant program, accounted for nearly 40 percent of total federal intergovernmental outlays in 1993, compared with 28.3 percent in 1989 and 14.0 percent in 1975. When highway programs and AFDC are added in, over half of all federal outlays to states and localities are accounted for. If these programs are not included, the growth rates for the remainder of federal domestic aid has not kept pace with inflation.

Financial importance of federal funds for state budgets dramatically increased in the late 1950's. In 1955 federal grants accounted for 21 percent of all American states' revenues, and by 31 percent in 1960.[3] For FY 1966-90, 48 continental states received between 14.5 and 47.5 percent of their revenues from the federal government, with averages of 27.7 in 1966, 29.3 in 1976, and 23.8 in 1990.[4]

3.2 Previous Research on the Short-Term Distributional Benefits of Over-representation

[3]Source: Advisory Commission on Intergovernmental Relations, *Significant Features of Fiscal* Federalism, *1982-83 Edition* (Washington: The Commission, 1984), pp.120-121.

[4] The above averages are calculated as average unweighed proportions across states. Combined revenue from federal government constituted 25 percent in 1966 FY (27.6 in 1976 FY, and 23 in 1990 FY) of the combined total revenue of the 48 continental states.

3.2.1 The 'Supply Side' Argument

Most of the empirical work on variations in the distribution of federal grants to states (and federal spending more generally) has emphasized what Stein (1981) and Berch (1992) refer to as the political 'supply side.' The hypothesis is based on both popular belief and formal theoretical argument, and stipulates that the spatial allocation of federal funds reflects the distribution of power within Congress among various state delegations and individual congressmen. Numerous studies test a version of the same hypothesis, namely, that the politically better-positioned members of Congress bring relatively more federal benefits to their states and congressional districts. This group of studies addresses the roles of committee membership (Ferejohn 1974; Ritt 1976; Ray 1980; Anton 1989; Rundquist, Lee and Luor 1995), partisanship (Ferejohn 1974; Ritt 1976) and Thompson and Moncrief (1988) - at the state level, and seniority (Ferejohn 1974; Ritt 1976). Most studies find little connection between these characteristics and the distribution of federal aid. Moreover, almost all reports that find support for the 'supply side' hypothesis are based on the analysis of programs for which the Congress makes distributional decisions directly (as is the case with most formula-based grant programs).[5] One of the major problems with the previous studies of formula-based

[5] Perhaps only one study of programs for which allocating authority is delegated to the bureaucracy (as in the case of project grants) unequivocally supports the conclusion that overseeing agency congressmen benefit from their committee membership. Plott (1968) shows, using expected-value analysis, that districts of members of the House Banking and Currency Committee have received twice the amount of urban renewal expenditures as one would expect, based on average levels of urban renewal nationwide. In particular, this study found that in 1964, while committee members comprised only 7.1 percent of the House,

grant allocations is that they usually ignore the properties of actual formal mechanisms employed by Congress to distribute these grants. In particular, most studies ignore the fact that allocation criteria tend to be stable over time. Once formulae are applied and federal projects are allocated to districts and states, the prolonged periods of steady flow of federal spending follow. Archer (1978) investigates the extent of incrementalism in federal allocations to states by fitting the simple model: an expenditure in a particular year as a function of the expenditure in the previous year. The coefficient of correlation exceeds .99 for all of his 15 assessments (in the fifteenth it was .976). Johnston (1980) compares spending in each of the states for 31 major federal programs between 1972, 1974, and 1976, and in most cases finds correlation greater than .9. The overwhelming pattern, then, is the one of continuity in the spatial structure of federal spending. Ignoring this fact, most existing empirical studies analyze short cross sections (one or two fiscal years) and ignore the effect of incrementalism. The failure to recognize the differences between the allocation base and the increment also leads to model misspecifications, when most studies overlook the possibility that the previous distribution of federal funds or factors that caused it could have mandated the pattern of committee assignments. Testing this possibility, Ray (1977) was able to predict between 75 and 93 percent of freshman assignment requests to six House committees in the Ninety-second, Ninety-third and Ninety-fourth Congresses on the basis of geographic distribution of federal spending in

---

their districts received 25.2 percent of the URA's expenditures.

each committee's area of jurisdiction and controlling for electoral insecurity and the existing committee representation of each freshman's state party delegation.

One way of dealing with these problems is to consider changes in the levels of spending as an institutionally influenced dependent variable. Several studies examine the distribution of increments in federal spending rather than its absolute current levels (Rundquist and Griffith 1974, 1976; Cook 1976; Ray 1976, 1980; Johnston 1980 and Berch 1992). The mostly negative results obtained in these studies probably reflect the fact that consistently greater increases in federal spending in some states or districts cannot be sustained for prolonged periods of time without producing visible biases in the overall allocation of funds. Others consider the allocation of new programs, ignoring the old ones (Ferejohn 1974; Alvarez and Saving 1995). This approach, however, is strictly short-term, in that it does not consider the overall balance of "new" and "old" programs in the total level of spending. For example, it is possible that new programs may be merely replacing the old ones. Analysis of new federal programs may be telling us how new programs (or new names for them) are introduced, rather than how federal money is distributed. In addition, as information about new programs is not available immediately to all potential recipients, that fact alone may create a temporary bias in favor of some more active states or districts.

3.2.2 The 'Demand Side' Considerations

Another direction in the literature is to focus on a single-committee

jurisdiction or even a specific program. First of all, such an approach ignores the possibility of inter-committee logrolling and bargaining. Taking logrolling into account, congressional influence must be related to the total package of benefits received by states or congressional districts, not merely to the rewards under the immediate control of a constituency's representative. Moreover, the analysis of specific and often small programs conceals the full picture - whether well-placed legislators (their districts) benefit overall or only in narrow program areas compared to their less well-situated colleagues.

The studies of distributional properties of small individual programs are further complicated by the fact that not all small programs are equally desirable to all constituencies. One serious problem with small grants is the compliance cost of federal regulation (Stein 1984). It has been argued that there is a break-even point, below which it makes no sense for a state to apply for a new federal grant. For example, Wright (1982) describes the New York State federal aid coordinator who refused to pursue a $2 million developmental disabilities grant because "it would have cost us more than two million . . . to do the things that were required as a condition for receipt of the funds." Fossett (1983) argues that local officials often decide not to pursue some federal grants because of uncertainty regarding the level and form of financing. In the event of funding cutbacks or significant rule changes, officials would be forced to choose between rising local taxes and reducing services, thus alienating either the local taxpayers or the recipients of federally funded services.

The understanding that there is no reason to assume that every state and locality puts forth the same effort to maximize federal aid that it receives stimulated studies of federal allocation focusing more on the "demand" side. Muskin and Cotton (1969) analyzed 28 HUD grants available in FY 1966. They found that no state has made full use of all grants, although no state has allowed more then seven of the grant allocations to go unused. Oppenheimer (1983) shows that a state's aggressiveness in the pursuit of federal funds is an influential factor in the outcome of the funding process. Grady (1987) concentrates on the role of the governor. Berch (1992) examines the change in federal aid to the states during 1985 - 1987 (the period influenced by the 99th Congress). He finds that state-based variables, like the governor's experience in Congress, intrastate conflict, and Washington lobbying presence are helpful in explaining the rate of change in federal aid to the states.

The controversy in the studies of the "demand" side of political benefits is whether congressional districts or whole states should be expected to benefit from the actions of the members of Congress. All agree that electoral connections are district-based, but there is a variety of reasons why state level data may better reflect the distribution of federal funds. Rich (1989) argues that congressional districts may not reflect redistributional processes well because of failure of localities to apply for funds. For example, for a number of years many communities received little or no federal aid from some programs not because they lacked influential legislators, but because they did not want such federal aid. This was

especially evident among southern and suburban communities during the 1960's, who feared that acceptance of federal aid under the Urban Renewal program would require them to take action to address low- and moderate-income housing needs within their jurisdictions (Rich 1989). Houston, for example, did not participate in urban renewal due to both its aversion to federal intervention as well as to the success of private redevelopment (Friedland and Wong 1983). Local governments also do not pursue funds from all federal programs, nor do they pursue the ones they do all with equal intensity. For example, in the 145 local communities that make up the Southeastern Wisconsin Regional Planning Commission, 73 failed to apply for even one of the ten federal grants for which they were eligible (Stein 1979). Hale and Palley (1981) demonstrate that there is a good degree of variation in efforts of local officials to pursue federal funds. Rich (1985) shows that keeping a lobbyist in Washington is helpful to a locality's aid's chances.

Rundquist, Lee and Luor (1995) present several additional arguments why states should be taken as units of analysis and provide some empirical tests of this proposition. First, benefits to a particular district may spill over to adjacent districts. Second, state congressional delegations tend to work together and influence committee assignments. Congressmen may seek statewide offices. The state bureaucracy may be better able to communicate with the federal bureaucracy. Bickers and Stein, Rundquist, Lee, and Luor (1995) test and compare statistically

several hypotheses.[6] While overall results are again "mixed," their analysis reveals that distributive politics seems to produce state-level benefits in some policy areas which are not associated with district-level benefits.

Summing up, previous research suggests that any analysis of patterns of distribution of federal resources should take into account: (1) the stability of the overall pattern of federal grants distribution across time, (2) possible "remoteness" of distributive effects that requires a longer period time-series data to estimate redistributive effects, and (3) a difference in efforts of states and localities to pursue federal funds, which also makes state-level data more suitable for the long-term analysis. As far as the analysis addresses a long-term distributional patterns of federal grants, one needs to identify *long-term* factors that may affect the distribution. Finally, because the largest part of federal grants to states is distributed by the relatively stable formula criteria, formula allocation mechanisms themselves warrant closer attention as well.

3.3 Congressional Formulae for Fund Allocation and the Bias in Favor of Small States

While many studies look for evidence of redistributional effects and their political determinants, few examine the properties of actual allocation mechanisms used to distribute funds. It is, in fact, unclear how in practice individual politicians

[6] Based on the congressional and state-level data provided in *Federal Domestic Outlays 1983-1990: A Data Book.*

can systematically impact the redistribution of federal funds. In order to affect final allocations, Congress has to bias the general procedures used by the agencies in favor of specific constituencies. Thus, if the bias is to be found, actual allocation formulae and the principles behind them must reflect spatial redistributional intent.

All federal grants can be divided into four major categories: general purpose revenue sharing grants, specific purpose block grants, formula-based categorical grants, and project grants. General purpose revenue sharing grants can be spent at the discretion of the recipient. Specific purpose block grants are available to all eligible recipients, but only for spending on particular programs designed by the federal government. Importantly, a significant portion of federal funds is distributed through relatively few programs. For example, in 1976 nearly 59 billion dollars was distributed as federal grants to states and local areas. As Table 3.1 indicates, the largest 12 programs accounted for $50.1 billion of total spending (based on Gonzales 1980).

[Table 3.1 is about here]

The analysis of actual formulae for these 12 programs indicates, however, that no redistribution in favor of any particular individual state or congressional district can be systematically performed in compliance with those formulae (see Gonzales 1980 for a detailed discussion of the formulae). All these formulae are universal (i.e., uniformly applied everywhere) and are based on a limited number of factors such as population, per capita income, tax effort, or the relative size of urban and rural areas. In addition, the formulae are quite stable, and Congress has

often expressed unwillingness to amend them. Once a formula is established, the allocation criteria are altered only with great difficulty (Hale and Palley 1981). This means that with regard to about 85 percent of all federal funds, there is technically little opportunity for federal redistribution to favor individual states or districts on a year-by-year basis. In other words, a stable coalition of states or types of constituencies may benefit from one formula or another, but not any individual state or district. Therefore, with respect to a major share of federal grants, the long-term redistribution pattern can only result from the Congressional choice of a redistributive formula.

It is also important to notice that in the case of project grants for which no formula allocation is specified by the Congress, theoretically bureaucrats can allocate funds at their own discretion. In practice, however, they often do the same thing as legislators, i.e., create their own long-term allocation formulael. Hale and Palley (1981) argue that even though project grants are not distributed by legislative formulae, federal agencies tend to use their own administratively determined formulae to distribute funds to each state or region of the country. For example, the Economic Development Administration (EDA) uses several basic factors to allocate its public works' grants: area size, population, the restriction that no single state can receive more than 15 percent of the total grant budget, and the criterion of at least one area project per state. Similar guidelines and restrictions are reported for HUD's administration (Hale and Palley 1981).

There are plenty of descriptions of congressional fights over alternative

formulae. For example, the extension of the Community Development Block Grant (CDBG) Program in 1977 was an example of a well calculated strategy in designing a formula grant. The factors used in allocating $3.4 billion in 1978 CDBG funds were changed chiefly by substituting for "housing overcrowding" with the "age of housing" (built prior to 1940) in a city. This formula revision heavily favored older industrial cities in the Northeast and North Central states at the expense of the newer, younger, and smaller cities in Southern and Western states. Arnold (1981) demonstrates the clear pattern of roll-call voting, between Northwestern and Midwestern congressmen versus those from the West and the South in the 1977 vote on this amendment. Arnold (1981) also describes the formula fight in 1979 for a new $1.35 billion block grant program for states, designed to help the poor to pay their heating bills. Congressmen from frostbelt districts were practically unanimous (93 percent) in their support of the formula that favored states with a colder climate, while congressmen from warmer states were equally united (96 percent) in opposition to it.

The adoption of revenue-sharing formulae in the early 1970's also reveals serious differences between the House and the Senate. In a unique compromise, the conference committee kept both formulae, and allowed each state itself to select a formula according to which it would be funded.[7] The House five-factor formula rewards urban, populous states, while the Senate two-factor per capita

[7] See Beer (1976: 127-196) on the first point, and *The 1972 Congressional Quarterly Almanac* pp. 636-652 on the second, also Dommel (1974) pp.156-164. For a full description of both formulae see (Reischauer 1975, Gonzalez 1980).

formula is more favorable to smaller and rural states. Four of the five states receiving the most in per capita terms under the Senate formula would receive less than the median per capita grants under the House formula. The coefficient of correlation between state population and allocation according to the Senate formula is negative (-.44), but positive for the House formula (.44). The smaller states are more advantaged by the Senate formula as compared to the House formula. On average, the 24 smallest continental states were supposed to receive an equivalent of 119 percent of the U.S. average per capita allocation based on the Senate formula, but only 89 percent of the average based on the House formula. The bias in favor of small states is produced by the fact that one of the two components of the Senate formula - state per capita personal income - is lower in smaller states. The correlation between state per capita income and state population can also bias allocation of other major formula grants. In particular, the two largest programs - the Medical Assistance program (Medicaid) and Aid to Families with Dependent Children (AFDC) allocate funds to states based on the formula which favors states with low per capita income (about 18 billion dollars in 1976 FY). These programs provide matching funds for states to purchase medical services for eligible low-income individuals and families. Federal matching funds A_i are determined on the basis of the federal medical assistance percentage (FMAP). For each state *i,*

$$A_i = 100 - 45 \times \left|\frac{Income_i}{Income_{us}}\right|^2$$

where $Income_i$ is the 3-year average per capita income for state *i*. Furthermore, A_i must be no less then 50 percent but no larger then 80 percent of total state expenditures on the program. Rehabilitation Services and Support (0.9 billion in 1976 FY) matching formula allocations were also based on a 3-year average of per capita income.[8] The bias in rates of reimbursement of state expenditures on Medicaid and AFDC in favor of smaller states continued over time. Thus, in 1988 FY among the 24 continental states with the highest reimbursement rates only five states were medium size - New Jersey, North Carolina, Georgia, Indiana, and Tennessee.

The analysis of major grant formulae suggests that at least two other programs may be biased in favor of small states: the Highway Research, Planning and Construction Grants and Construction Grants for Wastewater Treatment Works, together accounting for 11 billion dollars in 1976. Both these programs have a constraint that the minimum state allocation proportion should be 0.5 percent. It means that small states with population less than 0.5 percent of the total US population (0.5 percent of the US population according to the 1970 census constituted around one million people) must get more than their proportional shares of these programs' funds. Simple calculations show that as a result of these 0.5 percent minimum allocation restrictions, states with population less than one million in 1976 gained at least 0.5 billion dollars extra compared to the allocation strictly by population shares.

---

[8] For more a detailed description of the formulae, see Appendix 3.1.

For the actual 1976 gains of small states over the average level in the overall distribution of federal funds, see Table 3.2 and Figure 3.1.

[Figure 3.1 and Table 3.2 are about here]

As the data demonstrate, many small states obtained greater than average per capita shares of federal funds. Thus, the question arises about economic and political reasons leading to such a bias. The analysis of major formula-based grants suggests that smaller states could benefit more from federal grants because on average these states have lower per capita income. But this fact alone does not mean that these states would automatically receive preferential treatment in the distribution of federal grants. Even from the point of view of equalization of economic conditions across states, the per capita personal income criterium is only one of many alternatives. Moreover, such a criterion does not necessarily reflect the comparative financial needs of the states, especially if it is used in isolation, without controlling for the cost of living. It is essential that being in a minority in Congress, smaller states manage to see grant formulae legislation that leads to redistribution in favor of states with low per capita personal incomes. The 24 continental states with the highest reimbursement rates for Medicaid expenditures in 1988 were represented by only 129 congressmen. It has been suggested, therefore, that the reason smaller states benefit more from federal grants is their better representation in the Senate (Arnold 1981).

In fact, the history of adoption of the general revenue formula indicates that the Senate is more willing than the House to adopt formula criteria favorable to

smaller states. But will the bias in favor of smaller states remain when we also control for the economic conditions? To answer this question we provide a series of tests showing that smaller states indeed benefit more from distribution of federal funds, even after we take into account the differences in the per capita personal incomes across states.

3.4 Bias in the Per Capita Distribution of Funds

The analysis of actual formula allocations suggests that the major share of federal funds is distributed according to stable criteria that hardly can be changed by action of an individual congressman. Therefore, if there is any political bias in major formula grant allocation, it can be sustained only in favor of a group of states with a long-term advantage in congressional representation. The most persistent institutional difference among states exists due to the fact that smaller states are better represented in the Senate. If senators seek to get as much as possible in terms of federal money for their constituencies (states), then, because the bargaining power of smaller states is politically identical to the bargaining power of larger states, smaller states' senators should be able to secure for their constituents a higher per capita allocation of federal resources. Arguments in support of this hypothesis were first elaborated by Arnold (1981). Also, because small states have "smaller" needs in terms of total spending and, therefore, impose a lesser incremental tax burden on other states, we can expect that senators from smaller states would be more often included in coalitions when questions of non-

universal redistribution arise than their larger-state counterparts. In addition, there is a theoretical possibility that incumbent presidential candidates may prefer to allocate more per capita federal money into states with the higher per capita representation in the Electoral College. In practice, presidential candidates usually concentrate their campaign resources on larger states, as they can contribute more to putting together a winning coalition in the Electoral College, while require essentially the same "fixed" campaign costs. Clearly, an additional campaign trip to California potentially is more decisive than a similar trip to Alaska that could be taken instead. But this documented bias of campaign strategies in favor of large pivotal states may coexist with the presidential strategy of distributing federal funds to states on the basis of equal importance of each electoral college vote. Theoretically, the same amount of money could "buy" more Electoral College votes in smaller states with higher per capita numbers of delegates. Because the President must work through Congress, actual presidential impact on the geography of federal spending has not been assessed empirically. The main exception seems to be the analyses by Arrington (1969) and Wright (1973) of fund allocation during the New Deal in the 1930's. Arrington (1969) shows that the Roosevelt administration spent much more money per resident in the West than in the South, and wonders whether this was

> "...Because the Southeast was not organizationally or financially prepared to match federal funds? Because blacks counted for something less than whites in appropriating relief funds? Because the South was safe in the

Democratic fold and did not need as much economic bribing?" (p.312) Our analysis of Arrington's data reveals also that small states obtained more per capita assistance from the Roosevelt administration than larger states. The 24 largest states received on average $213, and smaller than medium size states $370 per capita in New Deal expenditures between 1933 and 1939. The ten smallest states on average obtained almost $502 per capita. It so happens that states with the higher per capita Electoral College vote have received more per capita federal funds during New Deal. The correlation between the per capita funds received by states and their per capita electoral college vote is equal to .8.[9] Each additional electoral college vote (per million of population) provided on average $35.5 additional per capita federal funds to the state.[10]

Whatever was the reason in the 1930's to provide more per capita federal assistance to smaller states, the tendency persisted over time. As Figure 3.2 demonstrates, smaller states (defined as states with fewer than eight congressional representatives) obtained more per capita federal funds in every year between 1966 and 1990.

[Figure 3.2 and Tables 3.3 and 3.4 are about here]

Table 3.4 reports the correlation between per capita federal funds received

---

[9]This conclusion, however, is subject to the same methodological criticism as we mentioned in section 3.1 with regard to building a hypothesis around the per capita data. We return to its discussion latter.

[10] t-statistic equals 8.99, 48 observations, data for per capita funds are taken from Arrington (1979), Table 3.2. Wright (1973)'s estimate of impact of variation in electoral votes per capita is lower (near $27) due to inclusion of explanatory variables.

by continental states and the number of state congressional (both in the House and the Senate) representatives per capita. It was between .61 and .76 during the period. Moreover, the inclusion into the regression (with state per capita revenue from federal sources as a dependent variable) of an additional independent variable - the state per capita personal income - in all but two years during the period does not improve the fit of the model. This result corresponds to that of Atlas *et al.* (1995) who report a significant positive correlation between per capita representation in the Senate and the net federal spending received by states.

While a year-by-year analysis strongly supports the hypothesis that better represented states receive more per capita revenue from federal government, such analysis may be compromised by certain econometric problems that we preliminary mentioned before. Uslaner (1976, 1977) argues that it may be inappropriate to use per capita data on both sides of the equation. The fact that both dependent and independent variables are related to the size of the state's population can potentially distort statistical analysis. Uslaner (1976) divided several series of completely uncorrelated randomly generated numbers by a variable he called 'total population' and, as a result, the new 'per capita' variables became highly correlated. Other series of highly correlated variables became unrelated to each other after being adjusted into the 'per capita' values. In our case, one can argue that a collection of randomly generated variables with values bounded by actual annual minima and maxima of federal funds transferred to any single state, when divided by actual state populations, could be highly correlated

with the inverses of state populations. In fact, a series of 250 randomly generated samples based on the assumption that federal funds were allocated to states *randomly* (actual amounts of transfers were drawn from uniform distributions) produced a correlation between the per capita 'federal funds' and the inverse of state populations greater than .8 in most cases (Table 3.5). As the per capita representation is highly correlated with the inverse of total state populations, it is not surprising that similar results are obtained when we regress the 'per capita' randomly generated amounts of federal transfers on the per capita representation. Thus, Uslaner's (1976) argument that it is inappropriate to use per capita values simultaneously as dependent and independent variables directly applies to the analysis of the per capita federal funds distribution as a function of congressional representation. Therefore, we must respecify the statistical test intended to measure a possible bias in favor of better represented states in a way that would allow us to avoid the per capita measured variables at least on one side of the regression equation.[11]

In addition, the analysis of differences in states' per capita revenue from federal sources assumes that all states are equally interested in higher per capita government funds in general, and federal funds in particular. But more conservative states may prefer overall smaller government than liberal states. In

[11] One can suggest to consider a model with a dummy variable corresponding to smaller states. In fact, Figure 3.2 reproduces such analysis by showing differences in per capita federal funds distributed to smaller and larger states for every year between 1966 and 1990. However, it is obvious that such dummy is highly correlated with inverse of total population.

conservative states relatively smaller per capita revenue from federal sources may be a consequence of state policy to limit the role of government and not go for the matching grants. In other words, conservative states may demonstrate lower 'demand' for available federal funds. While year-by-year estimates of conservatism are not available, application of an aggregate index of ideological conservatism (Erikson, Wright, and McIver 1993) suggests that between 1976 and 1988 more conservative states indeed obtained less per capita federal funds (see Figure 3.4). Therefore, we also need to take into account differences across states in the overall role they grant the government.

3.5 The Test

Difficulties resulting from the use of the per capita variables and from the need to control for the scope of the state's governmental activities are not intractable. Instead of comparing the states' per capita revenue from federal government, we can analyze the share of state revenue coming from federal sources. This variable does not depend on the size of the state's population. It also provides some control for differences across states in the scope of governmental activities, as it indicates the relative importance of federal funds. On the other hand, we may expect that prosperous states with potentially higher revenue base would rely less on the federal government in financing state activities, assuming that own-source state revenue increases proportionally with increase in personal income. Fossett (1983) argues that unless local electoral officials have pressing reasons to do so, they will not pump large amounts of federal money into local

operating budgets because of the high uncertainty associated with federal aid. Funding cutbacks or changes in regulations may leave officials with more claimants than they can satisfy with local funds. But wealthier states also have greater fiscal capabilities to meet matching requirements imposed by many federal programs. Therefore, the overall issue of how the state's wealth is related to the proportion of federal funds in state budget becomes unclear and warrants empirical examination. It turns out that states with higher then median per capita incomes indeed have lower proportions of their revenue coming from federal sources. But if our bargaining hypothesis holds and it is true that in the long run smaller (better represented in the Senate) states are consistently more successful in obtaining federal funds, and therefore, their officials are more certain that the higher flow of federal funds will continue, their proportion of state revenue coming from federal government should be higher. In other words, in the long run small states may restructure their revenue sources in favor of federal governmental sources reflecting their stronger bargaining status.

In order to test this hypothesis, we need to combine cross section and time series data. In this study we consider data for 48 continental states for twenty-five years (1966-90), a total of 1200 observations. The dependent variable, proportion of total state revenue financed from federal sources, varies between 14.6 and 47.5 percent for different states during the period. The first independent variable is the number of state representatives in Congress (House and Senate) per million of state population. The range of this variable is between 1.6 and 9.4. The second

independent variable is state average per capita personal income adjusted for inflation. The range of real per capita personal income (in 1983 dollars) is between $5,470 and $17,900.

We, thus, estimate the following general model:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} , \qquad (1)$$

where:

Y_{it} = state *i*'s proportion of revenue financed by the federal government, (percent) :

$$100 \times \frac{State_i \ Revenue \ supplied \ by \ Federal \ Government}{State. \ Total \ Revenue}$$

X_{1it} = the combined number of congressmen and senators representing state *i* per one million of the population in period *t*:

$$\frac{State_i \ Number \ of \ Congressmen \ plus \ two \ Senators}{State_i \ Total \ Population}$$

X_{2it} = state *i*'s average per capita income in period *t*.

In order to ensure that the data demonstrate a consistent pattern over time, we first estimate equation (1) separately for every year between 1966 and 1990. As Table 3.6 reports, regression analysis for almost every year produces statistically significant estimates for coefficients on the political representation variable. Year-by-year regressions estimate that during 1966-90 states with an

additional representative in Congress (per million of population) had a higher proportion of state revenue coming from the federal government (between 2.71 and 0.95 percentage points for every extra representative). In our view, this result suggests that we may pool annual cross sections to obtain more precise estimates.

There are several statistical methods that can be applied to cross-section time series (panel) data (Judge *et al.* 1988, Hsiao 1986, Dielman 1989). The first step in all methods is to perform an OLS estimation of the model. In our case, all OLS coefficients are statistically significant (see Table 3.7). This means that the hypothesis that proportions of state revenues from the federal government were greater in better represented states (controlling for differences in real per capita personal income) is supported.

Further improvement can be achieved by taking into consideration specific effects for particular states and including state-specific "dummy" variables to account for those effects. This approach assumes that the fraction of state revenue that comes from federal sources is proportional to the level of state representation and per capita personal income, and is influenced by some state-specific factors which we cannot observe. We also assume that, while these factors are specific for each state, they are constant ("fixed") within each state across time. By introducing state-specific dummy variables, we can control for the impact of these fixed factors (Judge et al. 1988 pp.468-469; Hsiao 1986 pp. 29-32). Our model now takes the form:

$$Y_{it} = \beta_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} , \qquad (2)$$

where β_i 's are intercepts for each state *I*.

The results of this analysis are reported in Table 3.7. Briefly, we find the impact of representation on the proportion of state revenue from federal sources statistically significant at the .001 level. Each additional representative in Congress (per million of population) leads to a 2.2 percentage point increase in the proportion of state revenue from the federal government. At the same time, an additional $1000 in state per capita personal incomes reduces the proportion of federal funds in the state budget by 1.1 percentage points.[12]

Another way of analyzing time-series cross-sectional data is to build a model on a slightly different set of assumptions. Once again consider the specification (1):

$$Y_{it} = \beta_1 + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it} ,$$

but now, instead of assuming that β_1 is fixed for all states, assume that they are independent random variables with a mean β_1 and variance σ^2_μ. Therefore, each intercept can be expressed as:

$$\beta_{1i} = \beta_1 + \mu_i ,$$

where

---

[12] We also test the hypothesis that all intercepts are in fact equal. If the intercepts for different cross sections (countries) are different, then the simple OLS estimators may be misleading (see Hsiao 1986). The usual method for testing the hypothesis that all intercepts are equal is to contrast the residual sum of squares from a restricted (all intercepts are set to be equal) model with an unrestricted model - a version of an F-test. Based on this F-test, we can reject the null hypothesis that all intercepts are equal at the .001 significance level.

$E[\mu_i] = 0$,

$E[\mu^2_i] = \sigma^2_\mu$, and

$E[\mu_i \mu_j] = 0$ for $I \neq j$.

It is further assumed, that μ_i's are uncorrelated with ε_{it}'s, i.e., $E(\mu_i \varepsilon_{it}) = 0$.

Our initial model now becomes

$$y_{it} = \beta_0 + \beta_1 x_{1it} + \beta_2 x_{2it} + (\mu_i + \varepsilon_{it}),$$

where β_0 is a common intercept for all observations and μ_i's are "random" intercepts for each cross-sectional group of observations. It is easy to show that for each cross-sectional unit the composite disturbance vector has mean zero. The structure of these variance-covariance matrices is such that for a given cross-sectional group, the correlation between any two error terms in different time periods is the same. Note that the correlation is also assumed to be constant for all cross-sectional units. In our case, cross-sectional units are states, and to justify the model's assumptions, we may think of the problem in terms of some exogenous shocks leading to long-term changes in distribution of federal funds, such that impacts of these disturbances remain constant over time.

Because the variance-covariance matrix in the above model is not a scalar-identity type, the assumptions of the OLS model are violated. As long as we allow the random effect assumptions, OLS is not an efficient estimator. Instead, we must use the generalized least squares estimator, which takes into account the form of variance-covariance matrices V and Φ (V is a diagonal element of Φ):

$$\beta = (X'(\Phi^{-1}X)^{-1}X'\Phi^{-1}y.$$

In practice, of course, V and Φ are unknown, but we can use information obtained from the fixed effect model to estimate Φ. First, from the fixed effect model we calculate an estimator for σ^2_e. Then we calculate the means of our variables for each cross-sectional group and do the OLS for the means. Regression on these means allows us to estimate σ^2_μ. With estimators of σ^2_e and σ^2_μ at hand, we construct an estimator for V and Φ, transform our data, and obtain the GLE (for more details see Judge *et al.* 1988, pp.486-487).

As we report in Table 3.7, the random effect model also supports our hypothesis that the fraction of state revenue financed by the federal government is proportional to the state representation and per capita income. The random effect model estimates that states with an additional representative have a proportion of state revenue from the federal government higher by 1.9 percentage points. An additional $1000 in state per capita personal incomes reduces this proportion by 1.19 percentage points. Thus, we can conclude that all statistical models support our hypothesis.

3.6 Conclusion

Given the institutionalization of federal bargaining over the allocation of funds in the US primarily as one negotiated first among all unit representatives, with the outcome presented to the nationally elected executive ('center' by our definition), here we test and confirm a hypothesis that representationally based bargaining strength of federal units should systematically translate into (moderate)

distributional benefits. Briefly, even in the presence of economic controls, the proportion of state revenue coming from the federal government over time is higher in smaller (better congressionally represented) states.

Data Sources:

[1] State Revenue: *Governmental Finances* and *State Finances.* Department of Commerce, Bureau of Census, various years.

[2] Implicit Price Deflator for State and Local Government Purchases of Goods and Services: *The National Income and Product Accounts* and *Survey of Current Business*, various years.

[3] Personal Income, Population: *Statistical Abstract of the United States*, Department of Commerce, Bureau of the Census, various years.

References

Adams, Jerome, Beyle, Thad and Dusenbury Patricia. 1979. "The New 'Dual Formula' for Community Development Funds," *Popular Government* 44: 33-37.

Anagson, Theodore. 1980. "Politics in the Distribution of Federal Grants: The Case of the Economic Development Administration," In *Political Benefits* ed. Berry S. Rundquist. Lexington MA: Lexington Books.

Anton Thomas. 1989. *American Federalism and Public Policy: How the System Works*. Philadelphia PA: Temple University Press.

Arnold, R. D. 1979. *Congress and the Bureaucracy.* New Haven: Yale University Press.

Arrington. 1979. "The New Deal in the West: a Preliminary Statistical Enquiry." *Pacific Historical Review* 38: 311-316.

Atlas, Cary M., Thomas W. Gilligan, Robert J. Hendershott, and Mark A. Zupan. 1995. "Slicing the Federal Government Net Spending Pie: Who wins, Who Loses and Why," *American Economic Review* 85.

Cohen, L. R. and R. G. Noll. 1991. *The Technology Pork Barrel.* Washington, D.C.: The Brookings Institute.

Collie, M. P. 1988. "Universalism and the Parties in the U.S. House of Representatives," *American Journal of Political Science* 32: 865-883.

Copeland, Gary and Meier Kenneth 1984. "Pass the Biscuits Pappy: Congressional Decision Making and Federal Grants," *American Politics Quarterly* 12: 3-2.

Emery, Danuta. 1980. Campell Valencia and Freedman Stanley "Distributing Federal Funds: The Use of Statistical Data," *Statistical Reporter.* December: 73-90.

Feldman, P. and J. Jondrow. 1984. "Congressional Elections and Local Federal Spending," *American Journal of Political Science* 28: 147-163.

Fiorina, M. P. 1981. "Universalism, Reciprocity, and Distributive Policy Making in Majority Rule Institutions," In *Research in Public Policy Analysis and Management*, ed. J. Crecine. Greenwich, CT: JAI Press.

Friedland, Roger and Herbert Wong. 1983. "Congressional Politics, Federal Grants, and Local Needs: Who Gets What and Why?" In *The Municipal Money Chase: The Politics of Local government Finance,* ed. Sbragia Alberta, Boulder, CO: Westview.

Gist, John and Hill Carter. 1984. "Political and Economic Influences on Bureaucratic Allocation of Federal Grands: The Case of Urban Development Action Grants," *Journal of Urban Economics* 16: 158-172.

Gonzalez, Maria. 1980. "Characteristics of Formulas and Data Used in the Allocation of Federal Funds," *The American Statistician.* 34: 200-211.

Gottschalk, Peter T. 1981. "Regional Allocation of Federal Funds," *Policy Analysis.* Spring: 183-197.

Gradym, Dennis O. "Gubernatorial Behavior in State-federal Relations," *Western Political Quarterly* 40: 305-18.

Hale, George E. And Marian Lief Palley, 1981. *The Politics of Federal Grants.* Washington, D.C. Congressional Quarterly Press.

Hedge, David. 1981. "The Effects of Alternative Grant Mechanisms on the Distribution of Federal Aid to Cities," *American Review of Public Administration* 15:127-142.

Johnston, Ronald. 1980. "The Geography of Federal Spending in the United States of America," Research Studies Press.

Johnston, Ronald J. 1978. "The Allocation of Federal Money in the United States: Aggregate Analysis by Correlation," *Policy and Politics.* 6: 279-297.

Niou, Emerson and Peter C. Ordeshook. 1985. "Universalism in Congress," *American Journal of Political Science* 29: 246-290.

Palmer, Kenneth. 1984. "The Evolution of Grant Policies," In *The Changing Politics of Federal Grants*, eds. Brown Lawrence, James Fossett and Palmer Kenneth. The Brookings Institution. Washington D.C.: 5-53.

Plott, C. 1968. "Some Organizational Influences of Urban Renewal Decisions," *American Economic Review* 58: 306-321.

Ray, Bruce. 1977. "Congressional Influence and the Geographic Distribution of Federal Spending," *Ph.D. Dissertation.* Washington University. St. Louis. Missouri.

Ray, Burce. 1980. "Congressional Promotion of District Interests: Does Power on the Hill Really Make a Difference?" In *Political Benefits*, ed. Rundquist, Berry. Lexington, MA: Lexington Books.

Reid, Norman. 1980. "Politics, Program Administration, and the Distribution of Grants-in-Aid: A Theory and a Test," In *Political Benefits*, ed. Rundquist, Berry. Lexington, MA: Lexington Books.

Rich, Michael. 1991. "Targeting Federal Grants: The Community Development Experience, 1950-1986," *Publious: The Journal of Federalism.* 21: 29-49.

Rich, Michael. 1989. "Distributive Politics and the Allocation of Federal Grants," *American Political Science Review*, 83,1: 193-213.

Ritt, Leonard.1976. "Committee Position, Seniority, and the Distribution of Government Expenditures," *Public Policy.* XXIV. Fall: 463-489.

Rundquist, Barry and David Griffith. "An Interrupted Time-Series Test of the Distributive Theory of Military Policy-Making," *Western Political Quarterly.* 24: 620-26.

Rundquist, Barry, Lee Jeong-Hwa and Luor Ching-Jyuhn. 1995. "States vs. Districts as Units of Analysis in Distributive Studies: An Exploration," prepared for delivery at the 1995 Annual Meeting of Midwest Political Science Association, Chicago.

Shapek, Raymond. 1981. *Managing Federalism: Evolution and Development of the Grant-in-Aid System.* Community Collaborators. Virginia.

Stanfield, Rochelle L. 1978. "Playing Computer Politics with Local Aid Formulas," *National Journal.* December: 1977-1981.

Stein, Robert. 1981. "The Allocation of Federal Aid Monies: The Synthesis of Demand-side and Supply-side Explanations," *American Political Science Review.* 75: 334-43.

Stein, Robert and Bickers, Kenneth. 1994. "Universalism and the Electoral Connection: A Test and Some Doubts," *Political Research Quarterly* 47.

Stein, Robert and Bickers, Kenneth. 1995. *Perpetuating the Port Barrel: Policy Subsystems and American Democracy.* Cambridge University Press.

Stingler, G. J. 1976. "The Sizes of Legislatures," *Journal of Legal Studies.* 5: 17-34.

Thompson, Joel A. 1965. "The Politics of the Executive," In *Politics in the American States* ed. Jacob Herbert and Kenneth N. Vines, Boston: Little Brown.

U.S. General Accounting Office. 1987. *Grant Formulas: A Catalog of Federal Aid to States and to Localities.* Washington, D.C.: GAO/HRD-87-28.

Uslaner, Eric. 1976. "The Pitfalls of Per Capita," *American Journal of Political Science*, XX, 1 February.

Wright, Deil. 1982. *Understanding Intergovenment Relations.* Second Edition. Brooks/Cole.

APPENDIX 3.1: Analysis of Selected Fund Distribution Formulae in 1976

A1: Aid to Families With Dependent Children

States can choose the highest of the two numbers calculated by different formulas:

1) $R_1 = \frac{5}{6}A + FP(B - A)$, where

$A = \min[18N_m, (P_m + P_{FC})]$,

$B = \min[P_m, 32N_m] + \min[P_{FC}, 100N_{FC}]$, and

$FP = 100 - 50(\frac{\bar{I}_i}{\bar{I}_{US}})^2$, but $50\% \leq FP \leq 65\%$.

Where the notations mean the following:

$\bar{I}_i$ and $\bar{I}_{US}$ - the 3-year average per capita income for state *I* and for the U.S. as published by the Bureau of Economic Analysis;

N_m and N_{FC} - numbers of recipients receiving money payments, and children receiving foster care;

P_m and P_{FC} - allowable money payments, and payments for foster care;

FP - federal percentage of reimbursement.

2) $R_2 = FMAP(P_m + P_{FC}0)$, where

$FMAP = 100 - 45(\frac{\bar{I}_i}{\bar{I}_{US}})^2$, but $50\% \leq FMAP \leftarrow = 83\%$

(*FMAP* stands for federal medical assistance percentage).

A2: Highway research, planning and construction

For primary highway systems the formula is:

$\frac{2}{9}(\frac{A_i}{\sum' A_i}) + \frac{2}{9}(\frac{R_i}{\sum R_i}) + \frac{2}{9}(\frac{D_i}{\sum D_i}) + \frac{1}{3}(\frac{UR_i}{\sum UR_i})$, but greater than .5%, where the notation mean:

A_i - area of state;

R_i - rural population of state from the Census of Population;

D_i - rural delivery route mileage and intercity mail route mileage certified by Postmaster General;

UR_i - urban population for places of 5000 or more, Census of Population.

For interstate system (resurfacing, restoration and rehabilitation) the formula is:

$\frac{M_i}{\sum M_i}$; but with the minimum state allocation of .5%, where

M_i - lane miles in use five years or more from state's inventory of interstate system.

For high-hazard locations and roadside obstacles, the allocation formula is:

$\frac{3}{4}(\frac{P_i}{\sum P_i}) + \frac{1}{4}(\frac{PM_i}{\sum PM_i})$, but not less than .5% per state, where

P_i - total population, Census;

PM_i - public road mileage, state inventory.

This program is systematically biased in favor of small and compact states because of a high minimum threshold for federal allocation to states.

A3: Construction grants for wastewater treatment works

General policy: Funds are distributed based on population and need, but no state shall receive less than 5% of the total funds.

House formula:

$$H_i = .5\frac{N_{ai}}{\sum N_{ai}} + .25\frac{N_{bi}}{\sum N_{bi}} + .25\frac{P_i}{\sum P_i}, \text{ where}$$

$N_{ai}ai$, N_{bi}, and $N_{ci]}$ - three components of need, determined on the basis of

a) severity of pollution problems;

b) existing population affected;

c) need for preservation of high quality waters;

d) the state's opinion about priority needs,

from the needs surveys and population statistics and projections.

Senate formula:

1) $S_{i2} = \max[\frac{P_i}{\sum P_i}, \frac{N_{ci}}{\sum N_{ci}}]$, $\forall\ i$;

2) Set $S_{i2} = S_{i1}[\frac{100\%}{\sum S_{i1}}]$, so that $\sum S_{i2} = 100\%$;

3) Check $S_{i2} \geq .5\%$, $\forall\ i$;

4) Check $S_{i2} \geq \min[\frac{P_i}{\sum P_i}, \frac{N_{ci}}{\sum N_{ci}}]$, $\forall\ i$;

5) Check $S_{i2} > .75(.0110)$, $\forall\ 1i$;

6) Set $S_i = S_{i2}[\frac{100\%}{\sum S_{i2}}]$, so that $\sum S_{i2} = 100\%$.

Compromise formula:

$$A_i = \frac{1}{2}H_i + 1\frac{I}{2}S_i.$$

Tables:

Table 3.1. 1976 Annual Budgets of the 12 Largest Federal Programs

Program title	1976 FY, billions
Medical assistance program (Medicaid)	10.7
AFDC	7.3
General revenue sharing	6.3
Highway research, planning and training	6.2
Comprehensive employment and training	5.9
Construction grants for wastewater treatment	4.9
Social services for low-income recipients	2.4
Community development block grants	2.4
Educationally deprived children	1.6
Rehabilitation services and facilities	.9
School assistance in federally affected areas	0.8
Law enforcement assistance	0.5
Total:	50.1 (83% of the total)

Table 3.2. Per Capita Levels of Federal Funding for Small States in 1976

State	Population	Per Capita	Gains
Wyoming	0.38	454.71	260.05
Vermont	0.48	358.13	163.46
Delaware	0.59	211.75	17.09
Nevada	0.62	218.71	24.05
North Dakota	0.64	238.5	43.84
South Dakota	0.68	260.5	65.84
Montana	0.75	309.49	114.83
New Hampshire	0.83	174.67	-19.99
Idaho	0.83	234.25	39.59
Hawaii	0.89	335.67	141
Rhode island	0.94	248.57	53.91
Maine	1.07	237.59	42.93
New Mexico	1.16	241.38	46.72
Utah	1.24	267.07	72.41
Nebraska	1.54	186.97	-7.69
West Virginia	1.84	264.28	69.62
Arkansas	2.16	219.95	25.29

Note: Gains are calculated as differences between the average for 48 continental states per capita and the state average. The national average is $194.66 in 1976 dollars.

Table 3.3. Average Per Capita Revenue Received from the Federal Government by Smaller[1] and Larger[2] States

Year	Smaller States	Larger States
66	291	178
67	297	194
68	306	203
69	301	211
70	309	220
71	338	244
72	349	270
73	367	292
74	333	271
75	350	283
76	380	298
77	381	304
78	392	310
79	377	310
80	393	312
81	384	311
82	330	279
83	328	276
84	332	289
85	347	301
86	360	316
87	356	309
88	355	310
89	368	313
90	379	325

[1] States with 10 or less Electoral College Votes

[2] States with more then 10 Electoral College Votes

Table 3.4. Correlation between State Per Capita Revenues Received from the Federal Government and State Representation per Million Residents[3]

Year	Correlation r^2
66	0.69
67	0.68
68	0.72
69	0.69
70	0.66
71	0.65
72	0.65
73	0.62
74	0.63
75	0.68
76	0.75
77	0.74
78	0.76
79	0.68
80	0.72
81	0.72
82	0.66
83	0.64
84	0.64
85	0.63
86	0.65
87	0.61
88	0.64
89	0.69
90	0.64

[3] State Electoral College vote divided by state population

Table 3.5. Correlation between Randomly Generated State Per Capita 'Revenue' from Federal Sources and State Representation per Million Residents[4]

Year	Minimum r^2	Maximum r^2	Average r^2
66	0.53	0.88	0.76
67	0.6	0.91	0.75
68	0.8	0.92	0.85
69	0.77	0.92	0.85
70	0.8	0.9	0.84
71	0.64	0.85	0.74
72	0.68	0.81	0.76
73	0.62	0.86	0.76
74	0.78	0.92	0.83
75	0.65	0.73	0.7
76	0.73	0.89	0.84
77	0.84	0.9	0.88
78	0.55	0.87	0.78
79	0.76	0.89	0.82
80	0.71	0.87	0.78
81	0.71	0.85	0.76
82	0.72	0.84	0.78
83	0.67	0.9	0.79
84	0.7	0.85	0.78
85	0.72	0.88	0.78
86	0.63	0.82	0.69
87	0.72	0.79	0.76
88	0.55	0.81	0.68
89	0.67	0.89	0.76
90	0.72	0.88	0.81

Note: Ten Series of "Values of State Revenue from Federal Sources" are randomly generated (based on uniform distributions with actual minimum and maximum values of State Revenue from Federal Government) for every year between 1966 and 1990 as the limits are then divided by actual state populations.

[4] State Electoral College vote divided by state population

Table 3.6. Effect of Per Capita State Representation and Per Capita Personal Income on Proportion of State Revenue from Federal Government, between 1966 and 1990 FY

Year	Constant	Representation per million	Income per capita	Corrected R-square
66	36.07	2.27	-1.9	0.48
	-7.68[5]	-4.06	(-4.10)	
67	37.97	2	-1.91	0.43
	-6.96	-3.37	(-3.59)	
68	36.92	1.8	-1.71	0.47
	-8.74	-4.28	(-4.06)	
69	35.09	1.87	-1.63	0.45
	-7.78	-4.05	(-3.75)	
70	39.96	1.42	-2.02	0.43
	-8.7	-3.04	(-4.51)	
71	44.32	1.25	-2.24	0.39
	-8.78	-2.77	(-4.59)	
72	39.14	1.38	-1.72	0.37
	-8.65	-3.46	(-3.69)	
73	38.19	1.71	-1.64	0.4
	-8.52	-4.8	(-3.48)	
74	38.48	1.41	-1.7	0.42
	-9.22	-4.65	(-4.10)	
75	40.67	1.29	-1.79	0.41
	-8.13	-3.28	(-3.74)	
76	39.44	1.97	-1.77	0.46
	-8.14	-4.6	(-3.94)	
77	40.52	1.96	-1.88	0.59
	-10.29	-5.76	(-5.26)	
78	43.18	2.01	-2.14	0.61
	-11.48	-5.55	(-6.25)	
79	43.57	1.57	-2.07	0.54
	-12.31	-4.53	(-6.44)	

[5] t-statistics

Table 3.6 (continued)

Year	Constant	Representation per million	Income per capita	Corrected R-square
80	44.33	1.67	-2.08	0.48
	-10.41	-4.21	(-5.53)	
81	37.89	1.5	-1.42	0.33
	-9.36	-3.35	(-4.15)	
82	36.68	0.88	-1.38	0.27
	-9.52	-2.13	(-4.13)	
83	37.05	0.8	-1.43	0.33
	-10.69	-1.71	(-5.25)	
84	34.75	0.91	-1.32	0.28
	-9	-1.85	(-4.16)	
85	37.49	0.63	-1.43	0.28
	-9.01	-1.15	(-4.57)	
86	36.86	0.67	-1.27	0.35
	-11.19	-1.47	(-5.33)	
87	37.53	0.74	-1.39	0.42
	-10.48	-1.41	(-5.66)	
88	33.73	0.88	-1.1	0.36
	-9.48	-1.76	(-4.56)	
89	31.42	1.22	-0.97	0.38
	-9.21	-2.31	(-4.32)	
90	32.75	0.89	-0.96	0.32
	-8.72	-1.67	(-3.94)	

Table 3.7. Regression Estimates of the Shares of State Revenues[6] from Federal Sources to Total State Revenues (Percent) for 48 Continental American States between 1966 and 1990 FY (n=1200)

	OLS	Fixed Effect Model	Random Effect Model
Constant	36.68	n/a[8]	32.5
	(43.3)[7]		(24.8)
Representation per	1.45	2.16	1.9
million residents[9]	(13.2)	(9.0)	(9.71)
Personal income per	-1.47	-1.12	-1.19
capita	(21.7)	(-12.6)	(-14.7)
Corrected R^2	0.45	n/a[10]	n/a[22]

[6] Based on *State Government Finances,* different years.

[7] T-statistics.

[8] Multiple intercepts.

[9] State Electoral College Vote divided by state population.

[10] Corrected R-square cannot be used in this model.

Figures:

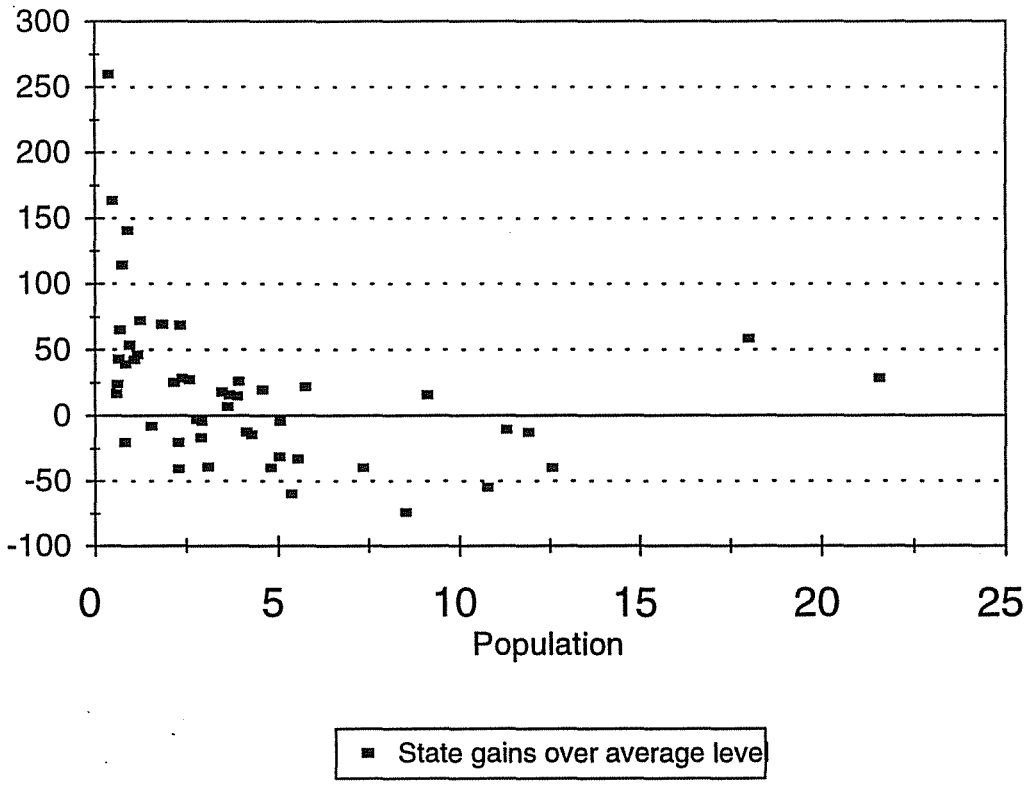

Figure 3.1. Difference between the National Average and the State Per Capita Allocation of Federal Funds in 1976.

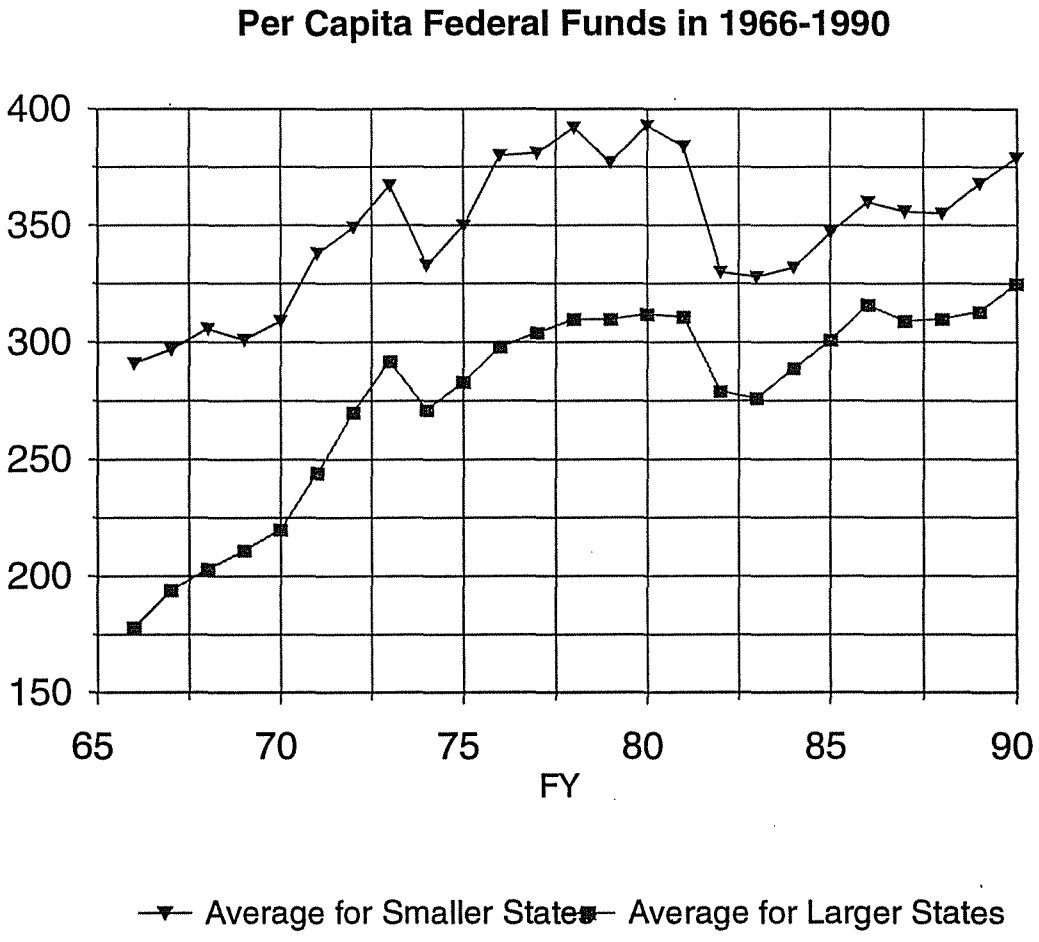

Figure 3.2

Note: Smaller States are States with 10 or less Electoral College Votes.

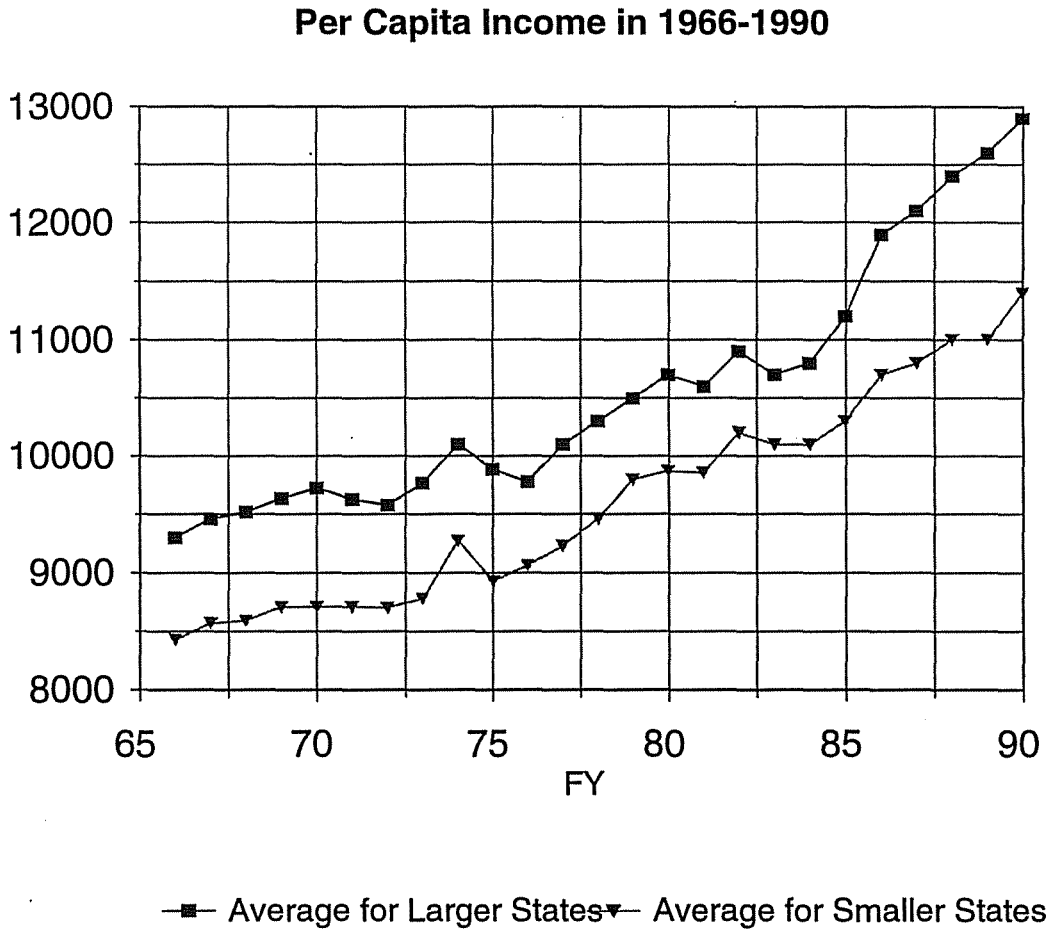

Figure 3.3

Note: Smaller States are States with 10 or less Electoral College Votes.

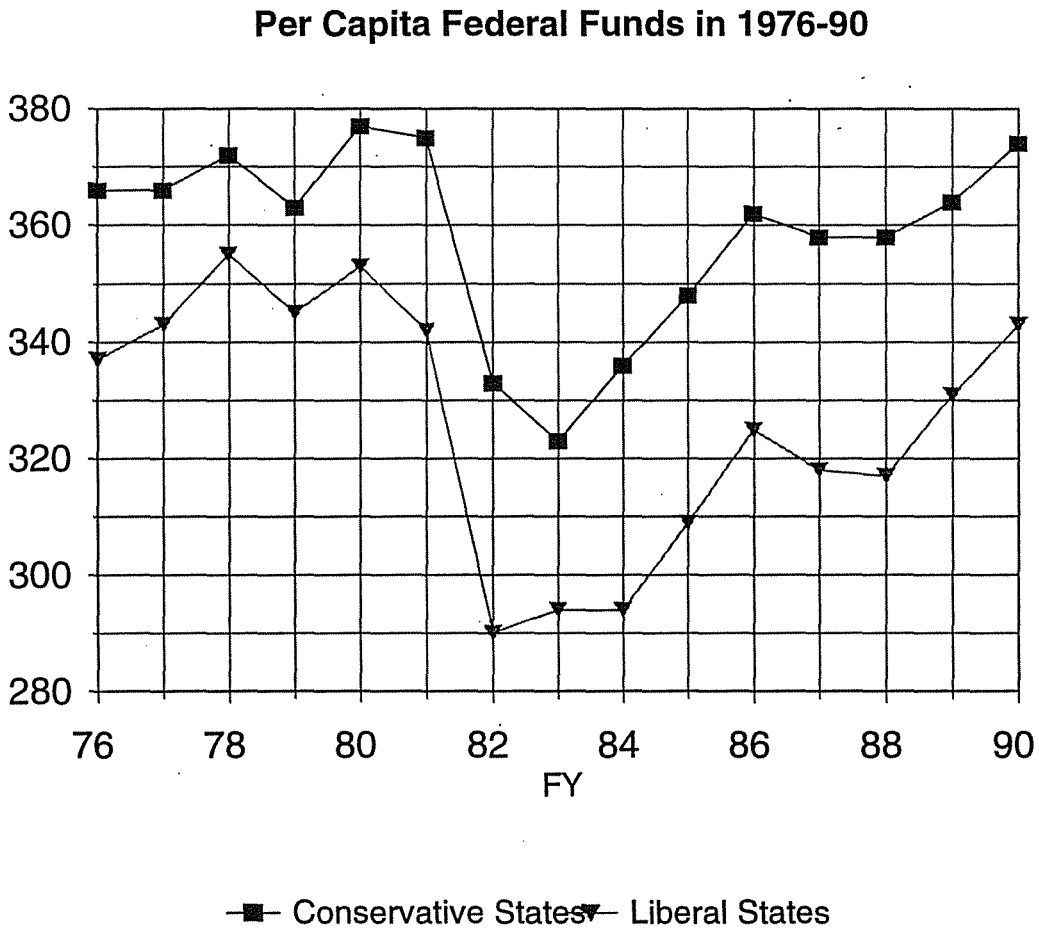

Figure 3.4

Note: Conservative States are States with higher than average index of conservatism (Erikson, Wright and McIver 1993).

CHAPTER 4. ASYMMETRIC FEDERAL BARGAINING IN A NEW FEDERATION: THE CASE OF RUSSIA

This chapter addresses the development of the political system in Russia as it is affected by the asymmetric bargaining nature of Russian federalism. The analysis is built on the theoretical argument offered in Chapter 1 - namely, that the problem of federal stability is a problem of federal bargaining over equilibrium selection. We argue that economic, constitutional, and electoral developments are to a large degree accountable for pushing Russia toward the predominantly bi-lateral institutionalization of federal bargaining which contributes to deepening of economic and political polarization among Russian regions.

In particular, we show a connection between the regional patterns of voting and several types of asymmetries among the federal subjects in Russia. The asymmetries can be sub-divided into three major categories. First, there are asymmetries caused by the unevenness of preexisting economic conditions of the regions. Second, there are adjustments in economic circumstances of regions caused by the ongoing manipulation by the center of economic policies with regard to them. And, third, the asymmetries affecting regional vote are further enhanced by the bargaining process, in which some members of the federation emerge as winners at the expense of the others.

In the introduction we noted that an alternative approach especially popular among economists is to identify the federal problem as a problem of a public good provision, and, therefore view federalism as a form of a public

good. Federalism as a public good is potentially beneficial for participants, but they may have incentives to "free ride." Therefore, the model of federalism as a public good suggests that federal stability requires sufficient incentives for participants of the federation to overcome the "free rider" problem.

We, however, argue in Chapter 1 that even if federal arraignments are beneficial and there are sufficient incentives to keep a federation together, and even if the "free rider" problem is solved, such a federation nevertheless can collapse. We base our argument on the problem of equilibrium selection. Arguably, in each federation there could be many potentially stable at the implementation state, thus, equilibrium federal arraignments. But while there are many potentially stable federal arrangements, each specific equilibrium could be more or less favorable for a particular participant. When there are multiple equilibria and they are not all equivalent, participants would try to select the best one from their own point of view. We argued also that it is the process of equilibrium selections that constitutes federal bargaining. Each participant of federation has incentives to move the federation to a new equilibrium and change federal arrangements to its own benefit. However, once the decision is made and the allocation is chosen that would be an equilibrium in the continuation game, it could be followed by a prolonged period of federal stability. The problem is that in the presence of many potential equilibria, participants may fail to reach any of them if they fail to coordinate their actions.

The two conclusions from the Chapter 1 are relevant to the development

of federalism in Russia. First, federal bargaining is an ongoing process, an essential element of politics in any federation. Some regions would always try to move the federal system to a different equilibrium allocation, if only allowed. Therefore, the equilibrium selection through federal bargaining must be institutionalized and restricted. In particular, constitutional arrangements must guarantee that at least one equilibrium allocation is chosen. Second, the most dangerous period for federal stability is when the process of federal bargaining starts or is reopened. Even a stable and efficient federation can collapse if its participants for some reason start renegotiating federal arrangements, for example, by amending the federal constitution. The most dangerous period of the federal history is the first few years since its inception, the initial federal bargaining.

In 1997 the Russian Federation was still in the process of initial federal bargaining. The federal center and Russian regions were seeking to establish new principles of federal integration. In 1991-1992, when political and economic reforms were just starting the danger of disintegration of Russia was real: several republics and regions declared independence and threatened to secede from the federation. The federal "solution" offered for Russia at the time was the development of a highly asymmetric federalism where different regions and republics would face different cost and benefits of federation and would have different economic and political rights. Moreover, these asymmetries were allowed to develop endogenously, through bargaining. Currently, the status, the position of each region in the federation, is the result

of continuous bilateral negotiations between it and Moscow. The federal center (federal executive) sign special treaties with regions, where both sides define on an ad hoc basis some resolutions for issues of property rights, natural resources, tax collection, and fiscal transfers.

In this chapter we analyze in details the process of federal renegotiation in the new Russian Federation and identify economic and political incentives both for the federal center and the regions to continue renewing the process of federal bargaining. We argue that in Russia federal bargaining in its current form creates a highly asymmetric and potentially unstable form of interactions between the federal center and regions. As regional economic success strongly depends on successful bargaining with the federal government or on the personal ability of a regional leader to secure economic benefits for the region, and as Russia develops into a federation based on bilateral bargaining and negotiations between the federal government and republics (regions), it affects the development of its new party system, in particular, parties' regional electoral strengths. Thus, in section 4.4 we formulate and evaluate several hypotheses connecting Russian federal economic policy to its forming party system. As there inevitably were winners and losers in the economic reform, the traditional positions of regions in relative economic standing were drastically upset, further increasing regional inequalities while transforming former 'winners' into current 'losers.' This affected the political choices of political elites and electorates in those regions. Looking at the data from the 1991-1996 elections, we show that the winning or losing status of a Russian region

impacts both the character and the dynamics of its electorate. In particular, regions that are losing economically respond well to national parties that promise a stronger center and 'fairness' in the allocation of economic resources. At the same time, we observe the growing strength of regional parties and political movements that offer themselves as representatives of the narrow interest of a particular region or territory.

Our analysis also offer an explanation for the clearly regional pattern of the communist victories in Russia. Communists, ideology aside, are a national party advocating strong central government and equalization policies through governmental transfers to disadvantaged regions. Our argument allows to explain the absence of strong - in terms of their electoral support - national parties in the democratic camp. Indeed, it appears that the only national force confronting the communists is the integrated national-regional incumbent governmental organization.

In this chapter we also address the claim that regional governors deliver votes in exchange for favors from the center. Such claim has acquired a status of almost axiomatic truth among the students of post-communist Russia, which fact effectively places federal bargaining in the center of Russian political process. Here we mostly reenforce this claim. In this chapter, and especially in section 4.5.1, we analyze different explanations of the regional leadership's ability to 'deliver' votes in elections. These explanations require us to assess the specific circumstances in which regional electorates found themselves following the abrupt dissolution of the Soviet Union, the role which Russia as

one of the USSR republics played in bringing first the federal issue and then the federal conflict to the forefront of the Soviet politics and a strongly differentiated regional impact of the economic reform. We argue, that regional electorates did not have to be originally divided by any preexistent partisan affiliations but could be simply responsive in national elections to the coordinating efforts of their regional leaders.

On the whole, we show that in the contemporary Russian Federation federal bargaining strongly affects regional economic conditions, while economic conditions are closely related to the regional vote. Therefore, growing differentiation among regions, both as a result of the work of unleashed market forces and of the process of federal bargaining further widening inequalities leads to increasing political polarization among Russian regions. Some regions become strongholds of the pro-democratic and pro-reform forces, while others move further in the pro-communist direction. One can argue that such political polarization may contribute to regionalization of major political parties and create serious problems in the future for the federal stability in Russia.

4.1 The Background of the Participants of Russian Federal Process: Federal Conflict at the Time of Russian "Formative" Elections

Three groups of factors combined to bring federal bargaining to the forefront of Russia's political and electoral agenda and to make voters sincerely responsive to the strategic leadership of regional politicians: the

increase of regional inequalities in the course of the market reform, questioned initial legitimacy of the federal form in Russia, and the attempts of the branches of the national government to attract support of the regions by concessions when they confronted each other in the constitutional conflict of 1992-1993.

At the time of collapse of the Soviet Union, the Russian Federation was composed of both ethnic autonomous republics and Russian regions. Historically, autonomous republics were administratively more independent from Moscow than the regions, although both republics and regions depended on Moscow for all kinds of economic benefits and resources. In the Soviet era, the extent to which a region was "well-supplied" and prosperous, depended to a significant degree on how often the oblast's leader had been able to see the General Secretary or some other Politburo member in charge of economic issues (Gershaft 1996). Another factor was the presence on its territory of large industrial enterprises, with their well-connected directors (Smirnyagin 1996).

After the collapse of the Soviet Union, the former Soviet autonomous republics in Russia became its 21 'ethnic' republics, joined in a federation with 57 'Russian regions' (55 oblasts and krais, plus the two federal cities, Moscow and St. Petersburg), and 11 autonomous regions (oblast and krais). The autonomous regions, also 'ethnic,' are located within 'Russian regions' and, in practice, are subordinated to their 'host' region economically and politically. The only exceptions to-date are the influential and resource-rich Yamal-Nenets and Khanty-Mansy, autonomous regions, which possess on their territories more than 90 percent of all natural gas and 40 percent of Russian oil resources.

Formally, as stated in article 6 of the Russian Constitution, all subjects of the Russian Federation are equal. The only constitutional difference between republics and other subjects is that republics shall have republican constitutions while all other subjects shall have regional charters. Moreover, according to the Constitution (article 66 part 5), the status of the region can be changed to republican. In practice, though, Moscow fiercely opposes any such transformation. Only in 1991, several autonomous okrugs (Adygey, Altay, Karachaevo-Cherkassk and Khakhassiya) were allowed to update their status and were declared republics. But when in 1993 Sverdlovsk regional leaders attempted to change their region's status by pronouncing the so called Ural republic, the governor was immediately dismissed by Yeltsin. Similarly, attempts of Yamal-Nenets and Khanty-Mansy autonomous regions to upgrade their status have so far failed.

4.1.1 Economic Reform and a Jump in Regional Disparities

Russian regions, whatever the claims of official Soviet propaganda, were never all equal, politically nor economically. The reason lies not so much in diversity of geographic conditions, size, population, or availability of natural resources. Those differences, although significant, were quite comparable or even less pronounced than corresponding differences among the countries of the European Community (Hanson 1996). Rather, the 'strategic' (as much in the military as in the economic sense) placement of monopolistic industries of different kinds and at different level of technological advancement into the

regions further deepened the underlining inequalities, making some areas of the country economic hostages of the planned socialist economy.

Distribution and redistribution of economic resources was a key element of the socialist economy in the USSR. The stated objective of the planned economy was the achievement of maximum economic efficiency at the level of the whole country (whatever were the criteria for pursuing efficiency) through the manipulation of all national economic resources. Regional social and economic development was always a lower priority than the goals set for the national economy. Until the reform, however, the inequalities were somewhat 'smoothed' by means of direct economic transfers and redistribution, but the main channel of federal subsidies to the regions remained support for individual industries, rather than grants to the regions themselves. The reform made much of the redistributive flows impossible, both for the reasons of market-oriented economic policies, and, not less importantly, because the democratic complement of the reform made resource extractions from 'donor' regions or industries less feasible. During Russia's economic transformation the interregional variance in per capita real incomes has increased, and gaps between regions have widened (Hanson 1996).

Among the most important economic factors that contributed to the increasing economic polarization among Russian regions were those leading to the long-term structural changes in the Russian economy (Polishchuk 1996). To achieve maximum efficiency by means of the concentration of industry, whole regions were developed monoindustrially (e.g., the republics of Central Asia),

and were often exclusively controlled by the military-industrial complex (such as the Urals). Many industrial companies in those regions were unprofitable and heavily subsidized by the government, and therefore whole regions were dependent on federal subsidies. It was estimated that in the USSR only 4 out of 15 Soviet republics - Russia, Belorussia, Azerbaijan and Turkmenia - were net donors (Mikhailov 1997).[1] Population mobility among regions was also driven by the non-market criteria, and occurred more or less in the planned order, with the socialist state tightly controlling the migration of labor within the country by issuing strict residency requirements and through planned allocation of funds for new housing construction.[2] Non-market allocation of industries and population in the former Soviet Union became a major problem once market reform started and the scope of the state involvement into economy was reduced. Reduction of state subsidies combined with the 'release' of prices put dozens of regions on the edge of financial collapse. Moreover, the Russian federal government not only reduced financial help to regions and cut federal purchases, but effectively imposed many new financial obligations on regional economies.

Prior to reform, state enterprises were in part responsible for providing

[1]Of course, such terms as "profits" or "subsidies" have a limited information value in a non-market economy where input and output prices are selected by the planner.

[2]In general, population mobility was quite low. For example, in 1994 58 percent of population of the Russian Federation lived in one place from birth and another 30 percent lived in one place for more than 10 years.

social benefits to the employees and their families. They paid for child care, schooling, medical care, street cleaning, recreational activities, and built housing and fulfilled other social and entertainment needs of their workers. Once privatized, companies had to terminate the funding of such unproductive activities and the bill was transferred to regional administrations (Wallich 1994). Regional input in all governmental expenditures rose from 35 percent in 1992 to 65 percent in 1994. Thus, in 1996 regions were forced to find money to cover 88 percent of state medical expenditures, 80 percent of all educational costs, and 70 percent of the cost of social services. Currently, republican and regional governments collect 50 percent of all taxes, but account for 70 percent of all government spending. As the financial burdens of the regions increase and the economics declines continues, more regions become dependent on federal aid. It is estimated that 25 regions were net donors in 1994, whereas by 1996 this number was reduced to 14 regions, and only 10 regions remained in 1997. Already in April 1997, Vyacheslav Mikhailov, the Nationalities and Federal Relations Minister, reported to the Parliament that "only nine territories of the Russian Federation are economically self-sufficient and act as donors, with the remaining 80 being dependents."[3]

In the first quarter of 1997 the largest sum of taxes to the federal budget were paid by Moscow (22%), Khanty-Mansy (8,3%), Moscow blast (4%), Yamal-Nenets (3,6%), St. Petersburg (3,5%), Samara blast (3,4%), Sverdlovsk blast

[3]RIA, April 22, 1997

(3%), Perm (2,7%), Tatarstan (2,9%) and Bashkortan (2,6%).[4]

Hanson (1996) shows that there were two categories of 'winners' - regions that tended to experience smaller falls in real per capita income than the rest since 1989 (the last year when the economy officially grew). These were (1) the leading natural resources holders, and (2) the leading financial or gateway regions that mediate Russia's booming trade with the global economy (e.g., Moscow). However, in order to benefit the region, natural resources must be ready for immediate extraction as seen from examples of less fortunate Kamchatka and Sakhalin.

Successful regions share a key characteristic: a relatively high per capita inflow of foreign currency. Differences across the regions in the per capita inflows of foreign currency account for about a third of the variance in their residents per capita real incomes. The creation of joint ventures, for example, was the main method of investment in the early 1990s. Most of them became trade intermediaries and are concentrated in Moscow (82.6 percent). Officially, Moscow 'absorbed' 46.6 percent of all investments in 1996, St. Petersburg - 5.6 percent, Tatarstan - 5.8 percent, and Western Siberia - 5.1 percent. Unofficially, Moscow Mayor Luzkov estimated that the city received 2 billion dollars annually in foreign companies' investments and another 5 billion in domestic investments (Kobyakov 1997).[5]

---

[4]AFI, April 28, 1997

[5]Moscow, being the most prosperous region of the Russian Federation precisely because of its status of the capital city, nevertheless receives 5

It is not the case that regional differentiation has as its cause differences in policies adopted by regional leadership. Some regions have pursued economic reform more enthusiastically than the others, but such differences did not translate into tangible divergence in economic indicators. Ulyanovsk, the birthplace of Vladimir Lenin, is one of the clearest examples of resisting the reforms, where price control and export control policies were imposed within the region. Nearby Nizhny Novgorod region, on the other hand, had a reformist reputation from the very beginning of reform (Hanson 1996). A look at the data, though, reveals that the two regions are not far from each other in their actual involvement in regulating prices. Pro-communist Ulyanovsk regulates prices of 44 products, reformist Nizhny Novgorod, of 38. Meanwhile, the living standards in Ulyanovsk region are estimated to be higher than in Nizhny Novgorod.[6] For many regions, the current economic situation is determined by factors beyond their control. Too often regional economies suffer from the fact that giant enterprises on their territory produce non-competitive products and lack investments for technological restructuring.[7]

---

percent of the financial resources designated as support for needy Russian regions as a compensation for the "additional cost of performing as the capital city."

[6] "Analysis of development of the Russian regions in 1992-1995" TASIS European Commission. Brussels. Belgium.

[7]For example, in pro-reform Samara, the largest Russian car manufacturer, AutoVaz, which provides factory orders for more than 400 companies affecting the jobs of 2 million people across the country, has made huge losses for several years in a row despite the increase in production, sales, prices, and tariff protection by the state.

The change in relative economic conditions that 'losers' perceive as unfair contribute to the push for the renegotiation of the terms of federal relations in Russia. Some departures from the old standards of treatment by the center were necessitated by the technological reasons in view of their increased responsibilities. Once the federal center became unable to maintain previous level of financial flow to the regions, it was forced to give them greater independence in utilizing regional economic resources and incrementally adjusted their relations with the federal budget. But as different regions had different economic opportunities and needs, the adjustment of regional rights was necessarily asymmetric, with some regions receiving more rights than others. Once the asymmetries were noticed, they became the precedent that justified negotiations and bargaining between regions and Moscow. Such bargaining started in 1990-1991 in the form of lobbying with Moscow bureaucracy. However, bargaining quickly assumed a political form and became the central aspect of Russia's political process.

4.1.2 The Initial Criticism of the Post-Soviet Federal Arrangements

The most immediate political factor that made the renegotiation of federal and regional rights so easy to open was the lack of legitimacy of the federal form in general. Russia's leading national politicians themselves were main contributors to the loss of legitimacy by federal institutions. Attitudes toward the federal form were formed in public discourses over the organization of the Soviet Union, in which Russia's national leaders actively participated. As

Russian politicians publicly denounced the value of federal relations within the Soviet federation, and sought to prove Russia's 'exploited' status in it, they insisted on the renegotiation of terms with Moscow through the Soviet Federal Treaty, and finally orchestrated the Byelovezhskii Agreement that dissolved the USSR. They then paved the road for regions and republics within Russia to do the same when Russian federalism, in turn, moved to the forefront of the political agenda.

Russia's republics started demanding the revision of federal terms using the rhetoric borrowed from the Russian government itself - the prevailing idea was that a new democratic federation must be a voluntary union where each participant has the right to decide how extensive its sovereignty would be. Once Russia declared its sovereignty (from the Union), Russia's ethnic autonomous republics followed the suit (Tararstan, on August 30, 1990, Kalmykia - in September 1990). At a time when the Soviet government was still trying to reach a consensus on a new Federal Treaty for the USSR, Russia began preparing a Russian Federal Treaty. Indeed, the first attempt at such a treaty was rejected by the republics in January 1991, almost a year before the dissolution of the USSR. By then, being 'tough' with the center was already recognized by republican leaders as behavior advantageous from populist point of view, which could be expected to help win votes in future electoral campaigns.

4.1.3 Constitutional Conflict within the National Government

The third factor contributing to the intensity of federal renegotiations in Russia and to the strongly bilateral form of those negotiation was the political struggle between the different branches of the national government over their respective constitutional prerogatives. In fact, the first use of the 'regional card' was made in 1990, when politicians in Russia, in order to weaken the Soviet government of Mikhail Gorbachev, lent political support to Chechen nationalists and were instrumental in promoting the candidacy of Chechen's future president, Dudaev, who would go to war with Russia in 1994. With the same goal in mind, Yeltsin, in August 1990 incited the Russian republics and regions to "take as much sovereignty as you can stomach." And in 1992 - 1993 both Yeltsin and the Russian Parliament, already deeply in conflict with each other over the power division in the future Constitution, each sought to secure the support of Russian regional leaders in their fight for institutional influence. Weakened by internal conflict, the central government could not or did not want to enforce federal laws in the regions, especially if it meant turning the region into a supporter of its constitutional rival. Taking full advantage of the confrontation in Moscow, more than a third of the subjects of the Russian Federation withheld their contributions to the federal budget in 1992-93 and demanded special tax regimes or new federal subsidies for themselves.

The most valuable 'asset' in the fight between the president and the parliament at the time was the support of the leaders of the ethnic republics. Being empowered to block constitutional changes, ethnic republics secured the

special attention of the federal government.[8] The Federal Treaty itself, as it was adopted in 1992, legitimized the preferred status of ethnic republics (even though in most republics ethnic Russians constitute a majority of the population), and to further strengthen the support of ethnically based republics, overepresentation of the republics was initially written into the presidential constitutional draft prepared in Summer 1993 in competition with the draft of the specially appointed parliamentary commission[9] (Sharlet 1994).

The Federal Treaty of 1992 reflected the bargaining strength of republics. In fact, it was a series of treaties, of which the first was signed between the center and 18 republics (Tatarstan and Chechen-Ingushetiya refused to sign). Only after that and with stronger limitations on subjects' rights, treaty with the krais and oblasts, and one with the autonomous districts followed. However, the strong asymmetries in the federal subjects' status incited resistance from the regions, and, following the violent resolution of the intra governmental conflict in September-October 1993, the final constitutional draft equalized all subjects of the federation, stipulating as a concession to republics' claims that federal subjects may sign special treaties with the federal government and negotiate special status for themselves within the federation

[8]For example, Solnick (1995) estimates that in 1992-93 the president issued favorable decrees (ukazy) and governmental resolutions (postanovleniia) that specially addressed the needs of 18 of the 21 republics (excluding Chechnya), but only 14 of the 57 oblasts and krais.

[9] The republics were promised fifty percent of all seats in the Council of Federation, the upper chamber of the parliament.

on an individual basis.

4.2 Deepening of Regional Asymmetries Through Bilateral Bargaining Between the Center and the Units

In 1994, in accordance with its promise, the Yeltsin administration began signing treaties with ethnic republics, that covered the issues of republics' constitutions, procedures for governors' selection, and specified fiscal revenue allocation mechanisms. The deepening of asymmetries led the administrations of many federal units to demand their own federal treaties as soon as possible, but only seven 'ethnic' republics managed to sign treaties with Moscow prior to the December 1995 parliamentary election (Solnick 1995). The Yeltsin administration, however, continued handing out treaties to units after the election as well. Immediately following the election four 'Russian' regions were awarded power-sharing agreements. Fifteen more power-sharing agreements were singed during the presidential campaign - between March 20 and June 13, 1997, and Khabarovsk region was promised such an agreement after the election. Posing as the builder of a new, stronger Russian state, Yeltsin argued that power sharing agreements had already proven themselves as the basis of new federalism in Russia, which, he said, was founded on the principle of granting the regions "the independence they can handle . . . within the framework of the constitution."[10]

---

[10]OMRI Daily Digest May 27, 1996

Interestingly, after signing the first in a series of the pre-election power sharing treaties (with the Komi Republic, on March 20, 1997), the government issued a warning that the signing of such treaties might be brought to a halt if the Communists won the June presidential election, since the latter supported nationalization of property and strong federal control over regions. The Communists presidential candidate, in fact, never expressed any negative opinions about power-sharing agreements during the campaign, though some parliamentary deputies from the Communist party and other non-governmental parties, including such notables as the Federation Council Speaker Yegor Stroev and ultra-nationalist Vladimir Zhirinovsky, blamed the power-sharing treaties for widening inequalities among regions.

In May 1997, the top officials from the 17 regions that belong to the so-called Siberian Accord issued a special declaration asking Moscow to stop the practice of power-sharing agreements and granting special privileges to some regions. In October 1996, representatives from six 'black earth' regions asked the State Duma to pass a law defining the legislative and executive rights of federal subjects, complaining that "those who came first earned more rights," referring to the 26 republics and regions that had already negotiated power-sharing treaties with the federal government. Boris Nemtsov, the governor of Nizhni Novgorod region, expressed an opinion that while he sees nothing bad in regional lobbying, there must be no separate agreements granting some regions privileges and subventions while other regions which

fulfil their financial obligations properly are actually discriminated against.[11] The only problem with this statement is that Nemtsov's region had already signed its own special power-sharing agreement with the center. Of course, one can protect one's constituents interests in two ways: by securing special favors for one's own region, and by preventing the others from doing the same. To attempt both is a dominant strategy. Understandably, then, some regional leaders openly expressed their disagreement with the practices of bilateral power-sharing treaties, but nevertheless negotiated them for their regions. In addition to Nemtsov in Nizhnii Novgorod, the Rostov Head of Administration Vladimir Chub and the head of the legislature Alexander Popov were on record for a long time expressing the view that power-sharing agreements would lead to the eventual collapse of the federation. But once their neighbors from Krasnodar Kray negotiated a deal with Moscow in January 1996, Rostov leaders were forced to start preparing their own treaty, which was signed on June 11, 1996.[12] Similarly, the governor of Samara region announced that in principle he was against the practice of signing bilateral treaties, but this did not prevent him himself from obtaining in July 1997 one of the best deals in the federation to-date, comparable only to the ones signed with Tatarstan and Barshkostan ethnic republics.[13]

---

[11]RIA November 11, 1996

[12]Segodnya, N34 01.03.96

[13]One case is known when a governor has refused to sign the draft power sharing agreement between his republic and the Russian Federation. The

The next step in the exchange between the federal government and the regions' leaders took place during the summer of 1997, when power-sharing treaties were singed with the administrations of Bryansk, Vologda, Magadan, Saratov, Chelyabinsk, and Samara regions. Presidential representative Sergey Shakhray claimed on that occasion that the signing of new power-sharing deals was a positive move in the direction of equality among all Russian regions.[14] Such proclamations, though, fail to withstand even minimal criticism: some regions definitely got better deals than others. Certain power-sharing treaties, and especially the amendments to the treaties, are kept classified to avoid inter-regional rivalries, including the 13 (originally, 17) secret amendments to the last treaty with Samara. In the latter case, the public could only learn that after the president spent his three-week vacation in Samara region, he and governor Titov signed treaty, that gave Samara slightly fewer rights than the breakaway Chechen republic, assertive Tatarstan, and diamond-rich Yakutia, but more than other subjects of the Russian Federation.

Despite the limited information about the power-sharing agreements, there exists anecdotal evidence of their contents and economic consequences. For example, on the third anniversary of the power-sharing treaty between the

---

reason, however, was not the principle disapproval of the treaties practices, but the desire to further better the terms. Newly elected in Khakassiya, governor Aleksei Lebed (general Aleksandr Lebed's brother) refused to sign the draft treaty negotiated by his predecessor, arguing that he would need to study the experiences of other republics and regions that have signed similar agreements before preparing a new draft of his own.

[14]"Nezavisimaia Gazeta," No.141; 08-01-97

Russian federation and Bashkorstan, Mansur Ayupov, the Secretary of State of the Republic, admitted that all positive developments in the republic economy were due to the republic's special relations with the federal center. According to Ayupov, on the basis of the Treaty, the republic signed 22 agreements which specify the allocation of property, terms of access to foreign trade, the issues of agricultural development and others areas of interest. Bashkortostan is one of the few members of the Russian Federation which, under the treaty of sharing the terms of reference and prerogatives of August 3, 1994, has been given the right to independently carrying out international ties in the sphere of economics, science, culture and sports. If it were not for foreign trade, the economy of Bashkortostan would find itself in a difficult situation, because the republic, just as all of Russia, is facing the acute problem of non-payments and a shortage of cash. Barter in economic relations reaches almost 80 percent, but in 1996, Bashkortostan delivered 2.5 billion dollars' worth of goods to the world market, which is comparable with the republican budget. Mineral products account for 61.4 percent of exports, and chemical and oil-chemical products, for 32 percent. Bashkorstan was allowed to retain all excises on oil and other mineral resources (the only other republic with such rights is Tatarstan). The per capita monthly gross national income in the republic now exceed $2,400, which put the republic in the 25th place in the world. Bashkorstan occupies the third place in Russia's housing construction, accounts for a tenth of the gas supplies to the countryside, and builds every eleventh kilometer of Russian roads. It has free urban transport and spends tens of billions of rubles on social needs. A third of

the republican budget is spent on the agrarian sector while the republican government chose not to pursue privatization, preserving both collective and state farms. The republic does not receive anything from the federal center but pays taxes. In fact, the taxes it pays are reduced, presumably, because the republic does not send money to the Center for financing the federal programs on its territory.[15] During the first six month of 1997 the republic paid 2.2 trillion rubles in federal taxes.[16] At present, the republic is proposing additional agreements (seven new drafts) concerning the judicial system, the activity of the procurator's office, conscription, and other issues.

Another success story, with respect to negotiations with the center is Sacha Republic, which produces estimated 98 percent of Russia's diamonds and over 26 percent of Russia's gold. In 1993 Russian diamond sales earned approximately 1.5 billion dollars and according to unofficial estimates, the annual per capita income in this republic approaches $24,000.[17] In 1996, Sakha managed to build almost twice as much housing per capita than the federation average, despite the extreme Arctic climatic conditions.[18] The 'special' relationship of Sakha with Russia dates back to the time before the collapse of

---

[15] RIA, February 18, 1997. For instance, the republic leadership explains, "a certain sum from the value added tax, which the republic must transmit to the State Budget, is left to us for financing ecological programmes. Part of other taxes also remains in our republic to ensure the activity of federal institutions." RIA, February 18, 1997.

[16]"Nezavisimaia Gazeta," No.141 08-01-97

[17] Kommersant-Daily, November 11, 1996

[18]RIA, December 17, 1996

the Soviet Union. In 1990, Sakha (Yakutia) withheld diamond shipments to then the Soviet government of Mikhail Gorbachev, prompted by Yeltsin's promise to give Sakha greater control of its resources, and, the republic's president, Nikolaev, very publicly restarted shipments of diamonds and gold to Moscow once Yeltsin was firmly in control of Russia. In early December 1991 Nikolaev handed Yeltsin a 241.7 carat diamond named 'Free Russia' to celebrate both Russia's independence and the transfer of Sakha's resources to Russia. Soon after that, Yeltsin decreed that Sakha would be allowed to sell 10 percent of its diamonds independently. In the meantime, led by its chairman Ruslan Khasbulatov, the Russian parliament, rivaling with the president, sought to convince Sakha's leaders that it, too, endorsed Sakha's right to profit from its resources and its economic sovereignty.[19] More specifically, Khasbulatov pledged that he and the parliament would support Sakha's right to sell a portion of its diamonds and to work toward a bilateral agreement delineating Sakha's economic rights in its relations with Russia. He also alleged that "the present government of Russia does not fully take into account the peculiarities of the regions in its actions' and was at times precipitating crises."[20] Yeltsin quickly offered Sakha more tangible returns than mere promises of the support in parliament. On March 31, 1992, a new agreement was announced which gave

[19]Kempton, Daniel R. 1996 "The Republic of Sakha (Yakutia): The Evolution of Center-Periphery Relations in the Russian Federation." p.5

[20]Kempton, Daniel R. 1996 "The Republic of Sakha (Yakutia): The Evolution of Center-Periphery Relations in the Russian Federation." p.5

Sakha the profits now from 20 percent of its gem diamonds and all of its industrial diamonds. On June 29, 1995, the Sakha Republic signed a treaty which stipulated the devolution of powers and functions between the federal government and the Sakha Republic. Currently, the republics pays virtually no taxes to the federal budget but, at the same time, received 2 billion dollars as a zero interest federal credit in 1996.[21] The tax deductions from the diamond industry have become the foundation of the Sakha budget, accounting for more than 50 percent of its revenues. In 1996 no diamonds were transferred to Moscow; on the contrary, Moscow transferred diamonds valued at around 1.5 billion dollars from state stocks to Sakha.[22]

4.3 Multilateral Bargaining

Solnick (1995) suggests that, in addition to "placating restive regions" by means of the treaties, the center may have also weakened the coordinating mechanism that had permitted the republics to act collectively since 1990. If Tatarstan or Sakha, for instance, derive their special benefits from bilateral treaties rather than from their republic status, then perhaps they will be less willing to incur costs of defending the interests of other republics. In fact, the

---

[21]Kommersant-Daily, November 11, 1996.

[22]However, according to Sakha officials, the federal side is not yet fulfilling the signed agreements fully - in 1996, only 30 percent of the budgetary money reached the republic. In particular, it is not fully financing the mining of its 85 percent share of the republic's gold. This slowed down the production from 31 to 30 metric ton. RIA Novosti, March 24, 1997.

Chairman of the State Council of Sakha republic has already suggested that special agreements may be needed in the future to regulate the relationships among groups of subjects of the Russian Federation.

So far Moscow has successfully opposed all attempts to create regional alliances, such as the proposed Far East Republic, Ural republic, Altay republic (including a part of Buryatyiya), Mountain (Gorskaya) republic, Volga, or Russian republics. However, extra governmental territorial political alliances have proven to be much more successful. In 1996 there were at least nine territorial associations uniting regional elites. Most federal subjects belonged to one of nine: the Northwest Association, Russia's Central Area Association, the "Black Earth" Association, the Association of Northern Caucasian Regions, the "Big Volga" Association, the Urals Regional Association, the "Siberian Accord" Association, the Far East Association, and the "Council of Donor Regions." Activities of all those association are focused on promoting regional representation and lobbying regional interests in the federal government.

The Russian Federation, we can now say, is entering a new stage of "regionalization." This is not a "parade of sovereignties" like that of 1992, when many regions raised the possibility of seceding from the Russian Federation and each region bargained for better terms for itself. Now regional elites do not raise the question of secession; instead, they seek additional powers from the center. The role of numerous regional associations may become much more profound in the event of any potential political crisis in Moscow, and especially in any new constitutional conflict between the President and the Parliament. In

such a conflict the sides, once again, would be forced to rely on the support of regional elites, by giving them new confessions from the center. That would create strong incentives for 'collective' bargaining on the part of regions' elites, who are now much better organized than in 1991-1992.

4.4 Reaction to Regional Asymmetries in Electoral Choice of Russian Regions

In this section we evaluate our hypotheses connecting economic conditions in Russia's regions and its forming party system. As we argued above, there are winners and losers in economic reform and federal bargaining and that the traditional positions of regions in relative economic standing are drastically upset, further increasing regional inequalities and transforming former 'winners' into current 'losers.' This process affected the political choices of political elites and electorates in regions. Looking at official data from the 1991-1996 elections and official economic statistics published by *Goskomstat*, we show that the winning or losing status of a Russian region impacts both the character and dynamics of its vote. In particular, regions that were losing economically as well as the ones that were losing politically, in terms of lack of success in federal bargaining, responded well to communist parties that promise a stronger center and 'fairness' in the allocation of economic resources.

The phenomena that requires explanation is the clearly regional pattern of the communist victories in Russia. Preferences expressed by voters in

regions across the Russian Federation over time seem to be remarkably stable. Regional returns of all elections since 1989 are correlated to such a degree that most regions can be easily divided into the pro-reform and pro-communist blocks. While the electorate's choices changed over time, with the plurality of Russian voters supporting Zhirinovsky in December 1993, Communists in December 1995, and Yeltsin in 1996, such changes occurred as proportional shifts so that in all elections the "conservative" regions continue to be relatively more conservative than those supporting the pro-democracy camp. Based on such observations, political geographers proclaimed the so called "Red Belt" of regions surrounding Moscow and to the south of the 55th parallel (Kolosov, Petrov and Smirniagin 1990, Slider et al. 1994; Orttung and Parrish 1996).

Observing a remarkable stability of aggregate electoral returns at both regional and district levels, some analysts argue that, since 1991, Russian voters have been divided into three fairly stable blocs - pro-reform, anti-reform, and the center. The center, is a diverse mixture combining protest voters, nationalists, and voters (such as the Women of Russia's supporters) who simply want stability (McFaul 1996). Supporters of such a view acknowledge that these three groups could be quite stable at the macro level, but not necessarily at the individual level. In fact, individual level studies reveal significant volatility of voters' choices. Thus, Wyman (1997) finds that there is a persistently high degree of volatility within the electorate, with voters shifting from one camp to another between elections. This implies that the ideological preferences of Russian voters are not sufficiently stable to provide an

explanation for the observed stability in regional choices. In addition, as some regions still move across voting blocks, one may want to find factors behind such electoral dynamics. More importantly, the idea of stable electoral preferences and the separation of Russian regions into stable pro-democratic and pro-communist camps failed to predict the outcomes of regional elections of governors, where it turned out that voters' choices appeared quite independent of "ideology" (Smirniagin 1996). The "Red Belt" phenomenon, in other words, happens to be less pronounced in regional elections, with democrats winning in pro-communist regions and communists successful in some relatively "pro-democratic" oblasts.

In what follows, we argue that economic and political circumstances in which the residents of Russian regions find themselves are the factor that can explain a significant portion of variation in regional support for the Communist party. More specifically, the origin of the "Red Belt" lies in such individually felt economic conditions as the magnitude of direct economic losses suffered by the population at the beginning of reform and gains (losses) after the reform started, and such political factors as successful conclusion of power-sharing treaties with Moscow and of the region's success in federal bargaining. Some electorally relevant differences among Russia's regions were inhered from the previous regime; others are direct results of current economic policies. When we control for such economic and political conditions, we find that previous electoral patterns, no matter how strong a predictor other scholars find it, becomes only marginally important in explaining the variation in regions'

support for the communists. For example, once we control for regional conditions, the distribution of regional support for the head of the communist party Gennadii Zuganov in the second round of the 1996 presidential elections becomes practically independent of the support for the Communist party in the December 1993 parliamentary elections. The importance given in the literature to the role of ideological preferences (or the "traditional conservatism" of Russian voters in some regions) is also questioned by the fact that when we control for regional conditions, we find no additional impact of the degree of urbanization on the regional vote for the Communist party in 1993, and even the inverse (!) relation in December 1995 elections. Previous studies claimed that 60-70 percent of the Russian "political geography" could be explained by just one factor - the share of the urban population (or the share of people with higher education, which almost perfectly correlated with the degree of urbanization). Specifically, the electoral superiority of the democrats and the centrists over the leftists was claimed to be directly proportional to the share of the urban population in a particular administrative district or federal territory (Smirniagin 1996). Controlling for the regional conditions we find that such influence disappears (Orttung and Parrish 1996).

The importance of economic factors and region's bargaining standing in determining the level of support for the Communist party and, therefore, for the pro-government and pro-democratic parties as well, indicates the possibility for national and local politicians to influence regional electoral choices both by bilateral negotiations and by attempting to manipulate regional economic

conditions. As we argued above, regional economic success in the Russian Federation strongly depends on successful bargaining with the federal government or on the personal ability of a regional leader to secure economic benefits for the region. Thus, geographic voting patterns in Russia could be greatly influenced by the shifting outcomes in bargaining between regional and federal governments.

4.4.1 Initial Economic Conditions, Lost Safety-Nets and Communist Support

One of the most severe of all losses that the Russian population suffered due to reform was the loss of life-time savings as a result of inflation. Due to unequal distribution of economic resources across Russia's regions, opportunities to protect savings varied across regions. Moreover, the level of savings was different across Russia and in most cases those savings were forces by impossibility to buy a product at the local market or as safety-nets. For example, in 1992 urban population on average earned 6961 rubles and spent 6544, while rural population earned 6611 rubles and spent only 5221 rubles.[23] In urban areas, and especially in large cities, people did not have to rely on personal savings to enjoy the benefits of the old economic system, traditionally paid for by the rest of the country: better health care, access to education, and

[23]"Living Conditions of Russian Population" Official Report. 1996. (Uroven Zhizni Naseleniya Rossii. Goskomstat. Officialnoe Izdanie. 1996.) Moscow 1996.

superior supply of consumer goods.

The economic reform introduced by Yegor Gaidar in early 1991 included as one of its essential components liberalization of previously state regulated prices. After their deregulation, consumer prices increased enormously. Even according to official statistics, the minimum survival level rose by 33,700 percent between 1990 and 1993 - from 62 rubles to 20,600 rubles. While salaries, pensions and other incomes were partially adjusted to high inflation, no adjustment was made to adequately compensate for the devaluation of personal savings. In 1991 the population held 372.3 billion rubles in the official state savings bank (Sberbank) - more then 3,300 rubles per adult, or six average monthly salaries. Moreover, it is widely believed that in Russia a large portion of savings is held in cash, not in bank accounts. The third form in which significant savings were kept was a variety of "insurance" policies - in essence, accumulation accounts paid to the beneficiary either at the time of an 'event,' e.g., marriage, or upon reaching a certain age. All such savings were effectively lost as a result of price liberalization.

Unfortunately, no official statistics are available to directly compare losses of personal savings across Russian regions. We use a substitute measure instead. In April 1991, after the Soviet government raised some of the still controlled prices, saving accounts in Sberbank and State bonds were indexed by 40 percent. In 1991 we also observe that the rate of new savings (in Sberbank and in State bonds) sharply increased as compared to 1990 - on average, from 7.5 to 19.6 percent of all incomes. Ironically, on the eve of price

liberalization, the Russian people deposited almost one-fifth of their *annual incomes* into Sberbank saving accounts.[24] One can only speculate about the motives for holding money in saving accounts before the expected price liberalization. Perhaps many hoped that the government would continue indexation and believed that price increases would be limited as was promised by virtually all Russian liberal economists (e.g., Gaidar, Yavlinskii, Popov). Perhaps, for many it was the only way to safeguard at least a part of their lifetime savings, as consumer goods quickly disappeared from the shops and hard currency was difficult to purchase outside large metropolitan areas.[25]

At the same time, more than 10 percent of all incomes in 1991 resulted from indexation. If we suppose that indexed money was not withdrawn from saving accounts, then in 1991 there should be a positive correspondence between the savings rate and previously accumulated savings. This correspondence would be even stronger if those with higher accumulated savings also had a higher general propensity to save, and were ready to make relatively higher new savings in 1991. But even if new savings were a fixed portion of incomes across all individuals, people with higher accumulated

---

[24]Russia's Statistical Yearbook 1995. Moscow (Rossiiskii Statisticheskii Ezhegodnik. Goskomstat. 1995.Moskva.

[25]There was also a significant (from 19.2 billion or 5 percent of incomes to 81,4 billion or 9.8 percent of incomes) increase in the rate of cash holdings between 1990 and 1991. At the same time, savings in Sberbank increased by more than 156 billion rubles or by 72 percent - from 216 billion in 1990 to 372 billion in 1991. With indexation explaining only the 40 percent growth over the 1990 level, the rest is a result of new deposits.

savings prior to 1991 had to have a higher saving rate in 1991 as a result of indexation. Therefore, we can use the observed savings rate in 1991 as a proxy for the amount of previously accumulated savings and, thus, as a proxy for losses suffered by individuals after the price liberalization. For the 1991 calendar year the Russian State Statistical Committee reports saving rates for the 77 "first-level" federal subjects of the Russian Federation (republics, oblasts and krais), while separate data are missing for Khakasiya and 11 lesser autonomies which are located within oblasts and krais. Using this data we test the hypothesis that regions where population suffered the greatest losses of savings would demonstrate distinctive voting patterns in December 1993 and thereafter elections. Those with substantial savings prior to 1991, who then lost them to inflation, may be more disappointed by the reform and less willing to support pro-reform parties. Consequently, we expect to find a positive correlation between the losses in savings and the vote for the Communist Party.

In fact, using the rate of savings in 1991 as a proxy for lost savings, we do find a significant impact of this variable on the vote for the Communist party in December 1993 elections and in the subsequent elections as well. Figure 4.1 shows the rate of saving in 1991 and the vote for the Communist Party in December 1993. The correlation between the two variables is .72, which increases to .83 when Dagestan, an evident outlier, is excluded.[26]

[26]Perhaps the population of Dagestan kept most of their money in cash, or, perhaps, other regionally specific factors influenced the vote there in 1993, as well as in later elections. For example, no one thus far could explain why in the 1996 Presidential election much fewer Dagestani voters (in absolute terms)

The rate of saving in 1991 is not any less significant in explaining the support for the Communist party in December 1995 and the vote for Zuganov for presidency in 1996 (Figures 4.2, 4.3 and 4.4). The correlation between the rate of saving and the vote for the Communist party in December 1995 is .71, while in the presidential election it is .72 for the first round and .57 for the second. Notice that correlation between the vote for the Communist party in December 1993 and the same vote in December 1995 and in the presidential election is .75, .78 and .49 respectively (for the sample of 77 "first-level" regions). It suggests that the impact of lost savings on the vote in 1995 and 1996 is too great to be dismissed as an artifact of the "ideological" correlation with the 1993 vote. The loss of savings explains the vote for Zuganov in the second round of the 1996 presidential election better than does the vote for the Communist party in December 1993 ($r = .57$ versus $r = .49$). More important is that the impact of the rate of saving on the vote for the Communist party in December 1995 and for Genadii Zuganov in 1996 remains both meaningful in magnitude and statistically significant when we control for the results of December 1993 elections in the multi-variate analysis. For example, when we regress the December 1995 vote for the Communist party on its vote in December 1993 and the rate of saving in 1991, we find that each additional

---

voted for the communist leader Zuganov in the run-off than did in the first round, despite the significantly increased turnout between the two rounds (only 401,069 votes for Zuganov out of 879,723 valid in the second round, or 46.6 percent, versus 511,202 votes out of a total of 787,110 valid in the first round, or 64.9 percent).

point of the rate of saving corresponds to a .56 point increase in support for the communists.

4.4.2 Additional Controls

Returning to the analysis of the 1993 data and before we reject the sociological-historical "Red-Belt" hypothesis, we should control for several other socio-economic characteristics of regions (Table 4.1). First, the opportunity to protect personal savings by buying consumer goods was not equal across regions, and we may expect that in regions where there were relatively more goods to buy or "invest in" in 1991, the communist vote would be lower. In order to compare the supply of consumer goods across regions, we look at retail growth between 1990 and 1991 and find that the support for the Communist party in December 1993 was, indeed, lower in regions with relatively greater opportunities to buy consumer goods in 1991. Another available measure of the supply of durable consumer goods that could serve as a reasonable investment of savings is the number of personal cars per capita. The number of cars sold in a region depended only on the quantity of cars, centrally supplied, but not on the income distribution, as in every region the demand greatly exceeded supply.[27] Again, we find that regions that were better supplied with personal cars as a way to protect savings from inflation tended to vote less for the communists.

[27]It is a safe assumption that car sales in 1991 did not vary by regions due to variations in demand in the view of widespread shortages.

Once the loss of savings occurs, we can expect that an economically active population would recover from the shock quicker than retirees who have no hope of restoring their life-long savings. Correspondingly, the proportion of economically active population should be inversely related to the vote for the communists. As Table 4.1 reports, the data support such an assertion.

In addition, as the economically active population finds new opportunities to earn incomes, the relationship between savings and support for reform eventually must become positive. Once price stabilization takes place and consumer goods become available, the higher saving rates in some regions should correspond to the stories of relative economic success and the increasing economic well-being of the population. In other worlds, at some point higher saving rates should become a predictor of lower support for the communists. In fact, the data reveal that higher saving rates in 1992 still led to higher communist vote in December 1993, but that higher savings in 1993 contributed to the reduction of communist support. One should remember that in 1993 private companies started to offer the population a variety of attractive investment opportunities, promising quick fortunes. When calculating the savings rate for 1992 and 1993, we combine savings in Sberbank and all other reported savings outside state banks, as the last part became the largest part of total savings. In 1992 the population saved only 337.7 billion or 4.8 percent of incomes in saving accounts and 1006.9 billion or 13.9 percent of incomes as cash both in rubles and foreign currency, while in 1993, 4859.2 billion (6.2

percent) were saved in bank accounts and 13836.3 billion (17.3 percent) in cash (including 7409.5 billion rubles in foreign currency).

As a result of the reforms, the population suffered not only direct economic losses, but also a severe decline in social benefits, while the magnitude of the decline was different across regions. As noted earlier, to reduce government spending, Moscow reformers stopped financing social programs in the regions with the hope that local and regional governments would cover the deficit. Also where many social benefits had been previously provided by industrial companies, after privatization such companies could not afford social spending at the old level anymore. As a result, social benefits became the responsibility of local and regional governments and depended greatly on their economic resources. Unfortunately, the only consistently available regional statistics reflecting the decline in provision of social benefits is the level of available hospital facilities per capita, which fell by 6 percent between 1991 and 1993. It turns out that in regions with smaller decline in availability of hospital facilities (which were still mostly free of charge for the population) per capita, we find lower support for the communists in December 1993 elections. We find no effect of urbanization on the vote for the communist in 1993 when controlled for regions' economic conditions.

4.4.3 'Economic' Strategies in Electoral Campaigns

In December 1995, Russian voters chose among 43 parties. The Communist party obtained a plurality of the vote, while its support across

regions varied between 5.3 and 53 percent. As we argue above, over a half of variance can be explained by differences in initial economic conditions in regions expressed through the magnitude of losses of life-time savings, or, more precisely, are related to the savings rate in 1991. By the time of the 1995 parliamentary election, Russian living standards continued to deteriorate, further increasing differentiation among regions.

The government chose to control inflation by delaying payments of wages and pensions. In 1995, 19 percent of all earned wages was paid with a delay. In December 1995, the reported amount of overdue wage payments amounted to 141 percent of average monthly wages per worker. Forty thousand large and medium-size companies (with more than 200 employees) reported delays in wage payments.[28] Delay of payments is a strong reason to believe that the official statistical reports of salaries, wages and pensions do not reflect actual changes in economic circumstances of the population. Reported are not the actually paid salaries, but some accounting quantities adjusted to the rate of inflation when they "get on the books," and not when they are actually paid out. The strategy of delay must be recognized as a brilliant macroeconomic tool for eliminating the "inflationary pressure" on the economy. Russian voters, though, refused to reward such a strategy during December 1995 elections. Promised but not paid salaries and wages provided insufficient incentives to support the government.

---

[28]Official data by Goskomstat: "Osnovnye Socialno Economicheskie Pokazateli," January-April 1996. Goskomstat. Moscow. 1996.

The Russian government did attempt to reduce the amount of delayed payments in the end of 1995. While the amount of delayed payments had been growing throughout the year, in December 1995 unpaid wages declined on average by 1.41 percent. This small decline was cleverly allocated across regions, so that in some regions arrears declined while in others they increased. For example, in Moscow Region wage arrears were reduced by 27 percent, and in Tatarstan, by 34.5 percent. But in Ivanovo oblast they grew by 16 percent, in Samara, Ulyanovsk, and Belgorod oblasts - by 14 percent, 13 percent and 9 percent respectively. It is fair to say that the decline in wage arrears in the end of 1995 was a net change, a tip of the iceberg of a pre-election game of redistribution, and not surprisingly, such a move made a difference for the distribution of the vote for the Communist party. Multivariate analysis indicates that each percentage point of a decline in arrears (with the maximum decline of 46.9 percent and the maximum increase of 54 percent) reduced the regional vote for the communists by 0.18 percentage points (Table 4.2). Also the support for the communists was stronger in regions with larger numbers of companies delaying wage payments, as on December 1, 1995 (adjusted for the population size of the regions).

Similarly to what we observed in 1993, the communist vote was lower in regions with a higher proportion of economically active population. The data on regional consumer price indexes became available for the first time in 1995 and we find that regions with higher real income growth during 1995 (adjusted for the regional consumer price index) had lower vote for the Communist party

(Table 4.2).

Our comparison across regions is based on the official reports and, thereby, suffers from many problems related to the low precision of national and regional data. Knowing the limitations of the Russian data collection, we hope that errors in our data are not significantly and systematically biased for some particular regions. At the same time, underreporting of personal incomes is probably uneven across regions, while household subsistence food production is not counted in the income figures and also varies in importance. It makes sense for us to double check the conclusions on the basis of another measure - an assessment of economic conditions in regions implicitly made by the deputies of the State Duma when they decide how much federal support one or another region should receive. At least officially, the federal budget allocates support to regions based on criteria of "need" and "especially urgent need." While the actual allocation of money to regions has almost nothing to do with the budget sums approved by the Duma, we can take the intended allocation of federal funds to "especially urgent need" as a proxy for economic conditions. Higher levels of planned allocation (compared to the region's population) should correspond to worse economic conditions and, therefore, to higher vote for the Communist party. Data support such an assertion (Table 4.2).

Surprisingly, when we control for the economic conditions discussed above, we find that the degree of urbanization is *negatively* correlated with the communist vote, which goes contrary to the conventional academic wisdom! It turns out that the rural vote is more pro-government and pro-democratic than it

should be given the economic conditions.

Finally, controlling for the pattern of previous support for the communists, and perhaps, for the LDPR in 1993, we improve our statistical model only a little more. Previous electoral choice explains the mere additional 7 percent of the total variation of the vote for the Communists across regions in December 1995.

4.4.4 The 1996 Presidential Elections

Our analysis indicates that as in 1995, lost savings, growth in incomes, and unpaid salaries and wages affected the 1996 presidential election. While in the first month following the 1995 parliamentary elections incomes fell sharply, in the following months, especially in February, March and April, nominal incomes and wages grew steadily - the government took some extraordinary and very expensive measures to finance such growth.[29] Russian regions reacted predictably - the faster incomes grew, the lower was the vote for Zuganov. In April 1996, billions of rubles were distributed among regions to help industrial companies pay debts and raise wages. Of course, on average real wages (adjusted for inflation) went down. But interregional differences were significant: in some regions the decline was more then 12 percent, while in other regions the growth in real wages reached 6 percent. We can only

[29]Such as selling 4.4 billion dollars of foreign currency reserves and issuing official tax deductions on more than 30 trillion rubles. It has been estimated that state debt rose by 20 billion dollars during the six months of electoral campaign (Illarionov, *Segodnia*, No.110, 06/25/96).

speculate about the extent to which these differences resulted from Moscow's policies versus regional economic policies, but growth in real wages strongly reduced the regional vote for Zuganov. The April 1996 billions were money well spent by the government. As Tables 4.3 and 4.4 show, each point of growth in real wages decreased the vote for Zuganov by more than a point, both in the first and the second round of the presidential election.

As nominal incomes and wages were growing in the first months of 1996 (along with Yeltsin's popularity in public opinion polls), Russia experienced an enormous increase in overdue wages and salaries. By the beginning of June 1996, the government alone was directly responsible for overdue payments in the amount of 4,190 billion rubles. In addition, firms owed 22,865 billion rubles in wages. Total overdue wages were more than twice (27,055 billion) what was owed at the beginning of 1996 (13,380 billion). Across regions, arrears rose by around 120 percent in Orel and Kursk oblast and by 363 percent in Moscow. If raising incomes before the 1995 elections was but a mean of political campaigning, then after elections there should have been no money to pay and we would expect to find a correspondence between pre-election income growth and growing arrears. And, perhaps, regions with higher wages would suffer more from delays in payments. It is also natural to find larger arrears in regions with troubled industries, as indicated by a decline of the index of industrial production and by the level of their debts to other economic agents. This economic reasoning is supported by data, with one exception - the growth in arrears is *lower* in regions with higher levels of

overdue debt to creditors.[30] Perhaps the government decided to pay its share of debt to workers in the troubled areas where companies could not afford to pay their bills. But, interestingly enough, in regions voting for the pro-democratic parties (such as Yabloko, Russia's Democratic Choice, 'Forward Russia' and Our Home is Russia) wage arrears were *higher.* An additional percentage point of the pro-democratic support in 1995 corresponded to an increase in arrears growth of 3 points (Table 4.5). Was it accidental that higher than average growth in wage arrears occurred in Moscow, Moscow Region, St. Petersburg, Lenigrad Region, Yaroslavl, Vologda and Murmansk Oblasts - regions, where, judging by the previous elections, support for Yeltsin was guaranteed? In areas with higher than average growth of arrears in 1996, only 5.4 million voters supported the CPRF in December 1995, while in areas with the lower growth, almost 10 million. Notice also that the effect of growing arrears on the vote for Zuganov is counter-intuitive - slow growing arrears were paralleling the nevertheless higher vote for the communist candidate.[31]

---

[30] At the beginning of 1996 the overdue wage arrears constitute around 5-15 percent of the total overdue debt to creditors. The overdue debt, in turn, was around 50 percent of the total debt.

[31]The government helped regions financially up to the last days of the campaign. For example, seven days before the first round of the elections, the Finance Ministry began implementing the Russian President's decree on aid to regional budgets for teacher's salaries. As was immediately reported by the Presidential Office, funds from the Federal budget were transferred to 17 regions: Arkhangelsk, Bryansk, Republic of Mordovia, Ulyanovsk, Stavropol Territory, Republic of Daghestan, Kurgan, Aginsky Buryatia, Irkutsk, Primorye Territory, Murmansk, Tver, Penza, Krasnoyarsk Territory, Sakhalin, Kostroma, and Kursk. Almost all of these regions in the past supported opposition parties and the pattern of voting in the presidential election may have been smoothed,

4.4.5 'Political' Variables - Direct Impact of Asymmetries in Federal Bargaining on Regional Vote.

Above we argued that one of the forms federal bargaining currently takes in Russia is negotiation of power-sharing agreements. We argued that the power-sharing agreements put regions in unequal status, where having a treaty with Moscow can be viewed as a region's success in bargaining. Another indication of "bargaining success" is proportion of regional investments financed by the federal government. We control the results of the 1996 presidential elections for both variables - the dummy variable indicating signing a power-sharing agreement between Moscow and the republic or region and the proportion of all regional investments financed by Moscow (Table 4.4 and 4.5). It turned out that the fact of having a federal power-sharing agreement is significant in explaining the second-round (Yeltsin versus Zuganov) results. Controlling for other variables, the support for Zuganov in those regions was lower by 3.8%. The federal investments in region suppressed Zuganov's vote in both rounds.

Thus, "losers" in the bargaining process (not differently from the "losers" in economic terms) tend to support the communist challenger. If we compare the vote for Zuganov in the run-off elections with his vote in the first round of the 1996 elections, in the first round (when other candidates were present),

---

but was not reversed: in the first round Yeltsin lost to Zuganov on the average of 5 percent there, while he won by 4 percent elsewhere.

Zuganov won more votes than Yeltsin in 11 out of 21 republics and in 30 out of 55 krais and regions, while in the second round Zuganov won only 7 republics and 25 krais and regions. In six of the republics - Dagestan, Ingushetia, Kabardino-Balkariya, Karachaevo-Cherkessiya, North Osetiya, and Tararstan - Zyuganov actually lost thousands of votes between rounds.

Our hypothesis is that Zuganov's vote increase between rounds depends on the regional economic status and the short term quick-term economic improvements shortly before elections. We measure the regional status by the following variables - nominal income growth and consumer price increase compared to the 1994 level and the percentage of taxes left in the region.[32] Short-term effects of economic policy are measured by decline in wage arrears in May-June 1996. In addition, we control for the regional "ideology" by including into equation the first round vote for other than Yeltsin alternatives to Zuganov - General Lebed, nationalist Zhirinovsky and democrat Yavlinsky. The results are reported in Table 4.6. Once again we find that the reduction of

[32]In addition to power sharing treaties, Moscow has also negotiated a variety of revenue sharing agreements. As a rule, in Russia all taxes are collected locally, after which the regions send to Moscow a certain percentage of collected taxes. At the same time, a share of taxes is sent back to the regions in the form of fiscal transfers. Both the tax shares and the amount of fiscal transfers are subject to negotiation. For example, in 1995 the proportion of tax revenues sent to Moscow varied from 0 percent in Yakutia to 55 and 60 percent respectively in the Yamalo-Nenets and Khanty-Mansi autonomous okrugs. At the same time, each region's reliance on federal subsidies as a percentage of their budget receipts from federal budget ranged between .2 percent in Bashkorstan and 0.4 in St. Petersburg to 81.6 percent in the Koryak autonomous okrug and 78.7 percent in Tuva. Estimated per capita net balance of financial flows varied in 1994 between +1393000 and -2833000 rubles and in 1995 between +9480000 and -6677000 rubles (see Table 4.7).

wage arrears corresponds to distribution of pro-communist vote in regions. As we would expect higher nominal income growth reduced Zuganov's gains, while higher inflation increased them. Finally, the higher the proportion of taxes Moscow allowed the region to keep, the lower the Zuganov's gains between rounds.

4.5 Searching for the Mechanism Connecting 'Bargaining' Variables with Regional Vote

To the extent to which federal influences (e.g., economic aid specific to the region and bilateral treaties) are implementations of some bilateral agreements, the mechanism behind their influence on regional vote involves the effort on the part of regional elites of delivering their side of the 'bargain.' Behind the coefficients on out independent variables in section 4 of this chapter, then, among other things there are efforts of regional administrations to mobilize and direct regional vote.

4.5.1 Regional Elites: Can They 'Deliver' Votes

Many factors combine to enable regional elites to deliver their part of the political bargain, providing the center with much needed political and electoral support. Below we consider the four most important factors - (1) weak or practically non-existent regional legislatures and local governments, (2) low level of national party activities in the regions, (3) the relatively high political and electoral popularity of regional elites enjoy; and (4) their effective control

over the local media. In many regions these factors reenforce each other.

The confrontation of 1992-1993 between Yeltsin and the Parliament resulted not only in the constitutional increase of presidential powers. Another group of winners were regional governors. In exchange for their loyalty, the governors' powers were significantly extended following Yeltsin's order to dissolve all regional Soviets - regional bodies of legislative power. Although some legislatures resisted, eventually all were replaced. Many governors enjoyed a long period (some over a year) without having to bother with a legislature. Governors were able to manage carefully the process of electing new regional parliaments. About a third of the deputies elected to the post-1993 legislatures were officials appointed by the governors - in particular, heads of rayon administrations and officials from the regional administrations. Consequently, few regional legislatures seriously challenge their governor's authority, although there are some notable exceptions as in Kemerovo (Zlotnik 1996). The Kremlin also allowed governors to restrict the prerogatives of local bodies of power and to dismiss many elected mayors (e.g., in Nignii Novgorod, Vladivostok, Izhevsk). At the same time, with the continuing collapse of the federal economic system, Moscow gradually lost control over giant industrial enterprises whose managers, in Soviet time, were often the informal 'czars' of the regions and whose popularity within the regions, if anything, went up. Finally, because of the policy of delegating the burden of provision of formerly federal programs to regions, most federal bodies of power in regions fell under financial and administrative control of regional governors.

Public opinion polls estimate that on average the regional bodies of power enjoy relatively high levels of popularity, at least when compared with the federal government (correspondingly 35 and 15 percent in 1996).[33] The evidence is ample that some regional leaders enjoy such high levels of popularity and so fully control their regions that all attempts of the federal government to remove them from office have failed. Thus Yeltsin had tried twice to dismiss the governor of Irkutsk, Nozhikov, but he refused to step down and successfully rallied broad support within the region to protest Moscow's actions. Nozhikov's relations with Moscow changed after he supported Yeltsin in his showdown with Khasbulatov, and as a part of his reward, Nozhikov was allowed to hold an election, which he won in a landslide. Yeltsin did dismiss the governor of Sverdlovsk, Rossel, for trying to create a Ural Republic, but Rossel remained the most popular politician in the region and was soon elected head of the regional legislature. Subsequently, Rossel was elected governor (in August 1995) and became a strong supporter of Yeltsin's reelection. Another dismissed governor, of Novosibirsk, Mukha, was among the few heads of provincial administrations who overtly opposed Yeltsin's dissolution of the parliament. When his replacement, an appointed governor Ivan Indinok asked Yeltsin to authorize regional elections in December 1995, relying on support of the government party "Our Home Is Russia," contrary to Moscow expectations,

---

[33]"Pre-electoral Situation in Russia: Sociological Study" by the sociological Center of the Moscow State University. December 6-15, 1995. National News Service.

Mukha defeated Indinok by a margin of more than 140 thousand votes (466,292 to 321,782) in the runoff election.[34] The list of stories about clashes with the center followed by electoral successes in the regions would also include governors of Chelyabinsk (Sumin, who won 1993 elections only to be immediately dismissed by Yeltsin), Bryank (Lodkin, dismissed by Yeltsin in November 1993), Primorsky Kray (Nazdratenko), Ulyanovsk (Goraychev) and Tula (Starodubtsev).

In addition to the electoral advantages coming with the position of the 'best protector of our region's interests,' the secure position of many governors could be explained by their belonging to the network of the old nomenclature elite. A recent sociological study of elites in Russia shows that the proportion of nomenclature in all elite positions to be the highest (82.3 percent) among regional elites (as opposed to 75.0 percent in the presidential circle, 74.3 percent in federal government, and 61.0 percent in business elites).[35] In recent regional elections, virtually all candidates, regardless of their current ideological position, belong at some point of their career to the top nomenclature. And while it is true that only 19 of 47 governors who ran were reelected in 1996, in most cases incumbents lost to someone else from the midst of the same cadre of elites - to a former governor, the Chairman of the regional Soviet, or a member of the Council of Federation (directly elected for 1993-1995 to

[34]Sovetskaya Sibir', December 28, 1995; Zlotnik 1996.

[35]Kryshtanovskaya, Olga "Financial Oligarchy in Russia" (Financial Oligarchy in Russia), Izvestia, January 10, 1996, p. 5.

represent regions). In fact, the circle of elites is so well defined that in some regions both the government and the communist opposition were forced to endorse the same candidates (Khabarovsk Kray, Khanty-Mansiyskiy okrug, Komi-Permiyatskiy okrug).

Pro-reform and pro-government political parties in Russia do not have adequate regional or territorial organization. In most cases, the local democratic movement is represented by few dozens (Smith 1997). A typical study conducted in 1994 in Primorskiy Kray counted 20-30 members of Russia's Choice and a few dozen members of other pro-democratic parties among 1.5 million voters (Kirkov 1995).[36] As a result, the political activities of these parties in practice are restricted to Moscow, St. Petersburg, and a few other major cities. The only way of personally (i.e., not on the television screen and from Moscow) reaching voters in small towns and villages for those parties is through cooperation with local authorities and regional industrial managers. Only 2.5 percent of registered parties even tried to nominate their own candidates in the 1996 regional elections, and among 70 elected regional executives (counting the 1993, 1995 and 1996 regional elections), only ten officially ran under a party label. In regional legislative bodies, on average only 14 percent of deputies are elected from parties,[37] and only 5 percent of all

---

[36]In 1995, there were 300 members and 'supporters' of Russian Choice party in Kaliningrad region and 175 in Voronezh region. For more information about specific regions, see "Russian Political Almanac,"1995, by McFaul and Petrov.

[37]The share of party affiliated candidates is much higher in regions using mixed - majoritarian and PR electoral systems, such as in Sverdlovsk, Kalinigrad,

nominated candidates in local elections had party labels.[38]

4.5.1.1 Control of the Regional Media

The 1996 presidential campaign has proven that the federal government firmly controls national publications and electronic media. By some estimates, Yeltsin accounted for 75 percent of all election coverage in the print media and 90 percent of television coverage.[39] However, regional leaders fully control the regional mass media, especially news broadcasts and the press. A few days before the first round of the presidential election, Aleksei Frolov, a Russian regional media expert, said: "Our regional mass media are in the hands of local governments. As mayors and governors still control access to paper supplies and state subsidies for the impoverished local newspapers, the fate of the [federal] election in the regions [will depend] on the views of the local leadership."[40] People in the regions prefer to read local newspapers rather than national ones for several reasons. First, the Moscow dailies are rarely available and more expensive than local papers, with prices sometimes four or five times higher. Second, the national media is perceived as being too closely tied to politicking in Moscow. As a result, readers there now clearly prefer regional

---

Tuva, Mari-El, and Saratov.

[38]"Nezavisimaia Gazeta," No. 132, 07-19-97.

[39]Komsomolskya Pravda, April 30, 1996.

[40]Nivat, Anne "The Vibrant Regional Media" Transition Volume 2, Number 21, 18 October 1996.

coverage.[41]

Regional bosses do not even try to conceal the tight connection between the regional media and regional governments, unlike the more image-conscious national media. In Orenburg region, for example, by the start of the 1996 presidential campaign the oblast's Committee on the press decided to become a co-founder of practically every regional and local newspaper.[42] Later, at the summer 1996 editors' meeting for regional newspapers, representatives from the regional administration hinted openly at the need to uphold the interests of the presidential candidate who is kind enough to supply the region with subsidies.[43] Similarly, in Sakhalin the local authorities openly insisted on a media bias towards Yeltsin. In Tyumen region governor Leonid Roketskiy after meeting with Yeltsin announced his intention to support the incumbent and demanded that the press take his side. The largest local paper "Tyumenskaya Pravda" was known for its pro-opposition bent, and the pro-Yeltsin administration first threatened to withhold funding, attempted to change the paper's leadership, and tried to auction the paper.[44] Finally, the paper was rewarded nearly a billion rubles in subsidies and its anti-Yeltsin ardor cooled

---

[41]"Regional Press Fights Political Control," Transition, vol. 1, no. 18, 6 October 1995.

[42] Choice of the Regions. Issue no.3 May 28, 1996

[43] Choice of the Regions. Issue no.5 June 10, 1996

[44]Choice of the Regions. Issue no.1 May 6, 1996

noticeably.[45] In Samara, the regional governor Konstantin Titov attended uninvited meetings reserved for the top editors of the regional press. The majority of Samara local newspapers took an active part in the presidential election campaign in June 1996 and almost all supported the incumbent. Unsurprisingly, most of them, like the largest daily "Volzhskaya Kommuna," are entirely financed from the regional budget.[46]

The financial leash in 1996 forced even some clearly pro-communist local newspapers to pretend to back the incumbent. For example, in the southern part of Krasnoyarsk region, where a majority of voters are strongly opposed to Yeltsin, district newspapers were forced to avoid the subject of the election altogether. The newspapers, financed by the regional administration but having a strong oppositional orientation, limited themselves to publishing numerous 'letters from ordinary citizens` where those ordinary citizens spoke critically of the reform and the Yeltsin government.[47]

4.5.1.2 Governors' Help in the 1996 Presidential Election

During the 1996 presidential campaign, Yeltsin viewed the support of the regional governors as a key element in his reelection strategy (Hanson 1996). The majority of the 89 regional leaders had been appointed by Yeltsin himself,

---

[45]Choice of the Regions. Issue no.2 May 20, 1996

[46]Nivat, Anne "The Vibrant Regional Media" Transition Volume 2, Number 21, 18 October 1996.

[47]Choice of the Regions. Issue no.5 June 10, 1996

with the number of those democratically elected prior to the presidential election administrators totaling 15 in the republics and 20 in "Russian regions."[48] That regional leaders work hard to build their own political and electoral base and bargain with the center for better terms does not preclude them from political cooperation with the incumbent president, but, actually, requires it as a form of reciprocity. Besides, both political and economic pressures were applied to ensure their cooperation. In January 1996, an anonymous report (ostensibly, prepared by the presidential administration) was leaked to the press.[49] The report recommended that Yeltsin replace several governors who would probably have done little to aid Yeltsin's reelection. Four governors from the list were, indeed, later dismissed.

Among the most effective economic instruments for a quick pre-election repair of a region's economic situation was the system of tax exemptions and direct financial assistance. In February 1996, Prime-Minister Chernomyrdin signed a decree on special 'treasury tax exemptions' for regions, and until the end of the campaign only the officially issued by the government tax deductions constituted more then 30 trillion rubles (more than 5.5 billion dollars). And while in July 1996 the total sum of unpaid taxes in the Russian economy was more than 60 trillion rubles, calling the outcry of the official press, around 80 percent of those were officially delayed payments, either according to this decree by the

---

[48]Most of then elected governors were incumbents originally nominated by Yeltsin.

[49]Nezavisimaya Gazeta, January 26, 1996

government or according to the additional presidential decrees defraying tax payments for specific regions in specific amounts. At the same time, trillions of rubles were distributed to the regions directly as assistance (Illarionov 1996).

The government helped regions financially up to the last days of the campaign. For example, seven days before the first round of the elections, the Finance Ministry began implementing the Russian President's decree on aid to regional budgets for teacher's salaries. As was immediately reported by the Presidential Office, funds from the Federal budget were transferred to 17 regions: Arkhangelsk, Bryansk, Republic of Mordovia, Ulyanovsk, Stavropol Territory, Republic of Daghestan, Kurgan, Aginsky Buryatia, Irkutsk, Primorye Territory, Murmansk, Tver, Penza, Krasnoyarsk Territory, Sakhalin, Kostroma, and Kursk. Almost all of these regions in the past supported opposition parties and the pattern of voting in the presidential election may have been smoothed, but was not reversed: in the first round Yeltsin lost to Zuganov on the average of 5 percent there, while he won by 4 percent elsewhere.

Overall, 77 of the 89 regional leaders publicly came out in support of Yeltsin. Only the Kareliya republic's Victor Stepanov, Novosibirsk region's Vitalii Mukha, Tambov region's Aleksander Ryabov, and Ulyanovsk region's Yurii Goryachev were openly members of the opposition block (Orttung and Parentskaya 1996).[50] And only one (Ryabov, Tambov oblast) stood openly

[50]Out of the four, only one - Ulyanovsk governor Govyachev - faced re-election since, and was considered an unquestionable favorite.

against Yeltsin.[51] Even Novosibirsk's Mukha, known to be pro-communist, was careful not to declare his support for any candidate. In his turn, Yeltsin rewarded Novosibirsk's governor with a medal of honor. Konstantin Kanterov, the editor of "Novaya Sibir'," muses about this act: "Is this a gesture of respect from the country's leader? Respect for a governor once removed from office by the President himself and since re-elected? Is it a change in the attitude toward Novosibirsk Oblast, traditionally considered communist? Or is the President's attention an attempt to gain the governor's support? In contrast to the governors of Krasnoyarsk and Omsk, he has yet to come out in favor of Yeltsin."[52]

Presidents in Russia's 21 ethnic republics were the most effective in getting their constituents to vote for their chosen presidential candidate. In the first round, Yeltsin won more votes than Zyuganov in 10 out of 21 republics. In the second round Yeltsin won in 14 republics. In six of the republics - Dagestan, Ingushetia, Kabardino-Balkariya, Karachaevo-Cherkessiya, North Osetiya, and Tararstan - Zyuganov actually lost thousands of votes between rounds. On average, Zuganov gained only 2.5 percent between the two rounds in 21 republics with the elimination of other contestants from a runoff, but 10 percent in the rest of the country.

Between the two rounds of election, Yeltsin's emissaries made a number of 'raids' on the electorally 'unfavorable' regions. After one of these meetings,

---

[51]Segodnia. No.95 06.01.1996.

[52]Choice of the Regions. Issue no.5 June 10, 1996

Murtaza Rakhimov, the president of Bashkiria, gathered the local heads of administration together and told them that if their rayons supported Zyuganov the second time around, it would be a sign of their own "professional incompetence," which would lead to the appropriate "organizational conclusions" [orgvyvody], i.e., they would be fired (Zhukov 1996). The president of the republic also claimed that he personally visited 54 districts of the republic between the balloting to make sure that voters understood "the essence of the processes under way in the country"(Orttung and Parentskaya 1996). Before the elections, Rakhimov publicly announced that he himself would vote for Yeltsin as a reliable partner who granted the republic its sovereignty.[53]

In Tatarstan, the results of the first round seemed to have taken republican authorities by surprise. Immediately after speaking on "Tatarstan" television, presidential aide Rafael Khakimov emphasized that during the next five years it would be very important for the republic to build a civilized relationship with Moscow and other regions, and to develop a legal basis for Tatarstan's sovereignty. That is why, as Khakimov put it, "it makes a difference who will be Russian president for the next five years." [54] The head of the republic's State Council Likhachev, noted in a television appearance, that while government officials were prohibited from participating in electoral advertising, those citizens who hold democracy dear could not remain aloof from the

[53]Choice of the Regions. Issue no.4 May 30, 1996

[54]Choice of the Regions. Issue no.7 July 1, 1996

forthcoming second round. In fact, local observers considered it sensational that villages which traditionally supported President Shaimiyev ignored his call to vote for Yeltsin in the first round. In analyzing these results, the local media claimed that the nonpayment of salaries and pensions was the main reason for Yeltsin's first round defeat.[55]

Overall, the Russian Federation's ethnic republics in the end supported the incumbent. Yeltsin not only secured quantitative increase in support between the two rounds of the 1996 vote, but also a large qualitative change from the previous presidential. Most of these republics voted in 1991 against Yeltsin. This change include references to electoral fraud, especially in Degestan and Tatarstan, and the weekend scheduling of the first round, which could have led many urban voters to miss the balloting in favor of a weekend in the country. But while both can plausibly account for some of the dynamics, the magnitude of the shift is too big and universal to allow us to ignore the tremendous campaign effort of regional leaders generously encoraged by federal money.

The governors of the largely ethnically Russian regions and krais were not as effective in delivering votes as their republican counterparts. In the first round, Yeltsin won 25 of the 55 krais and regions, and improved his total to 30 by the second. In the first round, among "Russian" regions, Yeltsin received the highest share of votes in Moscow City, Sverdlovsk oblast (Yeltsin's home

---

[55]Choice of the Regions. Issue no.7 July 1, 1996, see also Segodnia.

region) and somewhat surprisingly in Perm oblast, which never before was in the first rank of democratic strongholds. In the second round, the "leaders" were again Moscow, Sverdlovks, St. Petersburg and Perm. The governor of Perm, G. Igumnov, explained that "the oblast voted not so much for Yeltsin but for the regional government."[56] The notorious Primorskii Kray case, though, was the most interesting and widely publicized. In both the 1993 and 1995 parliamentary elections, Primorskii Krai voted heavily for Vladimir Zhirinovsky's Liberal Democratic Party. However, the Krai's charismatic governor Yevgenii Nazdratenko, elected in December 1995 with a 90 percent landslide, published an article, "Why I became a Yeltsin Proxy," in the local newspapers and started active campaigning on Yeltsin's behalf. Yeltsin finished first in the krai with significant leads in both rounds. In Kaliningrad, the outcome of the first round also came as a surprise, since the local tradition of supporting the communists was broken for the first time. In Samara, Konstantin Titov removed three rural administrators in rayons where Zyuganov had done well in the first round and managed to boost the Yeltsin vote by almost 300,000 between rounds (Orttung and Parentskaya 1996).

The fact that Yelstin did not perform well in some traditionally pro-communist regions should not lead us nevertheless to overlook the efforts of the regional governors to promote his candidacy. In Voronezh, for example, governor Kovalev required that all rayon leaders announce their preferences for

[56]National News Service, November 14, 1996

president; while in the local media he argued that despite the present day hardships, voters should understand the disastrous implications of a communist victory. In response, 12 rayons officially declared their support for the incumbent president. Kovalev was also on record giving the regional electorate clear recommendations for whom they should vote before the December 1995 parliamentary election.[57] But in both cases the majority of voters in the region favored the opposition.

The governor of Bryansk region, Barabanov, also actively but unsuccessfully campaigned for Yeltsin in 1996. The regional press ("Bryanskii Rabochii") even claimed that the governor had been warned by a member of the President's staff that he would loose his position if he failed to deliver the required votes.[58] Both Kovalev and Barabanov were dismissed shortly after the elections, ostensibly for other reasons. The Kostroma governor Arbuzov was more efficient in the campaign. Yeltsin's campaign there was headed by his first deputy, who even managed to launch a special presidential radio channel, employing the best local journalists.[59] In the first round, the mostly pro-communist region voted slightly in favor of Zuganov (28.5 versus 28 percent), but in the second round Yeltsin led (49.8 versus 42.7 percent). The federal government faithfully stood behind Arbuzov in the subsequent December 1996

---

[57] Choice of the Regions. Issue no.3 May 28, 1996

[58] Choice of the Regions. Issue no.5 June 10, 1996

[59] Choice of the Regions. Issue no.3 May 28, 1996

regional election, but he lost in a runoff to the communist candidate with 30.7 percent of the vote.

In general, in two-thirds of the regions the majority of voters supported the same candidate (Yeltsin or Zyuganov) that their regional governor backed (Orttung and Parentskaya 1996). In turn, by the beginning of September 1996 President Yeltsin and Prime Minister Chernomyrdin announced their support of 43 incumbents and 4 rivals in the regional elections that followed the presidential election, of whom only 19 succeeded. Elections of governor in some regions, according to Leonid Smirnyagin of the Presidential Council, reversed well-established electoral trends. Unlike past parliamentary and presidential elections, the governor's races were not fought and won on the basis of 'ideological' concerns. The anti-Moscow rhetoric that was an important weapon in past regional races (when such elections had proceeded in an uncoordinated manner prior to the presidential election race) became much less pronounced. Now, nearly every contender tried to prove that "he could pry open all Moscow doors," and it became apparent that local constituencies regard the ability of a candidate to "wrest" money or privileges from Moscow as more important than their ability to wage a "die-hard" war with the Russian capital.[60]

Among successful and strong challengers, almost all had previous experience with electoral campaigning, had worked in old Soviets or regional

[60]Rossiiskie Vesti, December 3, 1996.

legislature, or were members of the Federation Council between 1993 and 1995. All these characteristics suggest that the key elements of electoral success were a candidate's experience in running for office and his personal reputation as an 'insider' able to protect regional interests in bargaining with Moscow.

4.5.2 The Hypothesis of Stuffed Ballot-Boxes: The 'Mechanical' Delivery of Votes

The wide-spread practices of political exchange between the federal and regional governments significantly increased the political role of regional elites. This fact has led some observers to believe that many such elites fully control political competition in their regions by willfully manipulating electoral outcomes to deliver their part of the 'bargain' with Moscow. In particular, serious allegations were made in 1993 that regional leaders falsified the referendum vote to secure the approval of the Constitution in exchange for future political favors from the federal government and for the sake of their own reelection.

4.5.2.1 Methodological Problems of Revealing Electoral Fraud in Russian Elections

The results of Russia's first competitive party-based elections and constitutional referendum of December 12, 1993, have been subject to

considerable dispute in terms of allegations of widespread falsification of ballots. According to one observer, Alexander Sobyanin, who served at the time as one of Yeltsin's political analysts and the representative for the Russia's Choice party on the Central Election Commission, no fewer than 9.2 million ballots were falsified to favor communists, nationalists, regional leaders, and Yeltsin's constitution. Unsurprisingly, the "formal" report of such allegations in March 1994 received worldwide notice. Daily *Isvestia* called it "political dynamite" and the U.S. media (*LA Times, Washington Post)* prominently reported the claim that more than 15 percent of the ballots were falsified and that turnout had not exceeded the 50% threshold required to render Russia's constitutional referendum legitimate.

Despite the notoriety they received in the mass media, these allegations have been largely ignored by political analysts, vis-a-vis the absence of any independent attempt to verify or disconfirm them. This is unfortunate not only because such allegations cast a cloud on the legitimacy of Russia's infant constitutional structures or because, as seen in the aftermath of the December 1995 Russian parliamentary and the 1996 Presidential elections, they encourage losers to attribute their electoral failures to trickery and fraud. In fact, Sobyanin argued that at least 12 million ballots were falsified in the December 1995 election, as well as several million votes in the Presidential elections and the following regional elections (Sobyanin and Suchovolsky 1996, Sobyanin 1996; Sobyanin 1996a, Kagarlitsky 1996). Even if such allegations of massive electoral fraud would not be confirmed by facts, they still seriously damage

the public perception of electoral process in the country. It is unfortunate also because it would be useful generally to develop methods for detecting fraud when an election's administration cannot be observed directly. Russia is not the only country in which the remoteness of polls and the authority of regional politicians make it difficult for neutral observers to monitor elections. However, unlike the commonplace cries of `foul' uttered by losing politicians, Sobyanin and his colleagues not only argue for the existence of extensive fraud, they also propose several methods for detecting that fraud using aggregate election data. It is important, then, that those methods be given closer scrutiny than they have heretofore received.

Insofar as the specifics of the Russian case are concerned, the general acceptance of allegations of fraud is unsurprising. First and most suspiciously, official election returns for the December 1993 election have never been published except at a level of aggregation (regions and Duma election districts) that precludes reanalysis. Second, given the brief period between Yeltsin's announcement of the 1993 election and the actual balloting (less than two months), neutral observers had little time to organize any effective oversight. Third, given the stakes of the election, control of both chambers of the national legislature and adoption of a new federal constitution, even cautious observers would have to look for the star in the east to believe that fraud did not occur at some level.

Claims of large-scale fraud also make sense in that they point to a seemingly logical logroll that benefitted a wide cross section of political actors.

Rather than under-count the votes for specific candidates, the asserted fraud consisted largely of adding ballots in a way that benefitted most of those who were positioned to contest the election's legitimacy: communists and nationalists, whose share of seats in the Duma were increased by the fraudulent ballots, regional bosses whose positions in the Federation Council were secured by those ballots, and Yeltsin and his coterie of reformers, who required the additional official turnout to legitimize voter approval of their strongly pro-presidential constitution. In addition, one need not presume the existence of any well-organized conspiracy. Regional or sub-regional-level officials, anxious to satisfy their bosses, would have a clear incentive to "facilitate" the election of those bosses to the Federation Council and to play a possibly unwitting hand in facilitating the implementation of the logroll.

The failure to reassess this analysis, though, was precluded by more than the unavailability of data or by an unwillingness to assume that Russian elections could be free of significant fraud. The original report, including its methodology, has been published in a form that only hints at technical details. Although most Russian papers reported its conclusions, none explained the method, and Western readers could find only a brief description of it in an article translated and published in 1994. Fortunately, more recent publications (Sobyanin 1995, Sobyanin and Suchovolsky 1995, Sobyanin and Myagkof 1995, Myagkof 1996, and private conversations) have filled in some technical gaps and provided the data employed in the original analysis. Thus, our goal is to reexamine that methodology and to compare the main characteristics of

Russia's December 1993 elections with those in various Western and newly-formed East European democracies.

Our reassessment leads largely to a series of negative conclusions. Although we cannot preclude the possibility of fraud in precisely the form suggested by these scholars, even if we assume for the moment the general validity of the method, we cannot confirm the conclusion that nine million or more ballots have been added to the count. Moreover, even if fraud took precisely in the suggested form, the methodology employed is ill-equipped for detecting that fraud and for measuring its magnitude. In offering these conclusions, the rest of this section is organized as follows: Section 4.2.2 reviews the original method used by Russian scholars in calculating the magnitude of fraud. Our core conclusion there is that the `anomalies' in the data that they take as evidence of fraud may be little more than the logical consequences of a political competition and a country's electoral laws. Section 4.2.3 focuses on the constitutional referendum and party-list voting and the `anomalies' cited in the relationship between turnout and support for the constitution and pro-reform parties. Here we conclude that these anomalies are little more than the consequence of an 'ecological fallacy' - an unsuccessful attempt to use aggregate data to reveal information about individual characteristics and choices. We show that measuring fraud based on aggregate data in the case of the party-list balloting is confounded by the fact that both turnout and political conservatism appear to correlate with a third variable - whether an election district is urban or rural. Moreover, in case of the

constitutional referendum, within-region patterns correspond closely to the patterns Sobyanin cites as `normal.' Section 4.2.4 offers some concluding remarks.

4.5.2.2 The First Estimate of Electoral Fraud

Although any number of stories can be told as to how fraud was implemented in December 1993 (Orttung 1995, Sobyanin and Suchovolsky 1995), as well as in December 1995 (Maximov 1995, Sobyanin and Suchovolsky 1996, Stolyarov 1996), Sobyanin's allegations are based less on first hand observation and more on the discovery of various `anomalies' in the election returns - the `fingerprints' left by those who added ballots to the total or otherwise manipulated summary election returns.[61] Two sets of fingerprints are offered as evidence, and both warrant close scrutiny since each is advertised as a method for detecting fraud when first-hand observations are unavailable.

The original method of calculating the magnitude of electoral fraud relies on an adaptation of a `universal law' relating the rank of objects according to some criterion to the value that criterion assumes for each object. For example, consider city population. Suppose we order cities from most to least populous, letting $R(I)$ be city I's rank and $P(I)$ its population. Then if we take a diverse enough sample, it is by now demographic folklore that the relation between R

[61]There were, in fact, surprisingly few eyewitness accounts of serious electoral violations. After 1993 elections 19 complaints were lodged formally against district electoral commissions, 5 of which were upheld by the courts; and only 1 against the Central Electoral Commission, 1 of which was upheld by the court.

and P will correspond approximately to the equation

$$R(I)P(I)^b = A$$

where b and A are constants. Notice now that if we take the log of both sides of this equation, we get

$$\log R(I) + b\log P(I) = \log A \quad (1)$$

which is merely the equation for a straight line. That is, if we let $y = \log R(I)$ and $x = \log P(I)$, $K = \log(A)/b$ and $B = 1/b$, our data should be consistent with the following expression:

$$x = K - By \quad (2)$$

Expression (2) captures attention because it appears to apply to a diverse range of phenomena, including, for instance, the populations of various species and the rank of industrial firms as measured by gross annual sales. As a consequence, numerous researchers have sought to justify this expression as a law-like generalization. And here, insofar as our research concerns the number of voters who vote for different political parties, the most relevant study is Simon (1955) and Ijiri and Simon's (1974) analysis of firm size. Together, these studies show theoretically that if the growth rate of firms is independent of size, if there is free entry of new firms at the bottom of the market, if smaller firms are no more likely to disappear through bankruptcy or merger than larger ones, and if the resources of firms that fail are distributed among surviving firms independently of size, then expression (2) will approximately describe the size distribution of firms in an economy.

If we transpose Ijiri and Simon's model to political party competition,

expression (2) should describe the relationship between the rank of a party and the strength of its support - provided that assumptions equivalent to Ijiri and Simon's hold, such as that larger parties have no advantage over smaller ones in their ability to attract new voters, that all parties have the same likelihood of merging with someone else or of disappearing altogether, and that wholly new parties can freely enter the competition. Deviations from expression (2), then, would arise if any one of these assumptions is invalid -- if something other than a wholly stochastic process describes the mechanism whereby parties grow, merge, dissolve, or emerge.[62]

The argument the authors of the method offer is that the reason why expression (2) fails to describe Russia's aggregate electoral statistics is the non-random element of vote fraud. In fact, the assertion that 9.2 million ballots were fraudulently added to the total is based on the assumption that *all* deviations from a linear relationship can be attributed to fraud. The method suggested to estimate how many ballots were falsified is to calculate the magnitude of deviations from the predicted straight line passing through the two parties with 'known' electoral support by taking all deviations from linearity as produced by such fraud.

Ignoring for a moment the assumptions that underlie the application of

---

[62] Currently, Professor Taagapera from University of California, Irvine, is working on the project aimed to predict the vote distribution of party shares based on key features of electoral system such as district magnitude. Grofman (1997) compared the performance of three alternatives models of party shares to predict distribution of votes in 1993 and 1995 Russian Parliamentary elections.

expression (2) for estimation of electoral fraud, we must notice that there are severe practical problems associated with this analysis. Suppose that fraud is sufficiently great so as to change the rank order of parties. In this case the deviation from linearity would not indicate the magnitude of fraud. To be able to estimate the magnitude of electoral fraud, we must know at least the following *a priori*:

- the true rank order of the parties;
- the parties that did not benefit from fraud;
- the `relevant' parties.

Insofar as Russia 1993 parliamentary elections is concerned, Sobyanin implicitly or explicitly supplies us with the requisite assumptions: *all* electoral fraud in the 1993 Russian party-list Duma elections favored communists and nationalists, in the 'true' electoral results the Russia's Choice party ranked first, and all but the smallest two or three parties are relevant to the analysis. Armed with these assumptions consider Figure 4.5, which uses officially reported national totals. However, rather than merely draw a straight line between `RC' and `UA', we need to move `RC' horizontally to the left and the LDPR horizontally to the right to accommodate the assumption that Russia's Choice actually ranked first. The resulting straight line suggests, then, that Zhirinovsky (LDPR) benefitted the most from fraud, the Communists (CPRF) next, Yabloko third, and the Agrarians (APR) fourth. If we assume, moreover, that without fraud the Communists would have ranked fourth, behind the Women of Russia party (WoR), and that the Agrarians would have ranked behind Yabloko, we

would conclude that Zhirinovsky's vote was doubled by the addition of approximately 6 million fraudulent ballots, that the Communists gained 2 million votes, and that the Agrarians gained nearly 2 million -- for a total of approximately 10 million fraudulent ballots.

The difficulty here is the ad hoc nature of the assumption that the primary beneficiaries of fraud were communists and nationalists. But even still, this assumption sometimes leads to strange conclusions when we look at the 88 separate regions (oblasts and republics) that participated in the election. Instead of generating a coherent picture, the application of expression (2) to each region separately results in a range of inconsistent and seemingly incoherent conclusions as to who benefitted and who lost from fraud. Most importantly, 51 of 88 regions give no evidence of fraud - virtually straight lines describe the log-log relationship among the first six or seven ranked parties. Only by assuming that the LDPR or Communists actually ranked second can we infer fraud in any form, in which case, of course, it is not expression (2) that allows us to detect fraud, but our *a priori* assumptions.

Because we must know a priori who benefitted from fraud and the true rank order of the relevant parties, the application of expression (2) to other elections cannot be an all-purpose methodology for detecting fraud. But even if we believe we know these things, there is an additional difficulty with the proposed methodology. Specifically, there are good theoretical reasons for not assuming that expression (2) is anything more than something that applies only under very special circumstances. For example, if we look once again at the

relationship between firm size and rank, we would not find a linear fit but instead a concave curve in which mid-sized firms are larger than predicted or large and small ones smaller than predicted. In their analysis of this fact, Simon and Ijiri (1974) note that two things can explain this `distortion' -- smaller firms that are more likely than larger ones to be absorbed by mergers and larger firms that hold an advantage when it comes to growing through mergers and acquisitions. Hence, if we move back to the political realm, Simon and Ijiri's analysis suggests that things other than fraud can move the picture away from a linear relationship -- the inherent advantages of larger parties to raise funds and advertise, an unwillingness on the part of voters to support smaller parties with little chance of winning seats, and the desire on the part of established politicians to be on the list of a viable party rather than on a list that has little chance of passing the 5% threshold for representation.

Ijiri and Simon's analysis is consistent with what we find in Russia. In virtually every region, the graph of party strength and rank is strongly concave if we include those parties that failed to surpass the 5% threshold. Such parties exhibit a sharp drop off in support so that all but the smallest ones lie above a straight line connecting the strongest and weakest parties. This fact is important. A considerable literature suggests that different electoral systems exert different pressures on politicians and voters to form, consolidate, vote for, and dissolve parties (see, for example, Duverger 1954, Rae 1971, Lijphart 1984, Taagepera and Shugart 1989, Ordeshook and Shvetsova 1994). That is, the electoral system itself exerts a systematic (i.e., non-stochastic) influence on

the number and size of parties and we cannot assume a priori that this influence induces a linear relationship between rank and size. It also follows that as a political system matures, any theoretically predicted deviations from linearity will become more pronounced as the processes of merger, dissolution, and acquisition described by Ijiri and Simon begin to operate fully.

To illustrate our argument, consider the West German elections - a country with an electoral system that differs from Russia's only in some details (albeit important ones). A nearly linear relationship between rank and size of parties holds in 1949, but that by 1965 we can detect a step-function relationship in which the two strongest parties are approximately equal in strength, the third and fourth ranked parties are approximately equal, and the two smaller parties are decidedly weaker than the rest (Figure 4.6). This pattern maintains itself in 1976 and 1987 except that in 1987 there are three parties at the second level. Thus, in West Germany at least, we need to assume either that the assumptions supporting expression (2) became less valid as the political system matured or that maturity led to greater fraud. A similar pattern holds in Israel, which also utilizes a single national district constituency for elections to its lower legislative chamber, the Knesset (Figure 4.7).

We conclude that, although it likely that a stochastic model of voting and party competition can be developed that parallels Simon and Ijiri's (1974) theoretical analysis of firm size and that predicts a linear relationship between party rank and party support in accordance with expression (2), fraud is only one potential cause of deviations from such a prediction. As the data from West

Germany and Israel suggest, the electoral system itself establishes incentives among candidates and voters that, over time, move a system away from linearity. Moreover, even if we accept the argument that expression (2) applies only to newly emerging democracies - to political systems 'out of equilibrium' - the application of this expression requires a number of ad hoc assumptions that need independent validation. In this respect, perhaps the most critical assumption is that we must know whether fraud was extensive enough to alter the rank order of the parties and we must know the pre-fraud order. If expression (2) can be used at all, it can be used only after these things are established, which, of course, defeats the original purpose of its general application. In short, attempting to infer and then quantify fraud using expression (2) is at best a tenuous undertaking and at worst, wholly misleading.

4.5.2.3 Electoral Fraud and Turnout

Although the initial estimate of the scale of electoral fraud rested on the application of expression (2), subsequent analyses (Sobyanin 1995, Sobyanin and Suchovolsky 1995, Myagkov and Sobyanin 1995, Myagkov 1997) sought additional evidence from various patterns in the relationship between turnout and support for parties, candidates, and the constitution. And although searching for patterns that might be labeled `anomalous' was difficult because Russia has never officially published district level electoral statistics for the December 1993 elections, the research group has compiled rayon-level results for a subset of regions that encompasses about 800 rayons in 23 of 88 regions,

accounting for 30.6 million votes, or approximately 28.8% of the electorate.[63]

The search for specific occurrences of electoral falsifications on the basis of the turnout analysis has as an underlying foundation an *assumption* that local officials added 9.2 million fraudulent ballots to insure elections of the regional leaders,[64] which ballots were also at the same time marked for communists and nationalist parties and against the constitution. *Assuming* that turnout was falsified, the group then argued that one would find certain distortions of the 'normal' pattern of turnout.

To illustrate the rationale of this approach, consider a hypothetical district during the constitutional referendum and imagine that we can count votes at different points in time during the election day. If we find at some point that a half of all eligible voters had already participated in the elections and a certain number of votes had been cast "for" the issue and the reciprocal number is "against," we may reason that latter in the day, as more voters come to the polls, both the above numbers will increase. Although the increased turnout may produce more voters who vote "against," we would expect some of the additional turnout to contain voters who vote "for." It would be unusual and suspicious to find that after some point in time *all* additional votes were cast against the issue. These scholars argued that they were able to show that, in

---

[63]Although the data is unofficial and generated at the rayon level by aggregating data supplied by members of local electoral commissions, comparison of these data with official results reveals no significant discrepancies. That is, the reports of local officials and the Central Electoral Commission appear to be consistent.

[64] Something that was a conclusion in the rank-size part of their analysis

fact, all or almost all "additional" (in excess of the 'normal' turnout) voters in December 1993 had voted against the constitution and against the pro-reform parties. In a similar way the group also claimed that they could show that almost all additional voters in 1995 voted for the communist party or Zhirinovsky.[65]

Of course, no one had any means of directly counting the number of "additional" voters and identifying their choices. Instead, an attempt was made to estimate the number of "additional" voters from the reported turnout and aggregated electoral results for different districts. More specifically, Myagkov and Sobyanin (1995) regress the percentage of eligible voters who voted in support of the constitution E_f and the pro-reform parties E_{reform}[66] on the turnout in different districts (rayons) T. Comparing turnout and vote in 786 districts, they find that there is a weak, sometimes negative correlation between turnout and the percent of eligible voters who voted in support of the constitution or the pro-reform parties, but at the same time a strong positive correlation between turnout and the percent of eligible voters who voted against the constitution and for the opposition. According to Myagkov and Sobyanin (1995), the negative correlation between turnout, T, and the percentage of eligible voters who supported the constitution, (or the pro-reform parties) reveals that "additional" voters (those who contributed to the higher turnout) all voted against the

[65] *Moskovsky Komsomolets* December 30, 1995.

[66] Notice that the percentage of eligible voters who voted in support of the Constitution E_f can also be expressed as product of turnout T and percent of actually casted votes in support of the issue V_f : $TV_f = E_f$

constitution and against reforms. They infer that such a pattern is an anomaly and is a consequence of electoral falsifications in the form of added ballots. But such a conclusion needs to be approached with caution.

In fact, the analysis encounters a problem known in the literature as "ecological inference." The "ecological inference" is the process of using aggregate (i.e., "ecological") data to learn about individual-level relationships when individual-level data are not available. This leads to an "ecological problem," i.e., that existing statistical methods produce extremely unreliable and overconfident inferences (King 1997). For example, studies using aggregate electoral results and the statistics of the share of black voters in electoral districts to derive the estimates of the likelihood of a specific voting decision of a black voter - found that more then 115 percent of black voters voted for the Democrats in some districts or that a negative percent of them voted for the Republicans. Of course, no one accused Democratic candidates of stuffing the ballot boxes on those grounds. Rather these absurd results indicate the faulty nature of the methodology, and illustrate the improper use of aggregate data. King (1997) lists these and many other "absurd" examples to stress that impossible results occur with regularity in the case of ecological inference, which also signals that the results within the possible range may be extremely distorted as well.

To place the assessements of voting fraud in Russia in a standard ecological problem framework, consider first a well-known problem of determining a proportion of voting age whites β_i^{whitess} and non-whites $\beta_i^{\text{non-whites}}$

who actually participate in the election based on the known turnout T_i and on the race composition of the voting age population, X_i^{whites} and $X_i^{non\text{-}whites}$ ($X_i^{non\text{-}whites} = 1 - X_i^{whites}$) in district *i*. In every district the turnout T_i is weighted sum of proportions of whites and non-whites who participate in the election: $T_i = \beta_i^{whites} * X_i^{whites} + \beta_i^{non\text{-}whites} * X_i^{non\text{-}whites}$

To estimate district aggregates of the fraction of whites and non-whites who vote, B^{whites} and $B^{non\text{-}whites}$, researchers often use some version of Goodman's (1953) regression. Specifically, one can regress data for turnout in different districts on the proportions of whites and non-whites in the population $T_i = b_1 * X_i^{whites} + b_2 * X_i^{non\text{-}whites}$ and take the coefficients b_1 and b_2 from this least squares regression as an estimates of β^{whites} and $\beta^{non\text{-}whites}$.

This, in fact, is what was done on the aggregate voting data in Russia by those alleging massive fraud. Consider the turnout as being composed of a fraction of the voting age population who are "pro-reform" and a fraction of the voting age population who are "anti-reform"

$$T_i = \beta_i^{pro} * X_i^{pro} + \beta_i^{against} * X_i^{against}$$

Taking into account that the two groups compliment each other, or that $X_i^{against} = 1 - X_i^{pro}$, we can write

$$T_i = \beta_i^{pro} * X_i^{pro} + \beta_i^{against} * (1 - X_i^{pro})$$

Assume also that all pro-reform voters participate in elections, or that $\beta_i^{pro} = 1$ and $X_i^{pro} = E^{reform}$. In the case of the constitutional referendum, this is equivalent to assuming that the "pro-reform" voters all vote in support of the constitution while those who are not "pro-reform," ($1 - X_i^{pro}$), either vote 'against'

or abstain. In fact, on that specific ballot - in the 1993 Russian Constitutional Referendum - abstaining could lead to the defeat of the Constitution as the referendum rules required a higher than 50 percent turnout to make the referendum valid. Among eligible voters whom we denote as "not pro-reform," only a part actually participated in the voting, while others decided to abstain. Thus the total turnout can be expressed as

$$T_i = 1 * E_i^{pro} + \beta_i^{against} * (1 - E_i^{pro}) = \beta_i^{against} + (1 - \beta_i^{against} * E_i^{pro})$$

Notice that the regression $T_i = \alpha + b * E_i^{pro}$ estimates coefficients $\alpha = \beta^{against}$ and $b = 1 - \beta^{against}$. Then if coefficient b is "irregular," this in Sobyanin view indicates falsifications. If the regression of T_i on $\alpha + b * X_i^{pro}$ reveals that b is close to zero or negative, that implies that the turnout of "not pro-reformers" $\beta^{against} = 1 - b$ is close or greater than 100 percent. Such a value of $\beta^{against}$ is suspicious, because the group of "not pro-reformers" is defined to include voters who abstain, and in the Russian case it turns out that Goodman regression estimates that an impossibly high fraction of 'not pro-reformers' actually participated.

As we noticed above, ecological analysis in general and Goodman regression in particular often produce "impossible" or unreliable results. The existing literature provides a detailed description and an analysis of the ecological inference problem, and concludes that in many circumstance the Goodman regression is not an appropriate method. Scholars in the ecological inference literature have almost universally interpreted the frequent out-of-bounds estimates as evidence of aggregation bias. A part of the solution to the

ecological problem suggested by King (1997) is to use a model which imposes restrictions on the possible values of regression coefficients to make sure that they are not outside the possible bounds for each smallest unit of observation. Nevertheless, Sobyanin and his colleagues use the out-of-bounds estimates as their primary evidence of electoral fraud. Here, then, we can identify the most relevant factors that complicate the use of Goodman regression in the Russian case, and show that such regression can produce 'impossible' results for reasons other than fraud.

Notice, that the Goodman type regression $T_i = a + b * E_i^{pro}$ produces a negative estimate of *b* only if the correlation between T_i and E_i^{pro} is negative. To the best of our knowledge, Sobyanin et al. did not formulate their analysis in the terms of a Goodman regression (they simply correlated turnout with the proportion of those who actually voted pro-reform among all eligible voters). Statistically their analysis is equivalent to determining the sign of *b* from the regression $E_i^{pro} = \alpha + \beta * T_i$. A simple algebraic transformation connects the coefficient of correlation between the two variables with the estimate of the coefficient of the linear regression. Because it is the negative correlation between the turnout and the proportion of eligible voters who expressed themselves as 'pro-reform' voters which is deemed "anomalous," in what follows we show that a negative correlation between these two variables (T_i and E_i^{pro}) can arise "naturally" as a consequence of data aggregation.

First, a weak or negative correlation between T and E_f might be deemed anomalous only if it is assumed that the data are homogeneous - that every

observation is like any other except for the variables measured. Myagkov and Sobyanin (1995) implicitly assume that the percentage of voters V_i who voted in support of the Constitution or pro-reform parties is independent of the characteristics of electoral districts. That is, for any district the expected vote for the constitution is independent of the characteristics of the district or that $E(V_i^{pro} \mid X_i) = E(V_i^{pro})$. Homogeneity of districts, though, is an assumption and not a fact. For example, there could be unobservable intervening variables that correlate both with vote and turnout in a district. In such cases, the aggregate analysis reveals nothing about the choice of 'additional' voters or alternatively, about the rates of participation among pro-reform and anti-reform voters, but indicates that in some districts we can find both higher turnout and lower support for the Constitution and pro-reform parties. Latter we show that higher turnout and higher conservatism characterize non-urban districts as compare with urban districts.

The following example illustrates the problems that arise when vote and turnout are not independent. Let the true relationship between the vote V for or against a motion and turnout T be given by the expression

$$V = \alpha + \beta T \qquad (3)$$

Hence,

$$E = \alpha T + \beta T^2$$

and

$$\partial E/\partial T = \alpha + 2\beta T$$

It follows from this expression that if α and β are both positive (e.g., if the vote

against a motion increases in districts with higher turnout), then $\partial E/\partial T$ is necessarily positive. On the other hand, if β is negative (e.g., if the vote for the motion decreases in districts with relatively high turnout, as in Russian case), then $\partial E/\partial T$ is positive only if T is less than $-\alpha/2\beta$. The predicted relationship between T and E_f, then, is not linear or even positive and monotonic; instead, if turnout is sufficiently high for a sufficiently great number of observations, then a simple linear model would yield a negative estimate of the relationship between T and E_f, and a weaker relationship overall between T and E_f than between T and E_a.

One needs not assume that a simple linear function such as expression (3) describes the relationship between V and T for problems to arise in the interpretation of the correlation (or its absence) between E_f and T. All we require is for V_f to bear some monotonic relationship to T. In this event, either V_f or V_a must bear a decreasing relationship, so that when we multiply the variable bearing the decreasing relationship and T (which is, of course, increasing with T), we open the door, as an artifact of simple algebra, to a non-monotonic relationship between T and either E_f or E_a. Whether non-monotonicity actually characterizes the data will depend on the range of values T assumes in the data and the strength of the relationship between T and V_a.

That is,

- if T assumes only relatively low values such as is typical in most U.S. elections, the relationship between T and E_f as well as T and E_a will be positive;

- if T assumes only high values, such as was the case in the most recent Quebec referendum on separatism, and if T and V_f bear a sufficiently strong (negative) relationship, then the correlation between T and E_f can be negative; and
- if T varies widely and if T and V_f again bear a sufficiently strong (negative) relationship to each other, then the relationship between T and E_f will not be monotonic, and estimates of this relationship based on a simple linear model will be unreliable if not meaningless.

These possibilities must be addressed before any conclusion is advanced about fraud in Russia's December 1993 elections. First, we see here that we should not anticipate the same relationship between E_f and T as we observe between E_a and T as the scholars suggest. In and of itself, the differences between the two correlations hold no implications for fraud. Second, before deeming the negative relationship between E_f and turnout 'anomalous,' we must first assess whether there are variables that can predict both higher E_a and higher turnout in districts.

That the negative correlations can arise "naturally" as a consequence of the relationship between *V* and *T* is evident when we look at election returns from other countries.[67] For example, higher turnout in Poland's 1993 elections

[67] It is natural and not anomalous to find a correlation between turnout T and the vote for some specific parties. In the United States, for example, increased turnout often works to the advantage of Democratic candidates (Radcliff 1994; Tucker and Vedlitz 1986; DeNardo 1980) since Democratic Party identifiers and supporters tend to vote at lower rates than Republicans (Radcliff 1994; Abramson, Aldrich and Rhode 1991; Avery 1989; Burnham 1982). Similarly, a

aided the rightist Democratic Union (the correlation between the percent of eligible voters who voted for DU and turnout is + 0.48) but hurt the leftist Polish Peasants' Party (the correlation here is - 0.25). In Ukraine's 1994 presidential election, the correlation between turnout and E_f for incumbent president Kravchuk was +0.74 whereas the correlation between T and the percent of eligible voters supporting his opponent Kuchma was -0.46. In Bulgaria's 1994 parliamentary elections, the correlations between T and the percent of eligible voters supporting the leftist People's Alliance and the dominant BSP coalition were positive, but the correlations for the three democratic parties receiving more or less significant electoral support (Alliance of Democratic Forces, Bulgarian Business Block, and Democratic Alternative for the Republic) were either zero or negative.

Of course, one might argue that fraud was pervasive in Poland, Ukraine, and Bulgaria for some of the same reasons it was pervasive in Russia -- a poorly developed technology and administration for counting votes. But Canada offers an especially salient example of a strong positive correlation between T and E_a but a weak or zero correlation between T at its opposite, E_f. Taking the aggregate outcomes in the province's 125 election districts as our observations, Figures 4.8 and 4.9 graph turnout in Quebec's most recent (1995)

---

cross-national analysis of turnout and the vote for the left-of-center parties in 19 industrial democracies confirms that the success of `left' parties is affected by the rate of turnout so that the leftist share of the vote increases by about one-third of a point for every percentage point increase in turnout (Pacek and Radcliff 1995).

separatist referendum against T times the vote for separation (E_f) and T times the vote against separation (E_a), respectively. Once again, the correlation between T and E_f is negative (-0.20) whereas the correlation between T and E_a is positive (+0.32). If we look again at Figure 4.8 we should also note that the range of turnout in the Canadian data is relatively high - between 84 and 97%. That is, it is in exactly the range where we would most likely expect, on the basis of our discussion in the previous section of expression (3), to see a negative fraud-free relationship between T and E_f. Thus, if the relationship between T and E_{RC} is not anomalous in Canada (and elsewhere), we cannot assume a priori that it is anomalous in Russia.

However, accounting for such a relationship requires identifying a variable that intervenes between T and V_f so as to generate a negative correlation between T and V_a . And here, as even Myagkov and Sobyanin (1995) suggest, urbanization appears to be such a variable for Russia.[68] The relevance of this variable in Russian voting patterns is suggested by several studies based on aggregate regional data which suggest that support for reform is concentrated in urban areas, whereas rural regions are more likely to oppose

[68]In fact, to suppose otherwise is to suppose that Russia is somehow unique among post-communist states. The pattern of greater support for leftist or anti-reform parties in rural areas has been observed in the Czech and Slovak republics (Obrman 1992), in Bulgaria (Ashley 1990; Koulov 1995), in Romania (Shafir 1992), in Albania (Szajkowski 1992) and in Hungary (Keri and Levendel 1995). In Poland's 1993 elections we find a strong negative correlation (-0.68) between support for the pro-reform Democratic Union and percent of rural in a province. Moreover, both turnout and support for conservative parties is reported to be higher in rural areas in Bulgaria (Krause 1995). Latvia (Bungs 1994), Slovakia (Fisher 1995), and Hungary (Oltav 1995).

reform (Slider, Gimpelson and Chugrov 1994, Smirnyagin 1996). Moreover, turnout also correlates with urban-rural distinctions. Approximately 78 percent of respondents to a post election survey from rural areas claimed to have taken part in the December 1993 election whereas only 69 percent from cities with populations under 100,000 claim to have done so (Wyman et al. 1994, 1995). Although this study, like most polls elsewhere, overestimates overall turnout, this pattern is reflected in the within-region data. For all three elections (the presidential 1991 elections, the April 1993 Referendum and the December 1993 elections, see Table 4.10), there is a significant correlation between turnout and the percent of the population in a rayon classified as rural (with the exception of Murmansk region, where cities are populated largely by career military and their families). At the same time, we see a negative correlation between the vote for Yeltsin and the percent of rural population in all regions in 1991, in 12 regions in April 1993, and in all but 1 region in December 1993 (Sakhalin).

Table 4.10 classifies a rayon as urban if not more then 10 percent of its population is rural and mixed (non-urban or rural) otherwise and gives the average turnout figures in December 1993 for `urban' and 'mixed' rayons in each of the 23 regions in our sample, as well as the difference in these turnout rates. Table 4.11 also gives the average vote for Russia's Choice in these same rayons, as well as the difference in Russia's Choice's support. Note in particular that in every region, non-urban turnout is greater than urban turnout, and in every region, support for Russia's Choice is greater in urban rayons than

elsewhere.

Previous discussion was intended to show that the comparison of electoral results for non-homogeneous districts produces unreliable inferences. We show that even within regions, urban and non-urban districts demonstrate different electoral characteristics. Now consider what happens when we aggregate districts nationwide. Although the rationalization for predicting a positive correlation between T and E is based on a consideration of individual actions, Sobyanin and Myagkov's (1995) conclusions rest on data aggregated across the entire country. If instead, we consider the same correlations between the percent of eligible voters supporting the constitution and turnout within, and not across regions, as Table 4.12 shows, 20 out of 23 regions in 1993 exhibit a positive correlation between T and E_f. These correlations may not be uniformly strong, but they do suggest an interesting explanation for a near-zero aggregate correlation. To take an extreme possibility, suppose there are three regions and that each consists of three rayons. Suppose turnout in region 1's rayons is 30, 35, and 40%, that it is 45, 50, and 55% in the three rayons of region 2, and that it is 60, 65, and 70% in region 3's three rayons. Finally, suppose V_f is 20, 15, and 10 in the first, second, and third rayons of each region respectively. Then a region-by-region graph of E_f against T would produce three positively sloping lines that, despite the perfect correlation within each region, would generate a zero aggregate correlation.

Something like this occured in December 1993. Looking at support for the constitution and excluding the five regions for which the correlation between

T and E_f is negative or essentially zero, Figure 4.10 graphs the overall relationship between T and E_f across all rayons in the remaining 18 regions in the data set. Notice that the cloud of data here is not much different than the cloud reported by Sobyanin and Myagkov (see Figure 4.10). However, Figure 4.11 disaggregates the data by region, graphs the best fit lines for the relationship between T and E_f for each of these 18 regions, and reveals a pattern not dissimilar from our example - a set of approximately parallel, positively sloping lines. Thus, at least with respect to the constitutional referendum - the `anomaly' or not - a zero correlation between turnout and E_f is a function of differential turnout rates across regions rather than a consequence of the absence of any within-region relationship between T and E_f. Since Table 4.12 disaggregates the data by region, we cannot explain the absence of significant positive correlations in the third and fourth columns (party list voting) by an error arising as result of aggregation across regions. However, as we demonstrated above, we may not exclude a possibility of aggregation error resulting from aggregation of districts with other distinctive characteristics - e.g., urban and non-urban, large and small cities, economically successful and declining areas - to name only few possibly relevant distinctions.

There is additional evidence that aggregate data analysis, aimed to identify "extra" voters and their choices, provides unreliable results. For example, instead of looking at the percent of eligible voters supporting the constitution, consider the percent of eligible voters who cast invalid ballots. Unless the fraudulent ballots cast by those who implemented fraud were

otherwise invalid (blank or improperly marked), by artificially increasing turnout, fraudulent ballots cast against or in favor of constitution should produce a negative correlation between T and $E_{invalid}$. Similarly, we should predict a negative correlation between T and $E_{invalid}$ when looking at voting for party lists. However, if we look at the two last columns of Table 4.12 we see that a negative correlation appears in only 4 of 23 regions in the case of constitution referendum and in only 5 regions in the case of party list voting, thereby seriously undermining the contention that the method can be used to reveal electoral 'irregularities.'

Our analysis also indicates a problem with the argument about the ultimate motivation for fraud in 1993 - namely, ensuring the election of regional bosses to the Federation Council (Myagkov and Sobyanin 1995). Specifically, those bosses did not run in every region and did not uniformly win in those regions in which they did run. However, as Table 4.14 shows, the pattern of correlation between the turnout and the support among eligible voters for the Constitution, for Russia's Choice, and for Yabloko is the same in all regions. Moreover, all regions exhibit the same pattern in the relationship of urban-rural demography and the support for Russia's Choice and turnout. At the same time district by district, we cannot find anything 'unusual' in the pattern of turnout in December 1993 as compared with turnout in the 1991 presidential election or in the April 1993 referenda balloting. Based on analysis of electoral statistics for all 786 rayons, we must conclude, that pattern of turnout is very similar in all of these elections, and although it decreases over time, this decline is

proportional both across the country and within regions. In every region there is a significant correlation between turnout in April and December 1993, between 1991 and April 1993, and between 1991 and December 1993. Similar 'anomalous' negative correlations between turnout and support for Yeltsin and other pro-reform indicators are presented in 1991, April 1993, in December 1993, in December 1995 and in the 1996 presidential elections.

We conclude that the methodology of revealing electoral fraud through examining the correlation between turnout and the percent of eligible voters supporting one position or another is fraught with dangers, the most notable being that a negative or insignificant correlation can characterize honest as well as fraudulent elections. A negative or insignificant correlation can be a consequence of the way we aggregate our data and the existence of an intervening variable that establishes a connection between turnout and vote. Once again, such a methodology might prove useful, but only if we can preclude the existence of confounding things such as a correlation between preferences and some exogenous variable like the percent of rural population, or if we can somehow control for the influence of such variables. In the Russian case in addition, there appears to be a strong enough correlation between non-urban conservative preferences and turnout for any attempts to reveal electoral fraud that overlook such a correlation to be not trustworthy.

4.6 Conclusion

There are two views one can take of the effort to identify irregularities in

Russia's aggregate electoral data. One view takes irregularities as merely an indication of potential fraud that must be explored by other means before definitive conclusions can be reached. The second assumes that irregularities can be identified and quantified with sufficient precision so as to allow for the calculation of the extent and form of fraud. Although our analysis does not necessarily undermine the first view, it finds the second indefensible, at least with respect to the two methodologies used to argue for the existence of pervasive fraud in Russia's December 1993 elections.

We are not arguing that Russia's elections avoided electoral fraud altogether. Our arguments in this section are intended primarily as notes of caution about using aggregate electoral statistics to reveal fraud and quantify its magnitude. It should also be emphasized that we cannot apply the proposed methods by setting our null hypothesis equal to the proposition that there was fraud. Since, as we have tried to show, almost any pattern in the aggregate data is consistent with fraudulent as well as fraud-free elections, doing so defeats the purpose of the proposed methodologies - detecting fraud when we are not certain it exists or are uncertain about its magnitude.

Simultaneously with cautioning against the use of aggregate data for revealing 'irregularities,' we also wanted to reclaim these data for analytical use by showing that it has only been asserted, but by no means proven, that these data were fraud-produced.

References

Abramson, A., John Aldrich, and David Rhode.1991. *Change and continunity in the 1988 elections.* Washington. DC: CO Press.

Alperovich, Gershon. 1984. "The Size Distribution of Cities: On the Empirical Validity of the Rank-Size Rule," *Journal of Urban Economics* 16, 232-239.

Ashley, Stephen. 1990. "Bulgaria," *Electoral Studies* 9:4, p.312-318.

Bielasiak, Jack. 1994. "Institution Building in a Transformative System: Party Fragmentation in Poland's Parliament," in L. Longley, ed. *Working Papers on Comparative Legislative Studies,* Laurence University, Wisconsin.

Bungs, Dzintra. 1994. "Local Elections in Latvia: The Opposition Wins," RFE/RL *Research Report* 2, 28.

Carey, F. Henry. 1995. "Irregularities or Rigging: The 1992 Romanian Parliamentary Elections," *East European Quarterly*, XXIX, 1, 43-66.

Chandler, William M., 1987. "Federalism and Political Parties," in Bakvis and Chandler, ed. *Federalism and the Role of the State.* Toronto: University of Toronto Press.

Clem, Ralph S. and Peter Craumer. 1993. "The Geography of the April 25 (1993) Russian Referendum," *Post-Soviet Geography* 34 (8): 481-496.

Colton, Timothy. 1996. "Economics and Voting in Russia," *Post-Soviet Affairs.* 12 (4): 289-317.

DeNardo, James. 1980. "Turnout and the Vote: The Joke's on the Democrats," *American Political Science Review* 74, 406-20.

Duverger, Maurice.1954. *Political Parties. Their Organization and Activity in the Modern State,* New York: Wiley.

Fish, Stephen. 1995. "The Advent of Multipartism in Russia, 1993-1995," *Post-Soviet Affairs* 11(4): 340-383.

Fisher, Sharon.1995. "Turning Back," *Transitions,* 1, 24, 60-1.

Gibson, John and Anna Ciekecka. 1995. "Economic Influence on the Political Support for Market Reform in Post-communist Transitions: Some

Evidence from the 1993 Polish Parliamentary Elections," *Europe-Asia Studies* Vol. 47, No. 5 765-785.

Koulov, Boian. 1995. "Geography of Electoral Preferences: the 1990 Great National Assembly elections in Bulgaria," *Political Geography,* 14, 3, 241-58.

Goldberg, Carey. 1994. "Analyst's Study Casts Doubts on Vote Results," *Los Angeles Times,* June 3.

Hanson, Philip. 1996. "Russia's 89 Federal Subjects," *Post-Soviet Perspectives.* Vol. IV No.8.

Hughes, James. 1994. The 'Americanization' of Russian Politics: Russia's First Television Election, December 1993," *The Journal of Communist Studies and Transitional Politics* 10, 2, 125-150.

Ijiri, Yuri and Simon Herbert A. 1974. "Interpretation of Departures from the Pareto Curve Firm Size Distributions," *Journal of Political Economy,* 82, 315-331.

Gershaft, Mikhail. 1996. "Will Russia's Economy Turn into a 'Crazy Quilt?" Prizm. 24.

Kolosov V.A, N.V. Petrov and L.V. Smirniagin, ed. 1990. Vesna 89: Geografiia I anatomiia parlamentskikh vyborov. Moscow: Progress. 69, 74-75.

Koulov, Boian. 1995. "Geography of Electoral Preferences: the 1990 Great National Assembly elections in Bulgaria,"*Political Geography.* 14, 3, 241-58.

Lavrov A. 1996. "Pochemu dotatsionnye regiony golosuyut za kommunistov," (Why the Subsidized Regions Are Voting for the Communists), *Rossiiskie vesti*, March 10, 1996.

Lentini, Peter.1994. "Elections and Political Order in Russia: The 1993 Elections to the Russian State Duma," *The Journal of Communist Studies and Transitional Politics.* 102, 151 - 192.

Lentini, Peter. 1994. "Elections and Political Order in Russia: The 1993 Elections to the Russian State Duma," *The Journal of Communist Studies and Transitional Politics* Vol. 10 No. 2: 151-192.

Lewis-Beck, Michael S. 1990. *Economics and Elections*: *The Major Western Democracies.* Ann Arbor: University of Michigan Press.

Lijphart, Arend. 1984. *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries,* New Haven. Yale University Press.

Lyubarskii, Kronid. 1994. "Election Rigging," *New Times International,* February.

Maximov, Jvan. 1995. Strangling by Swindle," *Moskovsky Komsomolets,* December 30.

McFaul, Michael. 1996. *Russia between Elections*: *What the December 1995 Results Really Mean*, Washington, DC: Carnegie Endowment for International Peace.

Myagkov, M. and A. Sobyanin. 1995. "Irregularities in the 1993 Russian Elections: Preliminary Analysis," working paper, California Institute of Technology.

Ordeshook, Peter C. and Olga Shvetsova.1994. "Ethnic Heterogeneity, District Magnitude, and the Number of Parties," *American Journal of Political Science*, 38.

Orttung, Robert and Scott Parrish. 1996. "Duma Votes Reflect North-South Divide," *Transition* Vol. 2, No. 4: 12-14.

Orttung, Susan. 1995. "Will the Elections be Fair?" *Transition*, 1, 22.

Ottav, Edith. 1995. "A New Electoral Dynamic," *Transitions,* 1, 7, 22-5.

Pacek, Alexander and Benjamin Radcliff. 1995. "Turnout and Vote for Left-of-Center Parties: A Cross-National Analysis," *British Journal of Political Science,* 25, 137-43.

Petrushina E. 1994. "The Poor Beat the Rich," *Moskovskie Novosti (Moscow News)* 18 (1-18 May), 7.

Polishchuk, Leonid. 1996. "Russian Federalism: Economic Reform and Political Behavior," mimeo, California Inst. of Technology, Humanities and Social Sciences.

Radcliff, Benjamin. 1994. "Turnout and Democratic Vote," *American Politics Quarterly,* 22, 259- 76.

Rae, Douglas. 1971. *The Political Consequences of Electoral Laws,* New Haven: Yale University Press.

Rose, Richard. 1995. "Beware the Opinion Polls - There are too Many Parties to Pick One Winner," *Transitions,* 1, 22.

Rosen, K.T. and M. Resnik. 1980. "The Size Distribution of Cities: An Examination of the Pareto Law and Primacy," *Journal of Urban Economics,* 8, 165-186.

Shepsle, Kenneth and Ronald Cohen.1990. "Multiparty Competition, Entry, and Entry Deterrence in Spatial Models of Elections," in James Enelow and Melvin J. Hinich, *Advances in the Spatial Theory of Voting,* Cambridge, Cambridge University Press.

Shlapentokh, Vladimir. 1994. "Public Opinion Polls and December 1993 Elections in Russia," *Public Opinion Quarterly,* 58, 4, 579-602.

Slider, Darrel, Vladimir Gimmpelson and Sergei Chugrov. 1994. "Political Tendencies in Russia's Regions: Evidence from the 1993 Parliamentary Elections." *Slavic Review* 53 (3): 711-37.

Smirniagin, Leonid. 1996. "Russian Regional Elections: Who Wins?" *Rossiiskiye Vesti*, December 3 1996.

Sobyanin A., E. Gelman and O. Kaiunov. 1994. "The Political Climate of Russia's Regions: Voters and Deputies, 1991-93," *The Soviet and Post-Soviet Review,* 21,1,63-84.

Sobyanin A., E. Gelman and O. Kaiunov. 1994. "The Political Climate of Russia's Regions: Voters and Deputies, 1991-93," *The Soviet and Post-Soviet Review*, 21 (1): 63-84.

Sobyanin, Alexander. 1995. "How They Elect New Duma," *Izvesita* December 29.

Sobyanin, A. and V. Suchovolsky. 1995. *Democracy Restricted by Falsifications.* Moscow.

Sobyanin. A. and V. Suchovolsky. 1994. "Elections and Referendum December 12, 1993 in Russia: Political Results, Perspectives, Truthworthiness of Results,"*Analytical Report,* (in Russian) Volume 1.

Solnick, Steven. 1995. "Federal Bargaining In Russia," *East European Constitutional Review*, 4, 4:52-8.

State Duma Elections in 1995: Electoral Statistics. 1996. Central Electoral Commission. Moscow. Ves' Mir. (In Russian).

Taagapera, Rein and Matthew S. Shugart.1989. *Seats and Votes: The Effects and Determinants of Electoral Systems,* New Haven: Yale University Press.

Tucker, H. and A. Vedlitz.1986. "Does Heavy Turnout Help Democrats in Presidential Elections?" *America Political Science Review.* 80, 1291-8.

Valentei, Sergei. 1996. "The Concept of Russia's Federative Structure," *Russian Executive and Legislative Newsletter*, 22-28 June.

Vinton, Louisa.1993a. "Poland's Political Spectrum of Elections," *RFE/RL Research Report*, 2, 24.

Vinton, Louisa. 1993b. "Poland's New Election Law: Fewer Parties, Same Impasse?" *RFE/RL Research Report* 2, 28.

Wallich, Christine I. ed. 1994. *Russia and the Challenges of Fiscal Federalism.* Washington, D.C.: World Bank.

White, Stephen, Richard Rose and Ian McAllister. 1997. *How Russia Votes.* Chatham, N.J.: Chatham House.

White, Stephen, Matthew Wyman and Olga Kryshtanovskay. 1996. "Parties and Politics in Post-communist Russia," *Communist and Post-Communist Studies* Vol. 28, No.2, pp.183-202.

Wyman, Matthew, Stephen White, Bill Miller and Paul Heywood. 1995. "Public Opinion, Parties and Voters in the December 1993 Russian Elections," *Europe-Asian Studies.* 47, 4, 591 - 614.

Wyman, Matthew, Bill Miller, Stephen White and Paul Heywood.1994. "The Russian Elections of December 1993," *Electoral Studies,* 13, 3.

Tables:

Table 4.1. Vote for the CPRF in December 1993[1]

Variables	Coefficient
Intercept	55.0
	(4.2)
Rate of saving in 1991 %	0.7
	(6.7)
Growth in retail trade 1990-91 %	-0.1
	(-3.4)
Cars per thousand in 1991	-0.05
	(-1.2)
Growth (decline) in the number of	-0.2
hospital beds per capita 1990-93 %	(-2.1)
Economically active population %	-0.3
	(-2.2)
Rural population in the Region %	0.06
	(1.1)
Vote for Yeltsin in 1991	0.00
	(.84)
Number of observations	75
R-squared	0.71
Corrected R-squared	0.68
Mean of Dependent Variable	12.1

[1]Here and in all other tables *t*-statistic is in parentheses.

Table 4.2. Vote for the CPRF in December 1995

Variables		
Intercept	45.2	18.0
	(3.7)	(1.6)
Rate of saving in 1991 %	1.1	0.6
	(8.8)	(3.9)
Rate of decline in unpaid wages	-0.1	-0.1
in the end of 1995	(-2.2)	(-1.6)
Number of enterprises delaying wage	0.2	0.01
payments, per 10,000	(4.4)	(2.5)
Growth in real incomes	-0.2	-0.1
in 1995	(-3.2)	(-2.2)
"Extremely needy Regions" as	1.4	1.1
defined in 1995 Budget	(5.6)	(4.7)
Rural population in the region %	-0.2	-0.2
	(-2.1)	(-2.6)
Economically active population %	-0.6	-0.3
	(-3.1)	(-1.9)
Vote for the CPRF in 1993	-	0.7
		(4.9)
Vote for Zhirinovsky in 1993	-	0.2
		(2.7)
Vote against (not "for") Yeltsin	-	0.1
in 1990		(2.8)
Number of observations	75	75
R-squared	0.75	0.83
Corrected R-squared	0.72	0.8
Mean of Dependent Variable	24	24

Table 4.3. Vote for Zuganov in the First Round of the 1996 Presidential Elections

Variables		
Intercept	211.1	154.9
	(5.4)	(4.4)
Rate of savings in 1991 %	1.0	0.55
	(5.8)	(3.4)
Income average nominal growth, %	-0.7	-0.5
	(-3.5)	(-3.0)
Real wage growth, April 1996, %	-1.1	-0.9
	(-4.2)	(-3.9)
Increase in unpaid wages between 01/01/97 and	-0.04	-0.04
06/03/96, %	(-2.7)	(-2.8)
Number of enterprises delaying wage payments, per	0.03	0.03
10.000	(2.0)	(2.6)
Share of investments financed by federal budget %	-0.4	-0.6
	(-2.0)	(-3.4)
Rural population in the region %	0.30	0.30
	(3.7)	(4.4)
Share of economically active population	-0.31	-0.02
	(-1.3)	(-0.0)
Dummy for power sharing treaty	-1.0	-0.7
	(-.6)	(-.6)
Vote for CPRF	-	0.14
in December 1993		(5.0)
Number of observations	75	75
R-squared	0.79	0.85
Corrected R-squared	0.76	0.82
Mean of dependent variable	34.5	34.5

Table 4.4. Vote for Zuganov in the Second Round of the 1996 Presidential Elections

Variables		
Intercept	184.1	177.8
	(4.4)	(4.0)
Rate of savings in 1991 %	0.73	0.68
	(4.1)	(3.3)
Income average nominal growth, %	-0.5	-0.5
	(-2.6)	(-2.4)
Real wage growth, April 1996, %	-0.9	-0.9
	(-.3)	(-3.0)
Increase in unpaid wages between 01/01/97 and	-0.07	-0.04
06/03/96, %	(-4.0)	(-3.9)
Number of enterprises delaying wage payments, per	0.04	0.03
10.000	(2.6)	(2.6)
Share of investments financed by federal budget %	-0.9	-0.9
	(-4.0)	(-4.0)
Rural population in the region %	0.36	0.36
	(4.0)	(4.0)
Share of economically active population	-0.08	-0.05
	(-.3)	(-.2)
Dummy for power sharing treaty	-3.8	-0.7
	(-2.0)	(-2.0)
Vote for CPRF in	-	0.19
December 1993		(.4)
Number of observations	75	75
R-squared	0.71	0.71
Corrected R-squared	0.67	0.66
Mean of dependent variable	43.4	43.4

Table 4.5. Growth of Wage Arrears between January and June 1996

Variables		
Intercept	143.4	137.3
	(2.7)	(2.9)
Growth in real incomes in 1995	0.56	0.26
	(2.4)	(1.5)
Index of industrial production (1995=100)	-1.04	-0.80
	(-2.5)	(-2.7)
Average wage level	0.05	0.02
	(2.5)	(1.4)
Overdue debts to creditors, per capita	-10.6	-6.93
	(-2.6)	(-2.0)
Vote for pro-democratic parties in 1995	-	3.07
		(4.8)
Number of observations	78	78
R-squared	0.2	0.39
Corrected R-squared	0.15	0.35
Mean of dependent Variable	185.5	185.5

Table 4.6. Increase in Vote for Zuganov between Rounds of the 1996 Presidential Elections

Variables	
Intercept	309.1
	(.5)
Share of tax revenue raised remaining in region, 1995	-0.12
	(-2.3)
Increase in unpaid wages between May and June 1996	0.1
%	(3.2)
Nominal Income Growth in 1995	-0.05
	(-3.8)
Consumer Price Growth in 1995	0.03
	(2.3)
Vote for Gen. Lebed in the first round	0.37
	(4.3)
Vote for Zhirinovsky in the first round	0.99
	(5.7)
Vote for Yavlinky in the first round	0.31
	(2.3)
Number of observations	75
R-squared	0.7
Corrected R-squared	0.67
Mean of dependent variable	8.8

Table 4.7. Tax Distribution In Russia

	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita
Russia	59	765	65	175
Adygeiya	66	-100	79	-177
Altai Republic	67	-791	82	-793
Bashkortostan	74	597	88	90
Buryatiya	78	-248	77	-134
Dagestan	79	-659	85	-573
Ingushetiya	MD	MD	89	-621
Kar.-Balk.	77	-318	82	-353
Kalmykiya	57	-702	78	-590
Karach.-Cherk.	66	-131	77	-246
Kareliya	67	295	95	-76
Komi	58	1046	60	256
Marii El	73	-266	77	-147
Mordovia	72	-159	78	-75
Sakha	100	-295	100	-30
North Ossetia	66	-345	75	-301
Tartarstan	77	469	84	57
Tyva	75	-1245	84	-991
Udmurtiya	62	469	61	117
Khakasiya	76	221	74	-1
Chechnya	MD	MD	MD	MD
Chuvashiya	68	144	71	80
Altai Krai	73	-164	78	-177

Table 4.7. Tax Distribution In Russia (continued)

	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita
Krasnodarskii Krai	61	455	67	110
Krasnoyarskii Krai	65	1038	65	348
Primorskii Krai	61	519	61	188
Stavropolskii Krai	59	306	68	-2
Khabarovsk Krai	65	332	62	159
Amurskaya Obl	67	86	64	1
Arkhangelskskya Obl.	70	345	69	77
Astrakhanskaya Obl.	63	201	71	-10
Belgorodskaya Obl.	58	800	59	266
Bryanskaya Obl.	63	238	71	54
Vladimirskaya Obl.	58	549	60	176
Volgogradskaya Obl.	60	688	62	208
Vologodskaya Obl.	66	625	64	255
Voronezhskaya Obl.	61	358	66	125
Ivanovskaya Obl.	64	141	65	69
Irkutskaya Obl.	64	885	65	251
Kalliningrad	63	437	68	117
Kaluzhskaya Obl.	62	316	69	68
Kamchatskaya Obl.	74	-311	77	-540
Kemerovo	74	107	82	-90
Kirovskaya Obl.	64	307	71	73
Kostromskaya Obl.	61	-90	65	29
Kurganskaya Obl.	70	141	73	-42
Kurskaya Obl.	63	428	63	146
Leningradskaya Obl.	60	660	65	159
Lipetskaya Obl.	60	967	63	199

Table 4.7. Tax Distribution In Russia (continued)

	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita
Magadanskaya Obl.	67	-137	69	-675
Moskovskaya Obl.	51	1096	58	314
Murmanskaya Obl.	64	701	62	264
Nizhegorodskaya Obl.	52	1056	58	366
Novgorod Obl.	66	208	68	23
Novosibirsk Obl.	67	395	70	104
Omsk Obl.	64	469	71	54
Orenburgskaya Obl.	58	627	63	113
Orlovskaya Obl.	60	134	64	-1
Penzenskaya Obl.	65	129	77	-12
Permskaya Obl.	53	1114	58	295
Pskovskaya Obl.	68	74	75	-19
Rostovskaya Obl.	59	418	64	162
Ryazanskaya Obl.	59	608	57	225
Samarskaya Obl.	52	1478	55	532
Saratovskaya Obl.	62	375	67	104
Sakhalinskaya Obl.	71	4	74	-92
Sverdlovsk Obl.	57	1128	62	387
Smolenskaya Obl.	60	437	56	130
Tambovskaya Obl.	65	115	73	14
Tverskaya Obl.	57	1181	52	158
Tomskaya Obl.	57	1181	68	123
Tulskaya Obl.	63	443	65	119
Tyumenskaya Obl.	65	840	65	119
Ulyanovskaya Obl.	59	486	54	249

Table 4.7. Tax Distribution In Russia (continued)

	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita	Share of tax revenue raised remaining in region (%)	Estimated net balance of financial flows '000 rubles per capita
Chelyabinskaya Obl.	62	812	61	293
Chitinskaya Obl.	72	98	75	-41
Yaroslavskaya Obl.	52	1137	52	495
Moscow City	54	2817	60	724
St. Petersburg	55	1237	57	392
Evreiskaya AO	77	-535	77	-179
Arinskii-Buryatskii	80	-425	83	-484
Komi-Permyatskii	77	-427	81	-427
Koryakskii AO	68	-6677	77	-5918
Nenetskii AO	70	42	82	-419
Taimyrskii AO	73	341	61	-395
Urst-Ordynskii Burya	73	-778	85	-510
Khanti-Mansi AO	40	9297	59	1393
Chukotskii AO	69	-2582	78	-2833
Evenk. AO	79	-2725	78	-2096
Yamalo-Nenetskii AO	45	9480	72	1134

Sources: Lavrov, Alexey. "Russian Budget Federalism, First Steps, First Results". *Segodnya.* June7, 1995 McAuley, "The Determinants of Russian Federal-Regional Fiscal Relations: Equity or Political Influence?" *Europe-Asia Studies* Vol.49, No.3. 1997. 431-444.

Table 4.8

Turnout in 23 Russian Regions

Region	December 1993			April 1993			July 1991		
	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
Krasnoyarsk Kray	0.51	77.05	34.38	0.61	80.17	49.48	0.72	0.9	0.59
Archangelk obl	0.54	68.46	47.21	0.66	82.05	56.3	0.74	0.83	0.68
Briansk obl	0.64	83.29	55.35	0.68	87.29	55.25	0.82	0.99	0.73
Vladimir obl	0.6	72.91	50.98	0.7	82.16	62.68	0.8	0.89	0.73
Vologod obl	0.59	76.95	52.27	0.69	85.52	59.73	0.77	0.91	0.72
Voroneg obl	0.59	83.45	47.5	0.73	90.76	60.26	0.81	0.94	0.71
Kalinigrad obl	0.56	64.56	49.47	0.64	76.36	57.49	0.74	0.84	0.69
Kemero obl	0.53	75.58	44.83	0.58	84.53	43.37	0.7	0.91	0.62
Kirov obl	0.58	78.51	47.55	0.72	86.56	58.25	0.79	0.98	0.71
Kursk obl	0.64	80.99	42.66	0.7	88.93	48.81	0.85	0.97	0.67
Magadan obl	0.48	63.89	43.44	0.58	75.94	50.63	0.67	0.83	0.61
Murmansk obl	0.5	72.96	43.69	0.59	78.88	52.68	0.68	0.92	0.56
Nignii Novgorod obl	0.52	78.85	43.36	n/a	78.85	43.36	0.76	0.99	0.67
Novgorod obl	0.59	77.79	53.97	0.66	86.59	57.69	0.78	0.94	0.71
Orenburg obl	0.55	79.95	39.13	0.65	88.14	50.94	0.79	0.94	0.64
Penza obl	0.64	84.63	53.94	0.71	89.77	58.68	0.84	0.96	0.74
Permt obl	0.44	60.34	39.35	0.59	69.92	55.29	0.71	0.87	0.67
Saratov obl	0.58	84.59	47.97	0.68	91.43	54.05	0.78	0.97	0.71
Sachalinsk obl	0.5	63.16	43.46	0.56	72.56	47.6	0.7	0.85	0.65
Sverdlovsk obl	0.49	76.01	40.5	0.67	87.01	55.55	0.79	0.95	0.71
Smolensk obl	0.65	81.68	59.34	0.71	88.6	61.13	0.83	0.96	0.75
Tver obl	0.62	84.47	52.99	0.7	91.14	56.25	0.8	0.94	0.68
Tula obl	0.6	75	51.98	0.68	83.98	58.91	0.78	0.89	0.71

Table 4.9

Correlation between Turnout and Vote times Turnout

			Parties			
	1991	April 1993	Constitution	Conservaties	Russia's Choice	All others
Krasnoyarsk Kray	-0.32	0.26	0.7	0.9	-0.4	-0.68
Archangelk obl	-0.53	-0.07	0.6	0.75	-0.15	-0.6
Briansk obl	-0.57	-0.14	0.27	0.81	-0.41	-0.65
Vladimir obl	-0.39	0.21	0.5	0.86	-0.38	-0.69
Vologod obl	-0.35	0.14	0.69	0.83	-0.14	-0.6
Voroneg obl	-0.69	-0.76	-0.05	0.94	-0.64	-0.79
Kalinigrad obl	-0.35	0.46	0.73	0.69	-0.2	-0.49
Kemero obl	-0.65	-0.1	0.79	0.96	-0.58	-0.77
Kirov obl	-0.47	-0.17	0.22	0.84	-0.29	-0.68
Kursk obl	-0.32	-0.45	0.17	0.96	-0.64	-0.87
Magadan obl	0.23	0.86	0.71	0.91	-0.4	0.17
Murmansk obl	-0.47	0.52	0.8	0.87	-0.12	-0.43
Nignii Novgorod obl	-0.23	0.08	0.08	0.91	-0.53	-0.81
Novgorod obl	-0.64	0.37	0.85	0.91	-0.49	-0.63
Orenburg obl	-0.53	-0.27	0.45	0.92	-0.6	-0.79
Penza obl	-0.24	-0.42	-0.15	0.95	-0.61	-0.82
Permt obl	-0.27	0.57	0.89	0.75	-0.16	-0.54
Saratov obl	-0.48	-0.04	0.45	0.84	-0.31	-0.62
Sachalinsk obl	0.03	0.79	0.8	0.58	0.52	-0.07
Sverdlovsk obl	0.07	0.64	0.85	0.75	-0.17	-0.65
Smolensk obl	-0.7	-0.1	-0.3	0.94	-0.63	-0.83
Tver obl	-0.69	-0.15	0.01	0.96	-0.79	-0.88
Tula obl	-0.73	-0.28	0.37	0.94	-0.74	-0.85

Table 4.10

Correlation between the percent of Rural Population, Turnout and Support for Yeltsin

	Turnout			Vote for Yeltsin			Communists
	1991	April 93	Dec 93	1991	April 93	Dec 93	Dec 93
Krasnoyarsk Kray	0.68	0.77	0.79	-0.73	-0.04	-0.33	0.18
Archangelk obl	0.52	0.78	0.73	-0.62	0.34	-0.25	0.23
Briansk obl	0.83	0.8	0.81	-0.65	-0.21	-0.12	-0.05
Vladimir obl	0.82	0.81	0.85	-0.63	0.02	-0.29	-0.05
Vologod obl	0.78	0.82	0.76	-0.63	-0.04	-0.41	-0.17
Voroneg obl	0.61	0.6	0.67	-0.53	-0.52	-0.65	0.22
Kalinigrad obl	0.58	0.54	0.32	-0.7	-0.06	-0.1	-0.09
Kemero obl	0.86	0.82	0.85	-0.72	-0.1	-0.22	0
Kirov obl	0.61	0.68	0.63	-0.69	-0.26	-0.53	0.24
Kursk obl	0.72	0.72	0.73	-0.58	-0.43	-0.4	0.28
Magadan obl	0.71	0.79	0.84	-0.82	0.6	-0.22	0.68
Murmansk obl	-0.16	0.14	0.13	-0.1	-0.14	-0.29	0.33
Nignii Novgorod obl	0.71	0.81	0.81	-0.72	-0.67	-0.67	0.48
Novgorod obl	0.82	0.81	0.8	-0.72	0.37	-0.11	0.4
Orenburg obl	0.76	0.86	0.84	-0.83	-0.44	-0.61	0.01
Penza obl	0.78	0.8	0.76	-0.71	-0.17	-0.39	0.17
Permt obl	0.26	0.65	0.45	-0.77	-0.11	-0.48	0.46
Saratov obl	0.83	0.81	0.85	-0.68	-0.21	-0.48	0.18
Sachalinsk obl	0.85	0.81	0.83	-0.57	0.52	0.12	-0.32
Sverdlovsk obl	0.5	0.57	0.64	-0.62	0.04	-0.41	0.48
Smolensk obl	0.71	0.67	0.58	-0.84	-0.36	-0.42	0.15
Tver obl	0.8	0.8	0.71	-0.7	0.07	-0.32	-0.15
Tula obl	0.77	0.8	0.81	-0.87	-0.45	-0.44	0.35

Table 4.11

Difference in Turnout and Vote for Russia's Choice in Urban and Rural Areas

	Vote for Russia's Choice			Turnout		
	Rural	Urban	Difference	Rural	Urban	Difference
Krasnoyarsk Kray	0.09	0.17	-0.08	0.59	0.42	0.16
Archangelk obl	0.16	0.25	-0.09	0.55	0.46	0.09
Briansk obl	0.09	0.16	-0.07	0.65	0.55	0.1
Vladimir obl	0.13	0.19	-0.06	0.59	0.53	0.06
Vologod obl	0.12	0.19	-0.07	0.61	0.52	0.09
Voroneg obl	0.07	0.19	-0.11	0.62	0.47	0.15
Kalinigrad obl	0.14	0.22	-0.08	0.53	0.51	0.02
Kemero obl	0.08	0.15	-0.06	0.62	0.45	0.16
Kirov obl	0.09	0.16	-0.07	0.58	0.49	0.09
Kursk obl	0.06	0.17	-0.1	0.68	0.5	0.18
Magadan obl	0.13	0.15	-0.02	0.5	0.43	0.08
Murmansk obl	0.19	0.24	-0.06	0.5	0.47	0.03
Nignii Novgorod obl	0.1	0.16	-0.07	0.54	0.43	0.1
Novgorod obl	0.12	0.15	-0.04	0.57	0.52	0.05
Orenburg obl	0.08	0.18	-0.1	0.61	0.43	0.19
Penza obl	0.06	0.11	-0.06	0.67	0.53	0.15
Permt obl	0.23	0.32	-0.09	0.42	0.39	0.03
Saratov obl	0.07	0.17	-0.09	0.63	0.47	0.16
Sachalinsk obl	0.09	0.09	-0.01	0.53	0.45	0.08
Sverdlovsk obl	0.15	0.26	-0.12	0.51	0.44	0.07
Smolensk obl	0.08	0.15	-0.08	0.67	0.57	0.1
Tver obl	0.1	0.19	-0.09	0.64	0.51	0.13
Tula obl	0.11	0.17	-0.06	0.6	0.53	0.07

Table 4.12

Correlation between Turnout and Vote for Yeltsin or Reforms

	1991	April 1993	December 1993
Krasnoyarsk Kray	-0.32	0.26	-0.4
Archangelk obl	-0.53	-0.07	-0.15
Briansk obl	-0.57	-0.14	-0.41
Vladimir obl	-0.39	0.21	-0.38
Vologod obl	-0.35	0.14	-0.14
Voroneg obl	-0.69	-0.76	-0.64
Kalinigrad obl	-0.35	0.46	-0.2
Kemero obl	-0.65	-0.1	-0.58
Kirov obl	-0.47	-0.17	-0.29
Kursk obl	-0.32	-0.45	-0.64
Magadan obl	0.23	0.86	-0.4
Murmansk obl	-0.47	0.52	-0.12
Nignii Novgorod obl	-0.23	-0.23	-0.53
Novgorod obl	-0.64	0.37	-0.49
Orenburg obl	-0.53	-0.27	-0.6
Penza obl	-0.24	-0.42	-0.61
Permt obl	-0.27	0.57	-0.16
Saratov obl	-0.48	-0.04	-0.31
Sachalinsk obl	0.03	0.79	0.52
Sverdlovsk obl	0.07	0.64	-0.17
Smolensk obl	-0.7	-0.1	-0.63
Tver obl	-0.69	-0.15	-0.79
Tula obl	-0.73	-0.28	-0.74

Table 4.13

Correlation between Turnout and Vote for candidates in Federal Council

	1'st Winner		2'nd Winner		third
Krasnoyarsk Kray	-0.33	Head, Kray Administration	0.2	Director of chemical company	0.21
Archangelk obl	0.03	Head, Oblast Administration	-0.54	Chairman Brick compary	-0.56
Briansk obl	0.4	Former Head, Oblast	0.32	Military officer	-0.29
Vladimir obl	0.34	Head, Oblast Administration	0.12	Representative of the President	-0.27
Vologod obl	-0.61	Mayor, Cherepovets City	0.42	Head, Oblast Administration	0.41
Voroneg obl	-0.64	Head, Oblast Administration	-0.52	Executive of Oblast Administration	0.74
Kalinigrad obl	-0.34	Deputy Prime Minister	0.34	Head, Oblast Administration	-0.31
Kemero obl	0.45	Former Chaiman of Soviet	-0.27	Deputy chief of local newspaper	0.01
Kirov obl	0.06	Head, Oblast Administration	-0.14	Rector	-0.28
Kursk obl	0.75	Chairman of Soviet Councli	0.71	Head, Oblast Administration	-0.43
Magadan obl	-0.15	Joint Stock company director	-0.49	Director of constuction compuny	0.56
Murmansk obl	-0.15	Articservice company	0.47	Official of Oblast administration	-0.48
Nignii Novgorod obl	-0.44	Governor	-0.04	Chairman of Soviet Councli	0.45
Novgorod obl	0.66	Head, Oblast Administration	-0.22	Director	-0.65
Orenburg obl	0.5	Head, Oblast Administration	-0.64	Director	0.68
Penza obl	0.53	Head, Oblast Administration	-0.54	Head of City Administration	0.02
Permt obl	-0.11	director	-0.36	president of company	0.44
Saratov obl	0.6	Head, Oblast Administration	-0.02	First Deputy of Head of City Administration	-0.49
Sachalinsk obl	0.02	Head, Oblast Administration	0.03	Director	0.38
Sverdlovsk obl	-0.19	former Governor	0.14	no official position	0.01
Smolensk obl	0.74	Head, Oblast Administration	-0.83	Deputy Minister	0.7
Tver obl	0.62	Head, Oblast Administration	-0.61	Professor	0.57
Tula obl	0.67	Chairman of collective Farm	-0.26	President of Company Moscow resident	-0.63

Table 4.14

	Regions where local heads won the elections	Regions where local heads either were not run or ran and lost	All Regions
Number of observations	577	209	786
Number of regions	16	7	23
Correlation between the turnout and the turnout times the vote for:			
Constitution	0.06	0.03	0.01
Russia's Choice	-0.39	-0.5	-0.48
Yabloko	-0.51	-0.4	-0.48

Figures:

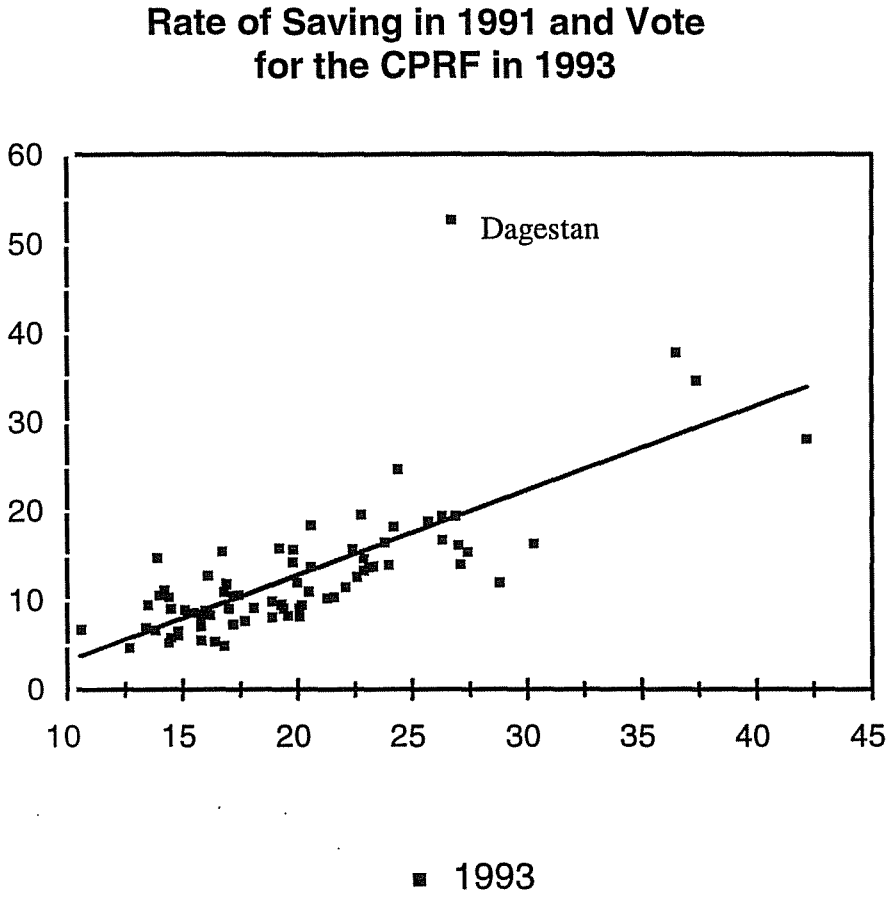

Figure 4.1

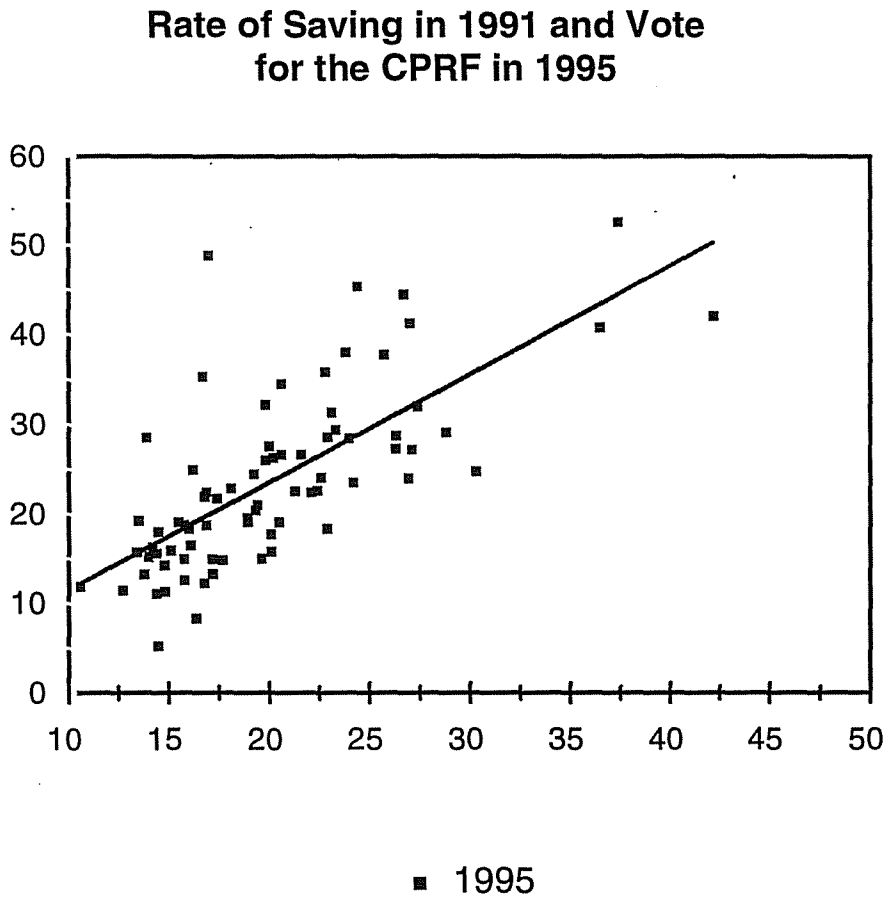
Rate of Saving in 1991 and Vote for the CPRF in 1995
60
50
40
30
20
10
0
10
15
20
25
30
35
40
45
50
1995

Figure 4.2

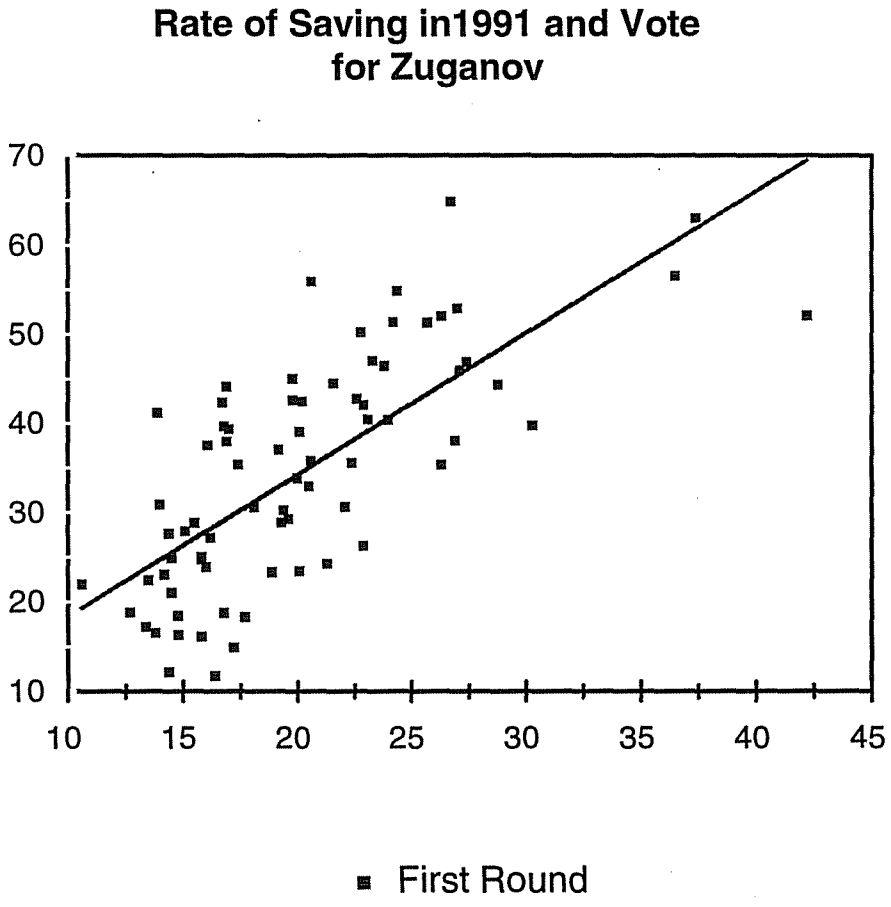
Rate of Saving in1991 and Vote for Zuganov
70
60
50
40
30
20
10
10
15
20
25
30
35
40
45
First Round

Figure 4.3

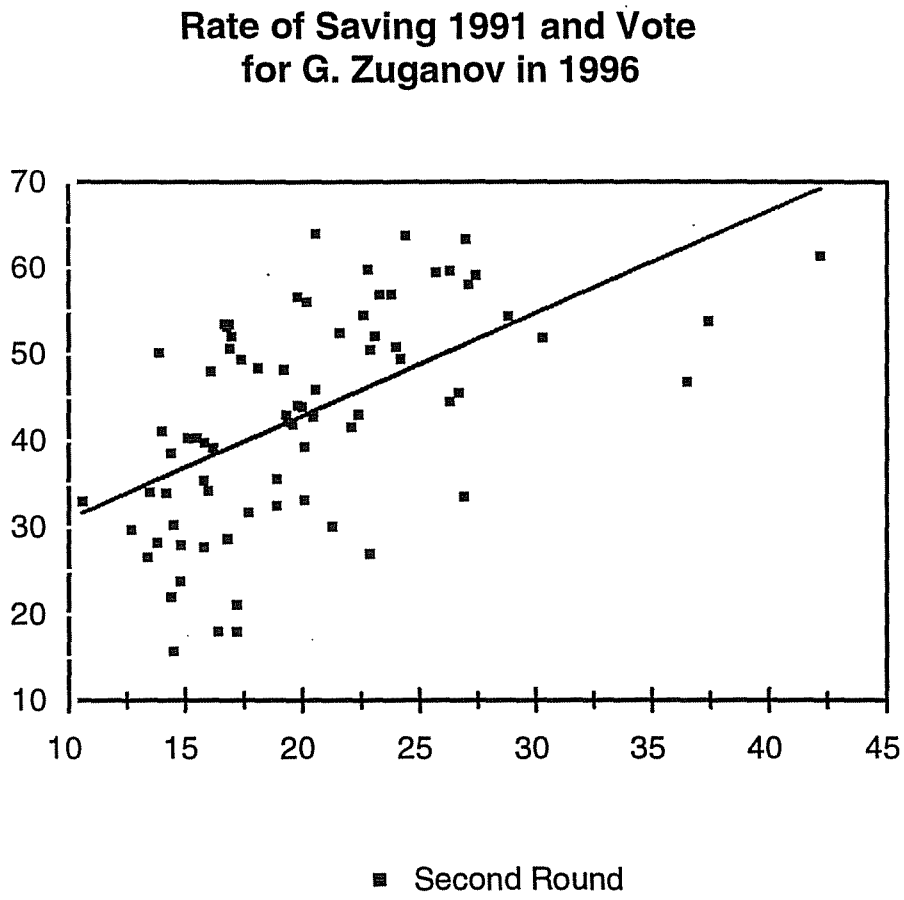
Rate of Saving 1991 and Vote
for G. Zuganov in 1996
70
60
50
40
30
20
10
10
15
20
25
30
35
40
45
Second Round

Figure 4.4

Russia 1993 (Official Results and Sobjanin's Estimates)

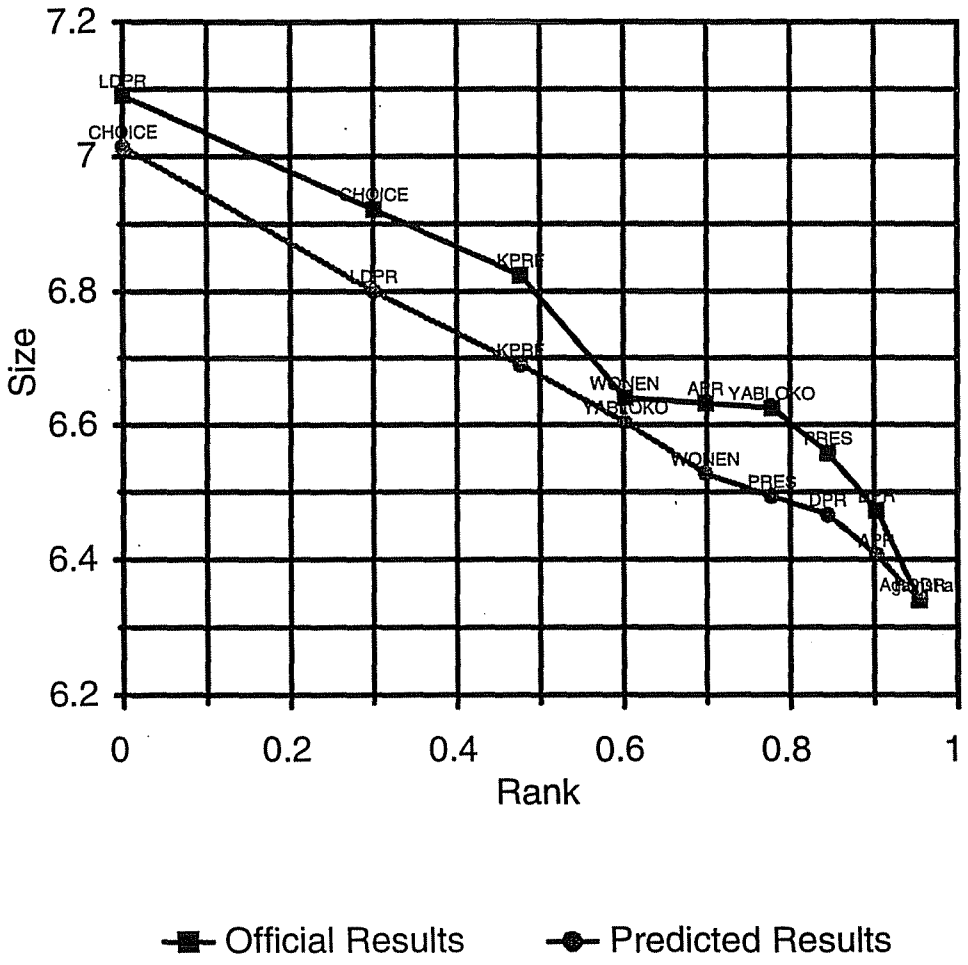

Figure 4.5

Ranks of Parties in German Elections

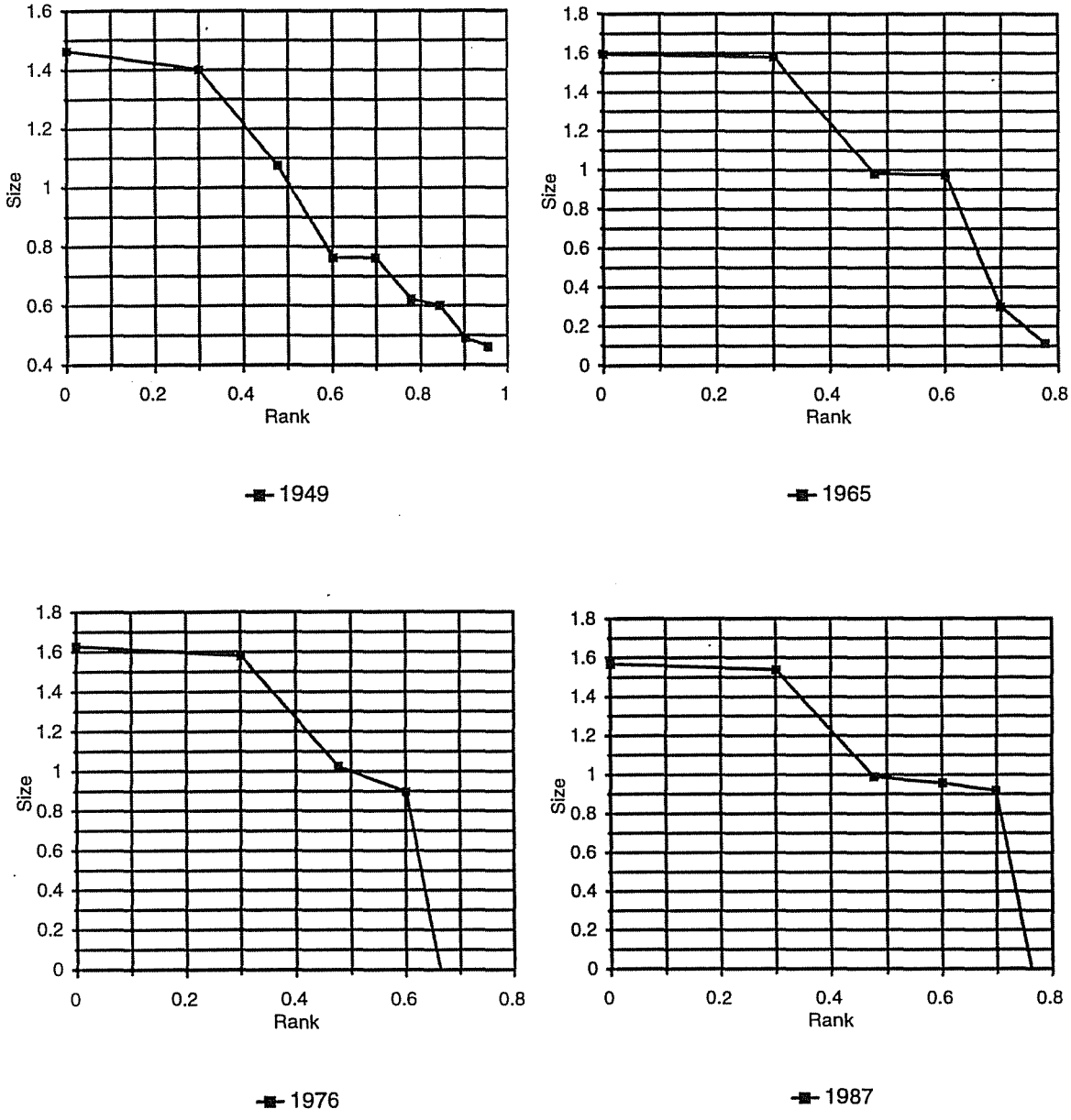

Figure 4.6

Israeli Elections

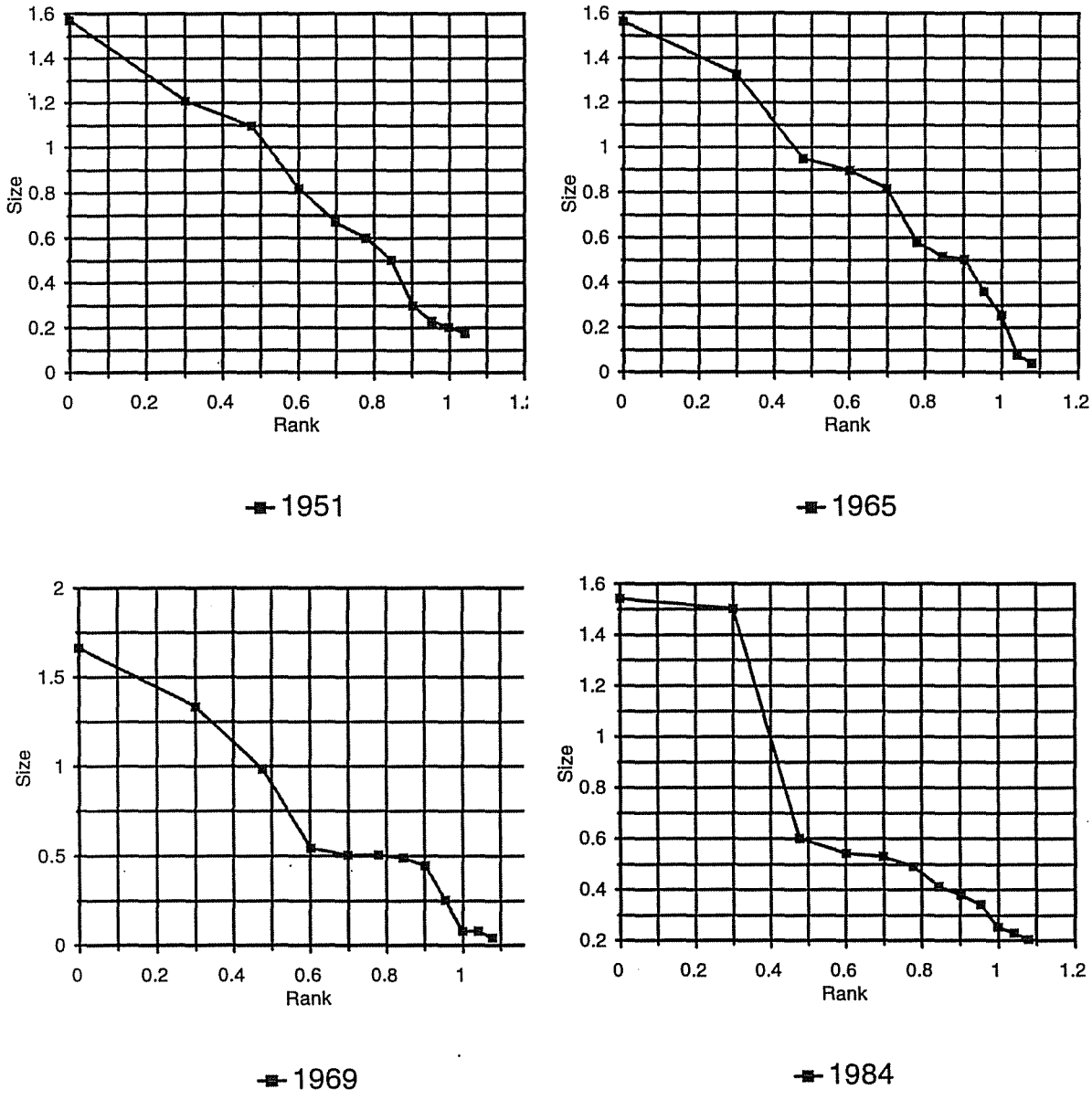

Figure 4.7

Quebec Referendum 1995, Vote "Yes"

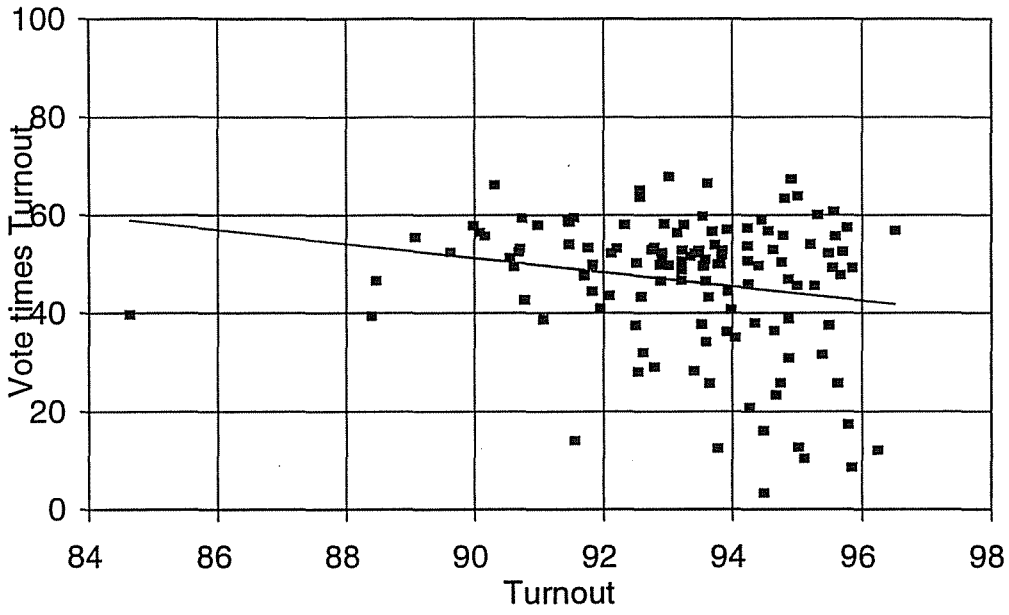

Figure 4.8

Quebec referendum 1995, Vote "No"

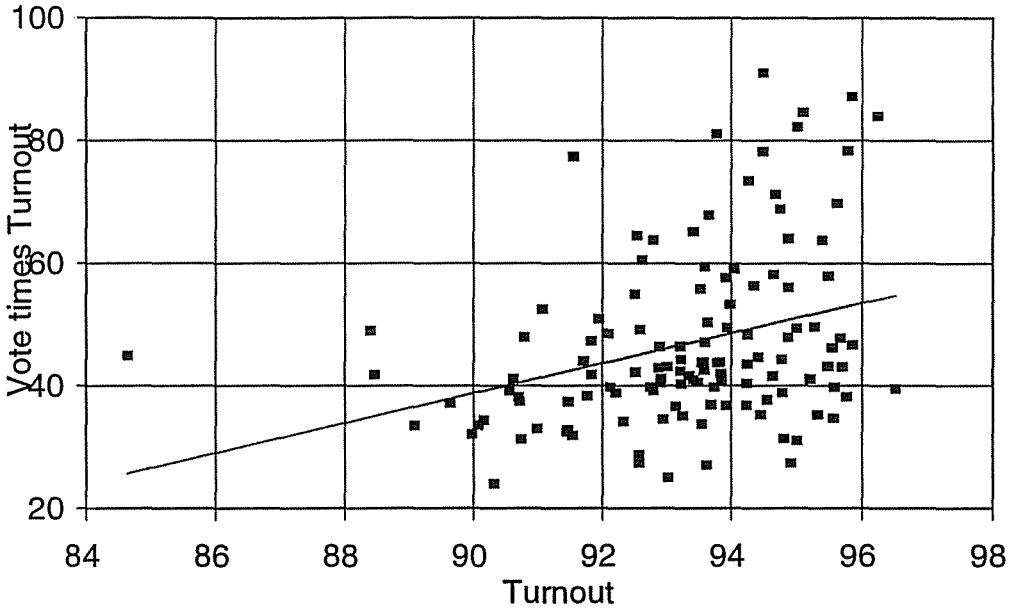

Figure 4.9

Turnout and Vote "For" Constitution

Times Turnout for Selected 18 Regions

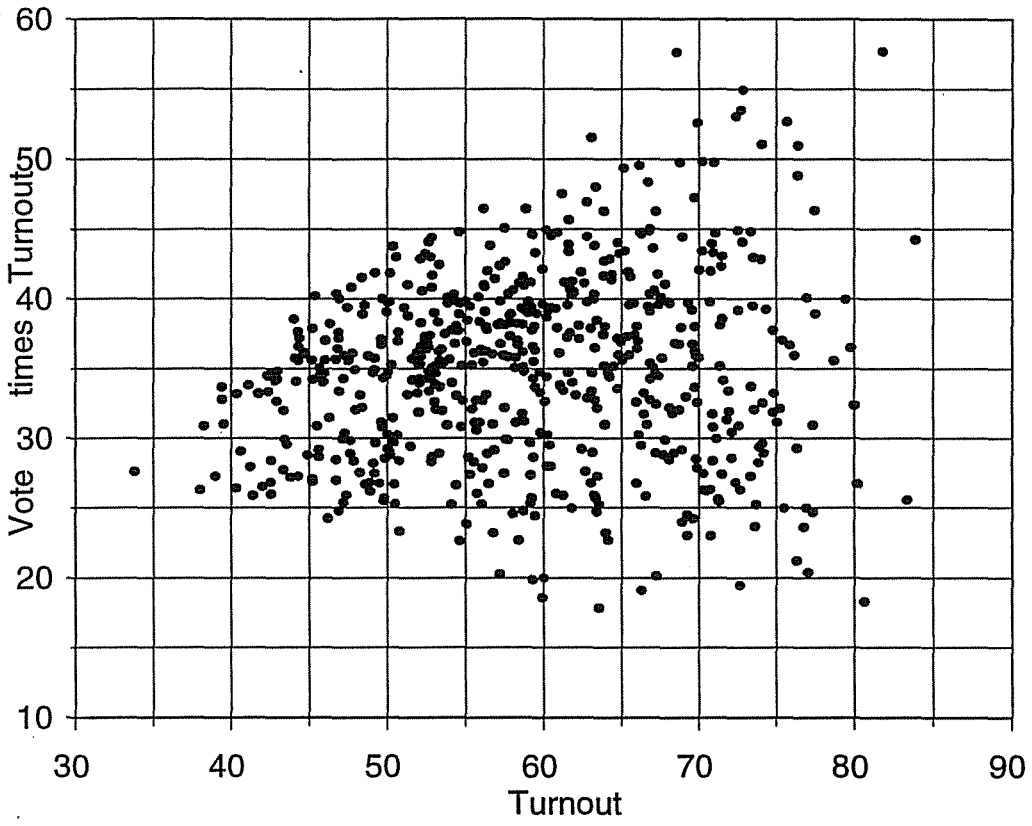

Figure 4.10

Regression Lines for Selected 18 Regions

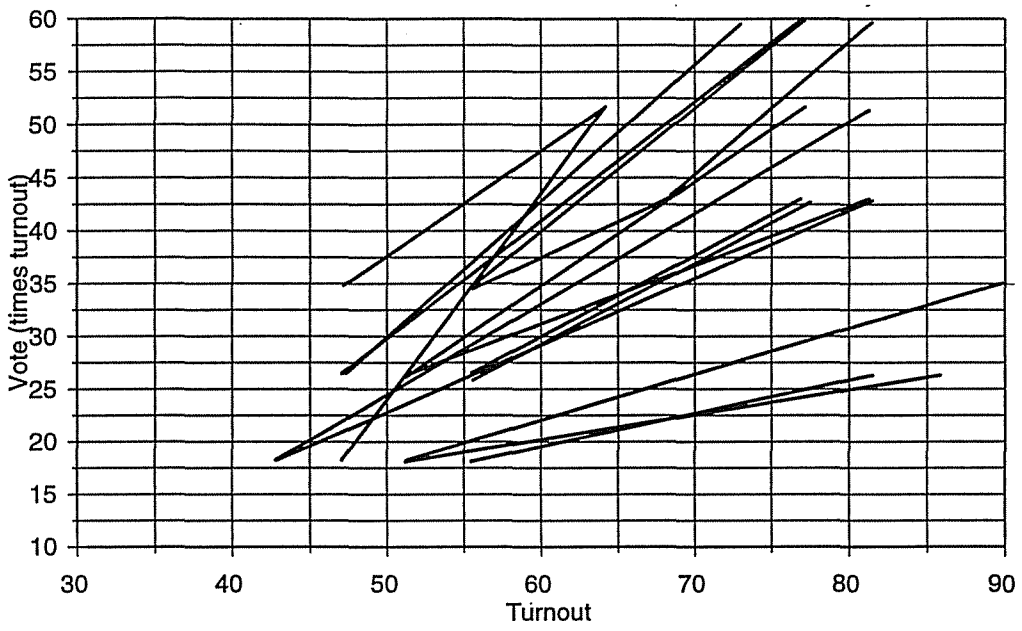

Figure 4.11