# Transition in Regional Capitals along the Volga[1]

Martha de Melo, Gur Ofer, and Plamen Yossifov[2]

December 13, 1999

Table of Contents

# I.  INTRODUCTION

1.      Under central planning, the Russian city, positioned at the bottom of the government hierarchy, performed a variety of functions, some "municipal" and others related to the production sector, all dictated by higher levels of government and planning authority. The various city institutions were run Soviet-style and lacked real independence. Under transition following the disintegration of the USSR, however, cities have become centers of change. First, the creation of a market economy calls for a service infrastructure that is largely an urban phenomenon. This is especially true in Russia and other FSU republics, where changes in agriculture have taken place more slowly than in other centrally planned economies. Second, decentralization of government powers and functions has left the cities increasingly more independent of Moscow and even of the governments of the regions (oblast/republic/kray) in which they are located.   This is reflected in the evolution of the city budget and in the increasing level of independence in budget execution.  And third, privatization of old firms and the establishment of new private firms have transformed the relationship between government and the productive sector, which is increasingly privately owned.

2.      As cities have become centers of change, they have become increasingly differentiated from their surrounding rural hinterlands.  Figure 1, admittedly somewhat dated but encompassing the most recent statistics, illustrates the increasing divergence between the Volga capitals and their surrounding regions using three economic indicators—average monthly wages, per capita retail trade, and private car ownership per thousand residents. In 1985, there was little difference on average between city and countryside, with the exception of retail trade (some 15 percent higher in the cities).  Between 1990 and 1997, however, there was a dramatic improvement in the relative position of most cities.[3]  As a result of these growing differences, it becomes increasingly important to study urban and rural areas separately, rather than jointly as is typical in regional-level analysis.

3.      Such a task, however, is complicated by scarcity of data at the city level.  No detailed national statistics for cities have been published since the appearance in 1994 of *Socioeconomic Statistics of Capitals of Republics, Krays, and Oblasts of the Russian Federation* (Goskomstat Rossii, 1994). However, some information on Russia's major cities can be obtained from two more recently published statistical compendia (*Regiony Rossii*) on Russia's regions (Goskomstat Rossii, 1997a, 1998a).[4]  In addition to the problems of data scarcity, the standard caveats regarding problems surrounding the reliability of data apply

---

[3] Samara is the only city that consistently lags behind its surrounding region on these indicators. This reflects the fact that the values for the remainder of Samara Oblast are elevated by the inclusion of Togliatti, a major industrial city in the region.

[4]  In addition to these regional volumes, Bradshaw and Hanson (1998) provide a useful review of the English-language literature on political, economic, and social transition in the Russian regions.

here as well. We acknowledge, for example, such difficulties as problematic price deflators and alternative values for the same variable appearing in different sources. The paper reflects a best-effort approach, and we occasionally call attention to specific data problems.

**Table 1. Comparison of Volga Capital Cities to Rest of Region**

| Region | Ratio of Capital City to Rest of Region x 100 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average Monthly Wages | | | | Retail Trade a/ | | | | Automobile Possession b/ | | |
| | 1985 | 1992 | 1996 | 1997 | 1985 | 1992 | 1996 | 1997 | 1985 | 1992 | 1995 |
| Tver | 101 | 128 | 136 | 102 | 128 | 71 | 92 | 163 | 141 | 155 | 198 |
| Yaroslavl | 99 | 123 | 139 | 142 | 117 | 63 | 180 | 227 | 123 | 129 | 149 |
| Nizhni Novgorod | 104 | 108 | 117 | 119 | 138 | 68 | 140 | 132 | 102 | 112 | N/A |
| Chuvashia | 116 | 134 | 142 | 154 | 116 | 78 | 95 | 99 | 90 | 139 | N/A |
| Tatarstan | 102 | 86 | 87 | 101 | 122 | 53 | 151 | 195 | 78 | 100 | 111 |
| Ulyanovsk | 107 | 116 | 125 | 122 | 128 | 58 | 173 | 189 | 90 | 128 | N/A |
| Samara | 100 | 82 | 87 | 97 | 117 | 51 | 96 | 112 | 88 | 96 | N/A |
| Saratov | 102 | 95 | 116 | 128 | 146 | 66 | 213 | 222 | 96 | 104 | 124 |
| Volgograd | 104 | 98 | 130 | 135 | 142 | 49 | 109 | 145 | 81 | 77 | 78 |
| Astrakhan | 95 | 92 | 122 | 111 | 137 | 60 | 251 | 243 | 99 | 139 | N/A |

*Source:* Goskomstat, *Cities of Russian Federation*, 1995, Goskomstat, *Regionyi Rossii*, Vol.1 and Vol.2, 1997, Goskomstat, *Regionyi Rossii*, Vol.1 and Vol.2, 1998, city case studies and city statistical bulletins.

a/ Per capita volume of retail trade of consumer goods and services.

b/ Automobile possession per 1000 residents.

4.    This paper focuses on the course of transition in 10 cities[5] serving as capitals of regions situated along the Volga River (see Figure 1), a broad region that sometimes has been described as the "heartland" of Russia and the former USSR (e.g.,Hooson, 1960, 1964). Two of the regions are republics (Tatarstan and Chuvashia); the other eight are oblasts. A comparison is of interest since historical access to similar information, technology, and cultural influences suggests that there would be less diversity in the experience of these cities than cities varying more widely in terms of size or more widely dispersed across the Russian Federation.

---

[5]The 10 cities include Tver', Yaroslavl', Nizhniy Novgorod, Cheboksary, Kazan', Ul'yanovsk, Samara, Saratov, Volgograd, and Astrakhan'.The Volga River has been a north-south trade route for many centuries, and there is substantial similarity among the cities. All are old cities with deep historical and cultural roots, with several being founded in the 10th (Yaroslavl'), 12th (Tver'), and 13th (Nizhniy Novgorod) centuries. The cities range in population from approximately 450,000 (Tver' and Cheboksary) to 1.4 million (Nizhniy Novgorod), typically accounting for roughly one-third of their regions' total population.

**Figure 1 . Regional Capitals Along the Volga River**

RUSSIAN FEDERATION
Figure 1: TEN REGIONAL CAPITALS ALONG THE VOLGA RIVER

5.　　We employ two basic approaches in the study of transition in these cities, each approach corresponding to a major part of the paper.  In the first part, we explore in some detail the problems encountered by Russian cities in the two aspects of transition--city as government and city as an economic center—with the focus placed on the common experience of the 10 capitals.   In our effort to understand this common experience, we draw on a variety of sources, including fiscal data distinguishing revenue and expenditure patterns of cities from those of their surrounding regions and a small survey of the business environment and transaction costs in 6 of the 10 cities. In the second part, we examine the evolution of differences among the cities, demonstrating how more or less uniform economic conditions diverged early in the transition period and outlining several hypotheses regarding how such differences arose.  This portion of the study, which uses conditions in 1990 as a benchmark against which to measure change, relies on a variety of local and federal government statistical publications, newspaper articles, and Russian and international scholarly work, in both published and unpublished form.

6.　　The impetus for transition at the city level has been partly legislative, with the two most relevant laws in Russia being the 1995 "Law on Organization of Local Self-Government" and the 1997 "Law on the Financial Foundations of Local Government in the Russian Federation."[6] Although most of the power at the sub-national level still resides with regional governments, these laws have given more independence to large urban agglomerations such as capital cities, where elected officials now have a local power base.[7] The extent of privatization, price controls, support for new private firms, mobilization of local revenues, and disposition of available budgetary funds all at least partly depend on local leadership.  And in the Volga region, local leadership tends to be more progressive than leadership at the regional level.

7.　　The following section of the paper presents a stylized view of the evolving nature and functions of the city during transition from a Soviet-type city to a modern market, or Western-style, city.  We then document and analyze the expanding fiscal role of cities, exploring and attempting to explain variations in the patterns of fiscal decentralization.  The focus is on the structure of city revenues and expenditures within the Volga capitals, with particular attention devoted to the most distinctive aspect of their budgets—the large share of expenditures on housing and utilities and the lack of any significant contribution of property taxes to revenues.  A subsequent section of the paper draws on a recent survey and other city-level economic data to characterize the current features of the urban economy in the Volga capitals, and the relationship between local government and the private sector.  Then, in the

---

[6] The effects of these laws can vary, as the "Law on Organization of Local Self-Government" provides for the relationship between regions and municipalities to be defined separately for each "federation subject."

[7] Since 1996 mayors and city councils are freely elected throughout the Russian Federation. See de Melo and Ofer 1999 for a discussion of the political landscape in the 10 Volga regions and regional capitals.

second major part of the paper, we shift the focus to exploring differences (rather than common experiences) among the 10 cities, in an effort to explain their divergent economic fortunes over the period of transition.
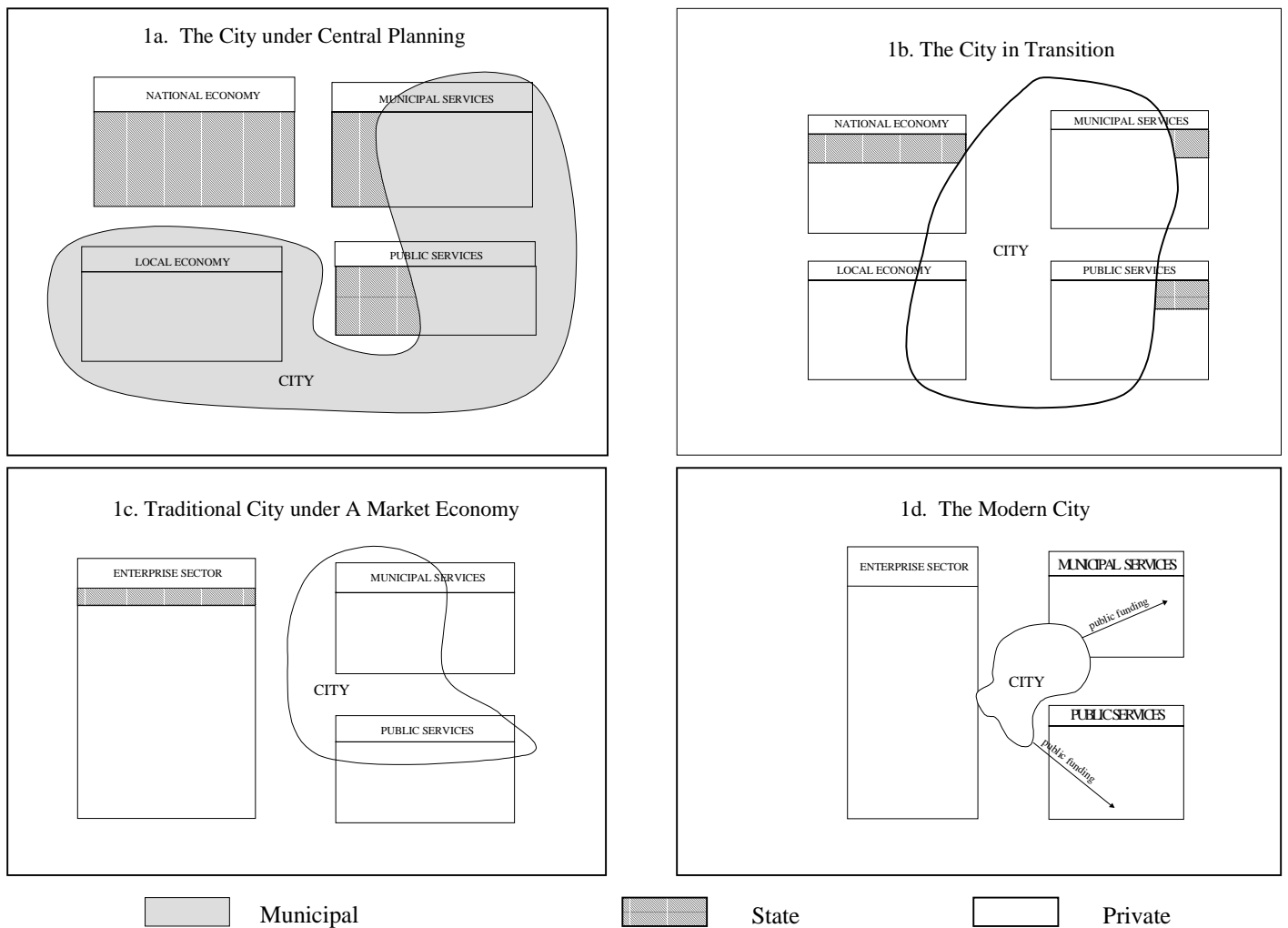
## II.  THE  RUSSIAN  CITY  IN  TRANSITION: A STYLIZED VIEW

8.      An effective and convenient way of visualizing the changing nature and functions of the Russian city, from a city under central planning to the so-called "modern" city model, is via a diagram (Figure 2) in which four basic areas of activity are represented by rectangles—activities contributing to the national and local economies, later joined as the "enterprise sector"; "social" services, including education, health, housing (including utilities), and welfare; and typical "municipal services," such as police, street cleaning, garbage collection, urban transportation, etc.  The four areas are overlain by a lightly shaded area representing city responsibility, a more darkly shaded area representing the responsibilities of the state (federal or regional level), and an unshaded area representing activities open to the private sector.

9.      Under central planning (Figure 2A), the four activities are divided into two spheres of responsibility, with no area open to the private sector.  State-owned enterprises primarily supply  goods and services for national distribution, whereas the city administration supplies social and municipal services plus goods and services for local consumption (bakeries, hairdressers, florists).  This rather simple picture is complicated by the fact that under central planning many state-owned enterprises provided housing, utilities, and other social services to some or all of their employees.  In some cases, they also participated in road-building and other typically municipal responsibilities.  This occurred mostly in cases of large state-owned enterprises, which, while located in the cities, were under the jurisdiction of the central government ministries.

10.      We have assumed that many Russian cities may eventually evolve in the direction of the traditional Western city (Figure 2C), or possibly the new paradigm for a modern city (Figure 2D).  The traditional city under a market economy provides most of the municipal services, including some utilities, and some social services (including a small amount of public housing); it regulates other utilities, some of which remain government owned.  The city does not normally engage in direct production of goods and does not own other firms.  Under the new paradigm, city administration has been reduced to the minimum (see, for example, Stein, 1990).  Much of the city budget is used to provide public funding and subsidies for privately provided public and municipal services, including some low-income housing.  A growing number of cities in the industrialized West are somewhere between stages C and D.  Since Russian cities are being reinvented in the transition, the option of "leapfrogging" directly into paradigm D for some services cannot be ruled out.  Indeed, given the general fiscal stress of the cities and the federal government, this may be the best option.

**Figure 2.  The Changing Role of City Government**



1a.  The City under Central Planning

NATIONAL ECONOMY

MUNICIPAL SERVICES

LOCAL ECONOMY

PUBLIC SERVICES

CITY

1b. The City in Transition

NATIONAL ECONOMY

MUNICIPAL SERVICES

CITY

LOCAL ECONOMY

PUBLIC SERVICES

1c. Traditional City under A Market Economy

ENTERPRISE SECTOR

MUNICIPAL SERVICES

CITY

PUBLIC SERVICES

1d.  The Modern City

ENTERPRISE SECTOR

MUNICIPAL SERVICES

public funding

CITY

PUBLIC SERVICES

Public funding

Municipal          State          Private

11.     The Russian city in transition (Figure 2B) most closely portrays the current situation of the Volga capitals and lies between the two extremes. City governments are still responsible for social and municipal services, including a varying, but typically large, share of housing and associated utilities and communal services.  Indeed, some of these responsibilities, such as housing, pre-school education, and health care clinics and hospitals, have been transferred to cities from privatized, formerly state-owned enterprises.  At the same time, most cities have privatized part of their communal housing stock and some of the related communal services and utilities (especially heating services).  Privatization of social services also has occurred in some services, mostly health care and, to a lesser extent, education.  But the continuing housing subsidies that create such a heavy burden on city budgets result from the combined effects of housing acquisition from privatized enterprises, lags in privatizing municipal housing, and poor cost recovery.

12.     Despite the substantial privatization of small enterprises, Russian cities still own a residual share of small firms providing goods and services for local consumption.  At the same time, cities have received some ownership rights from higher government levels for some, mostly medium-sized, enterprises (see left side of Figure 2B).  It is interesting to note that, in the new private-sector environment, some cities own properties jointly with private companies, complicating their role as regulator, tax collector, and facilitator of economic development.

13.     Figure 2 and the above discussion concentrate on various models of city functions, with implications for the expenditure side of their budgets.  The evolution of the revenue side is no less significant.  At this point in the transition, a decision has been made to continue largely with the old Soviet system of unified collection of revenues and tax sharing among the various levels of government. This pattern is not exclusively Soviet; it is common in a number of countries in Western Europe.  Also common to other countries is the system of federal and regional equalizing transfers that has persisted, with some changes, from the old regime.  The main development in this system is the increasing independence of lower levels of government in determining expenditures, and the creation, through legislation, of more stable and long-term sharing and transfer patterns.

14.     Perhaps the main difference between the budget of a typical Russian and Western city at present is the very small contribution of property, and especially residential, taxes to the revenues of the Russian city.  This difference is, of course, a vestige of the old regime, which limited both private property and independent taxation by local government.  Given the heavy burden of housing and utilities on the expenditure side, the lag in transition of the housing sector to the normal Western pattern represents a major obstacle to the creation of a modern Russian city and is a significant barrier to the improvement of Russia's general fiscal position.  This represents a major challenge of transition in the coming years at the local government level.

### III.   COMMON TRENDS IN THE EVOLUTION OF THE CITY AS GOVERNMENT

15.     To gain some perspective on the governmental functions exercised by the Russian city in transition, we look first at the role of municipalities in overall fiscal activity.  Their revenue and expenditure shares indicate substantial fiscal decentralization in the Russian Federation between 1992 and 1997, so we then look more closely at the decentralization process.  Using Volga cities as a case study, we employ regression analysis in an attempt to explain the patterns of revenue and expenditure decentralization and local government dependence on transfers from the regional center. In addition, since transfers and tax-sharing arrangements with higher levels of government largely determine the revenues of local governments, we use regression analysis to try to explain the variation in major categories on the expenditure side of local budgets.  Finally, we examine more closely the evolution of the structure of expenditures, with a special focus on subsidies and expenditures on housing and utilities, the single most important category of expenditure.

## A. Fiscal Decentralization and Volga Cities

16.     As mentioned above, an important part of the transition has been an increase in the power, responsibility, and economic resources of lower-level governments—-changes that have redefined their role.  Decentralization of government is popular everywhere, as it brings the decision-making process closer to the users of government services.  But economic theory recognizes that decentralization is limited by inefficiencies of small scale and external effects that go beyond the administrative unit.  Additional limitations also may arise from deviations from nationally set goals and policies, lower skills and human capital at the local level, and favoritism, rent seeking, and corruption attributable to weaker local democratic control.

17.     Appendix Table 1 indicates the changing fiscal role of all municipalities, or third-tier local governments, in Russia.  Between 1992 and 1997, revenues after transfers at the disposal of local governments increased from 23 to 30 percent of consolidated general government revenues.  This increase resulted largely from a rise in the local shares of property taxes and "other taxes," not in the traditional shared taxes or transfers. Expenditures including transfers increased from 15 to 29 percent of consolidated general government expenditures, with municipalities increasing their responsibilities for education, the national economy, and social protection.

18.     The process of fiscal decentralization[8] takes place at two levels—(1) from the federal level to the regions and (2) from the regions to local governments.  There is little uniformity at the first level, as regional governments have negotiated different power-sharing arrangements with the federal government. In particular, the federation republics, beginning with Tatarstan, have negotiated greater autonomy and more favorable revenue sharing arrangements. As a result, Ministry of Finance data show that, between 1992 and 1994, the shares of consolidated regional governments in general government total revenues and final expenditures increased from 43% and 25% to 64% and 47%, respectively (Appendix Table 2). Since then, federal authorities have tried to reclaim part of the revenue pool and shift more spending responsibilities to sub-national governments. The first part of this strategy was achieved in 1994–1996 and the second in 1997, with the result that in 1997 the share of sub-national governments in revenues (61 percent) was more commensurate with their share in expenditures (55 percent) than at the outset of reforms.

19.     Within regions, local government's share in the consolidated regional budget rose insignificantly between 1992 and 1997, when they averaged 70 percent of revenues and 66 percent of expenditures (Appendix Table 2).  Overall, the process of fiscal decentralization was much more dynamic at the federal level; at the regional level, local governments passively absorbed a relatively constant share of the enlarged subnational budgets. In Volga regions, these shares have remained slightly below the national average since 1994. The

---

[8] This process is discussed in Le Houerou (1995) and Freinkman et al. (1998). See MFK Renaissance (1998a) for a useful table defining the expenditure responsibilities of different levels of government.

"Law on Financial Foundations of Local Government" established minimum tax shares for municipal areas, but these are average shares for the region. The shares for local budgets are negotiated annually and differ dramatically across the cities of any given region. The larger cities typically redistribute collections from their jurisdiction, through the regions, to other areas of the region.[9]

20.    In what follows we concentrate on the dynamics and main determinants of fiscal decentralization to local governments in the Volga regions, narrowing the analysis to fiscal outcomes in "cities under regional jurisdiction" (CRJs)—typically cities with a population of over 25,000. Capital cities in all Volga regions dominate their respective CRJs tier, and in the comparative analysis of the Volga capitals undertaken in the second part of this article we use several policy indicators for CRJs as proxies for the capitals.[10] Two alternative measures of fiscal decentralization are defined:[11]  (1) the ratio between the per capita total revenues (on a net transfer basis) of CRJs to those of the consolidated regional government,[12] which may be termed the revenue-based decentralization measure, and (2) the ratio between the per capita total expenditures of CRJs to those of the consolidated regional government, which may be called expenditure-based decentralization.

21.    Freinkman and Yossifov (1999), using similar definitions for all regions of the Russian Federation, identified two different models of fiscal decentralization to local governments—(1) "true decentralization," achieved by granting local governments higher shared tax revenues and larger receipts from local taxes and non-tax revenues (typical for ethnically Russian regions--oblasts and krays); and (2) the "redistribution model"— characterized by the heavy reliance of local budgets on transfers from regional administrations (observed predominantly in ethnic republics and autonomous okrugs).[13] On the national level, republics and autonomous okrugs lag well behind oblasts and krays in the

---

[9] As noted in Freinkman et. al. (1998), these shares may be explained in part by the share of urban members in the regional Duma. The stronger the representation of urban districts in the regional legislature, the smaller the share of city revenues redistributed to other local budgets outside city jurisdiction.

[10] The average share of CRJ population living in the capital city in Volga regions in 60%, varying from 44% in Tatarstan to 85% in Astrakhan'.

[11] Precise definitions of the variables used in the construction of these measures appear in the explanatory notes to Appendix Table 2.

[12] All measures used from this point onward are based on "net transfers" unless otherwise indicated.

[13] These models are independent of what occurs on the expenditure side. Regions exercise varying degrees of control over municipal expenditures, but no measure of such control is available.

average degree of revenue and expenditure decentralization. We shall return to these two models during interpretation of some of the regression results; however, we shall first discuss the basic facts of decentralization.

## B.  Fiscal Outcomes in Cities under Regional Jurisdiction

22.     Appendix Table 2 shows the average values of the two measures of fiscal decentralization in Volga region CRJs over the period 1992–1997 (measures for individual Volga regions are shown in Appendix Table 1).  Decentralization of fiscal responsibility to CRJs has taken place somewhat more rapidly than has decentralization to all local governments in Volga regions.  At the same time, local government budgets in CRJs (both in Volga regions and at the national level) remained far less dependent on transfers from the regional center than the average municipality.   Furthermore, local governments in Volga region CRJs rely significantly less on this source of revenue than the average local government in CRJs of the Russian Federation. Thus, decentralization to urban areas has proceeded faster than decentralization to small towns and rural areas and along the lines of the "true decentralization" model identified by Freinkman and Yossifov 1999. The partial correlation coefficient between the two measures of CRJ decentralization, obtained by controlling for region-specific "fixed effects," [14] is high (0.68) and statistically significant at the 99 percent level of confidence.  Tatarstan and Ul'yanovsk Oblast clearly lag behind other regions in the degree of decentralization to CRJs.  In 1997, Nizhniy Novgorod Oblast and Chuvashia ranked first and second in terms of these criteria.

23.     Appendix Tables 4 and 5 also highlight the dependence of CRJ spending on transfers from higher levels of government, particularly in Chuvashia, Tatarstan, and Tver' and Astrakhan' oblasts.  The share of net regional transfers in CRJ total budget expenditures for Ul'yanovsk Oblast was the second highest among the 10 Volga regions through 1995, but fell after that to become one of the lowest.  Overall, the data on fiscal outcomes in Volga CRJs are broadly consistent with the tendencies observed at the national level.

24.     Appendix Tables 4 and 5 show the shares of different revenue items in local government budgets in Volga region CRJs  and in the Russian Federation in 1992 and 1997. Because the magnitudes and trends in revenue structure are similar, we review developments at the national level, with only occasional reference to the Volga regions.  Between 1992 and 1997, "shared taxes"[15] fell by 27 percentage points. The sharp decline was caused primarily

---

[14] The partial correlation coefficient is obtained by first transforming the observations over time on both variables for each region into differences from the respective regional means. The transformed data are then stacked on top of one another and the Pearson correlation coefficient is obtained.

[15] The profit tax, personal income tax, value-added tax, and excise taxes are often referred to as "shared taxes" because by law they are collected by the federal government and then shared with sub-national governments in more or less fixed ratios.

by the erosion of the tax base in the enterprise sector; it was offset only partially by higher net transfers from the regional administration budgets. At the same time, "own taxes," comprising property and other taxes accruing by law to sub-national governments only, grew more than threefold and were 26 percent of total revenues by 1997. On a real per capita basis, "own revenues," which also include non-tax revenues, increased on average from 51 to 115 constant 1990 rubles in Volga region CRJs  In 1997, they were highest in Tatarstan and lowest in Astrakhan' Oblast; they were everywhere, except in Tatarstan, higher than own revenues of regional governments or other local governments.  As noted by Zhuravskaya (1998) and Freinkman and Yossifov (1999), the expectation that regional governments will respond to any increase in local revenues by reducing tax shares or transfers not only discourages local governments from introducing such taxes, it encourages them to hide whatever new revenues they mobilize.  The strong increase in budgeted own revenues is surprising in light of these observations.

25.      The first part of the panel data regression analysis presented below explores the relationship between decentralization and socioeconomic and political developments in the Volga regions.  The cross-sectional dimension of the panel is comprised of the 10 Volga regions, while its time dimension encompasses the period 1992–1996.[16]  The results are specific to the Volga regions and cannot be generalized to the entire set of Russian regions. A brief description of explanatory variables follows.

*Administrative and political factors:*

        1. Dummy variable for type of administrative region (1 = republic, 0 = oblast).

        2.  Dummy variable for regional voting patterns (1 = "Red Belt", 0 = other). The five "Red Belt" regions (Astrakhan', Volgograd, Saratov, Ul'yanovsk and Cheboksary)  are defined as those favoring the Communist Party candidate Gennadiy Zyuganov over incumbent President Boris N. Yeltsin in both the first and second rounds of the 1996 presidential elections.[17]

        3. Dummy variables for above-average rank on policy reforms in the capital city (1= above average, 0 = other) and average rank (1= average, 0 = other); these ranks are derived later in the paper and shown in Table 14.  As shown in Appendix Table 6, the classification of regional CRJs into three reform groups, based on reforms in the capital cities, explains a major part of the observed variability in important economic and fiscal indicators (in repeated-measures ANOVA).

---

[16] The 1997 budget data for CRJ local governments was not used because of the lack of 1997 regional data for several explanatory variables.

[17] For more on the Red Belt and the elections, see Clem and Craumer (1996, Figure 2).

*Economic and social variables*: [18]

      1.  Real per capita monthly income in region (1990 rubles).

      2.  Index of physical volume of industrial production in region (1990 = 100).

      3.  Rate of infant mortality in region (number of babies per 1000 live births who died before reaching the age of one).

      4. Index of physical volume of industrial production in capital city (1990=100).

      5.  Dummy for a strong agricultural base ( 1 = "strong agricultural base", 0 = other), based on the ratio of agricultural to industrial production in 1995.  Tver', Cheboksary, Saratov, and Astrakhan' are regions with a relatively strong agricultural base.

*Fiscal variables* [19]

      1.  Cash revenues as a percentage of consolidated regional budget revenues in 1997 (in percent) (MFK Renaissance, 1998b).  This 1997 observation is used for each year of the sample on the assumption that it is indicative of relative rankings throughout the period.

      2.  Net federal transfers as a percentage of consolidated regional expenditures including transfers to the federal government.

      3.  Net regional transfers as a percentage of CRJ expenditures including transfers to the regional government.

      4.  Real per capita CRJ budget expenditures on national economy, education, health and sports, and social protection (1990 rubles).

26.     Table 2  presents the regression analysis for the main determinants of fiscal decentralization and subordination in Volga CRJs, where fiscal subordination is defined as the share of net regional transfers in total CRJ expenditures.[20] As seen in columns two and

---

[18] Data on the first three variables are derived from Goskomstat Rossii (1997a, 1997b), and for the second two variables from de Melo and Ofer (1999).

[19] All budget data for local governments in CRJs were extracted from a database compiled by Dr. Alexei Lavrov from standard reporting forms filed by regions with the federal Ministry of Finance. For a description of the database, see Lavrov (1996). Price indices and population data are taken from de Melo and Ofer (1999).

[20] The regressions presented in Tables 2 and 3 were tested for the presence of heteroskedasticity and correlation in regression residuals, using the White test for general

three, both decentralization measures are negatively related to the index of real regional industrial production, which was located primarily in the cities. The respective OLS coefficients indicate that decentralization of revenues and expenditures is likely to be 2.8 and 5.3 percentage points higher, respectively, for every 10 percentage-point additional drop in regional industrial output. In part, fiscal decentralization was used to help compensate cities for the rapid erosion of the local economy. Administrative status is another important determinant of fiscal decentralization to CRJs, as decentralization measures in the two republics (Tatarstan and Chuvashia) are on average about 14 percentage points lower. No significant statistical relationship was found between decentralization and indicators of regional wealth, such as real per capita income or average wages in the region or capital city.

27.     In addition to the common explanatory factors, revenue decentralization is negatively associated with the rate of infant mortality, a crude measure for the incidence and severity of poverty. While not influenced by regional poverty, expenditure decentralization is on average 7.3 percentage points lower in "Red Belt" regions. This probably reflects the unwillingness of conservative regional administrations to part with the old Soviet model of centralized fiscal arrangements. Expenditure decentralization also shows a negative time trend (-5.2 percentage points per year), which roughly offsets the increasing annual expenditures associated with declines in industrial production.

---

heteroskedasticity. The test statistics are computed using auxiliary regressions in which the squared residuals are regressed on a constant, the explanatory variables from the original regressions, and all possible, non-redundant cross products of the explanatory variables, with the exception of those involving dummy variables 0, and the Durbin-Watson test for first-order serial correlation. In panel-data models, the estimation of the Durbin-Watson statistic requires prior transformation of the regression output. First, the residuals for the different cross-sections are stacked on top of one another, separated by additionally included "n.a." values. Then, the standard formula of the Durbin-Watson statistic is applied to this augmented set of residuals). In the regression for the degree of fiscal subordination of CRJ local governments, the estimated value of the White statistic is statistically significant at the 95 percent level of confidence and consequently the reported $t$-statistics are calculated with the White heteroskedasticity-consistent standard errors of ordinary least square (OLS) coefficients. In three cases, the Durbin-Watson statistic fell in the inconclusive region, and on one occasion it dropped below the lower boundary of the one percent critical value. Because of the short time dimension of the panel and the difficulty of interpreting the Durbin-Watson statistic in panel-data models, no attempts have been made to correct for the possible existence of serial correlation in OLS residuals. The overall fit of the estimated regressions is high, with values of the adjusted $R^2$ falling within the range of 0.58 to 0.83.

**Table 2. Determinants of Fiscal Decentralization and Subordination**

| Regressors / Dependent Variable | Ratio of real per capita total revenues on net transfer basis of CRJs and consolidated regional government | Ratio of real per capita total expenditures on net transfer basis of CRJs and consolidated regional government | Net regional transfers as percent of CRJs total expenditures on net transfer basis |
|---|---|---|---|
| Constant | 119.29 (20.60) | 123.27 (16.18) | |
| Index of physical volume of industrial production | -0.28 (-6.03) | -0.53 (-6.98) | |
| Infant mortality | -1.60 (-5.38) | | |
| Net federal transfers as percent of consolidated regional budget expenditures a/ | | | 0.32 (2.95) |
| Cash revenues as percent of consolidated regional budget revenues in 1997 | | | 0.47 (8.00) |
| Time trend | | -5.22 (-5.15) | |
| Dummy variable Above-average rank of policy reforms in capital city | | | -17.65 (-6.86) |
| Dummy variable Average rank of policy reforms in capital city | | | -10.35 (-3.89) |
| Dummy variable Red Belt | | -7.27 (-4.07) | |
| Dummy variable Republic | -14.75 (-6.73) | -14.11 (-6.27) | |
| Sample | 1992 - 96 | 1992 - 96 | 1992 - 96 |
| Total Panel (Balanced) Observations | 50 | 50 | 50 |
| Adjusted R-squared | 0.69 | 0.66 | 0.77 |
| Durbin-Watson | 1.50 (1.24; 1.49) ** | 1.43 (1.20; 1.54) ** | 1.02 (1.20; 1.54) ** |
| White's Heteroskedasticity Test | 5.41 (0.37) *** | 6.46 (0.37) *** | 17.12 (0.01) *** |

Notes:
Unless otherwise noted, data on explanatory variables is regional and the OLS coefficients are statistically significant at the 99% level of confidence.
Unless otherwise noted, numbers in parenthesis are t-statistics. In regressions in which the estimated value of the White test statistic is statistically significant at the 95% level of confidence, the t-statistics are calculated with the White heteroskedasticity consistent standard errors of OLS coefficients.
** Lower and upper limit of the 1% significance points for the Durbin-Watson statistic.
*** P-value.

28.     The regression presented in the last column of Table 2 suggests that CRJ local governments in cash-short regions are unlikely to follow the "redistribution model" explained above.  It also shows that regions receiving large federal grants relative to the size of their consolidated expenditures tend to impose a higher degree of subordination on CRJ local governments.  However, the central finding in this regression is that CRJ local governments that are less dependent on regional transfers tend to have average or above-average ranks on policy reforms.  Thus, it is possible that the "redistribution" model of fiscal decentralization is associated with weak policy reform, presumably because it is associated with less policy freedom at the local level and because it weakens the incentives of local governments to provide better services in anticipation of higher tax receipts.  De Melo and Ofer (1999) have provided additional evidence that reform is associated with greater independence at the city level.  Earmarked grants to promote the implementation of unpopular measures may help to counteract such weakened incentives.

## C.  City Budgetary Expenditures

29.     Appendix Tables 4 and 5 present trends in the structure of expenditures of local governments[21] in the Volga region CRJs and in the Russian Federation in 1992 and 1997.  The two main expenditure items in CRJ budgets are the "national economy" and expenditures on public services.  Halligan et al. (1995) referred to expenditures on the national economy as "sunset" and those on public services as "sunrise," to capture their backward- and forward-looking characteristics.  Over time, subsidies are expected to shrink and expenditures on social services such as health and education are expected to expand.

30.     Since 1992, the expenditure on the "national economy," the largest budgetary item during the Soviet period, has preserved its significance in local government budgets, remaining slightly above 40 percent of total expenditures in Volga region CRJs.  However, its nature has changed significantly.  Subsidies to industry and agriculture, large items in the past, have almost disappeared, whereas subsidies to housing, including utilities, have increased.  In fact, housing subsidies have become the single largest expenditure item in municipal budgets, and their dominance in all Volga CRJs is striking.  They are therefore discussed in a separate section below.  Subsidies to public transport account for almost 15 percent of "national economy" expenditures, so there is significant room to increase cost recovery in all Volga cities, but especially in CRJs in Samara and Yaroslavl' oblasts  and Tatarstan, which subsidize their public transportation systems at levels above the Russian average.  The sharp increase in energy prices has contributed to rising transport costs, however, and some subsidization of public transportation is considered a legitimate public expenditure.  Direct support for industry has declined in all Russian CRJs to a mere 1 to 2 percent of expenditures, a healthy development, although regions still spend about 4 percent

---

[21]  As pointed out by Freinkman and Yossifov (1999), some local budget expenditures are in fact controlled by officials at the regional level; this is particularly true in regions relying heavily on offsetting of non-cash payments, given economies of scale in this type of activity.

of their budgets to support industry and a variety of hidden subsidies is likely to exist. Among the Volga CRJs, only Yaroslavl' still provided a significant but declining level of explicit support for industry.

31.     Looking at trends, the biggest increase in expenditure shares of local governments in CRJs was for social protection.  This sharp increase reflects in part the 1994 addition of "allowances for children and other social transfers" (previously classified under other expenditures) to the budgetary classification "social protection" (Lavrov, 1996). The highest real per capita outlays in 1997 occurred in Tver' and Chuvashia (Appendix Table 1). The least support for social protection was in Tatarstan, reflecting a preference for subsidization of food and other subsistence items over direct support to the poor.  Outlays for education also showed a general upward trend, surpassing those on health and sports to become the second largest expenditure item of local governments in CRJs.  In real per capita terms, CRJ expenditures on education and health are the highest in Tatarstan (reflecting both high budget revenues and high budget shares) and lowest in Ul'yanovsk, where they are only a third of those in Tatarstan.  Education expenditures by cities of regional jurisdiction have increased in all but two regions (Chuvashia and Saratov), but health expenditures have declined everywhere except in Tatarstan and Yaroslavl' Oblast.  This is consistent with the increasing delegation of responsibility for education and health to the local level and the tendency of local governments to move health off budget. Tatarstan appears to be making a major commitment to investment in human capital, as expenditures by the regional administration in health and education are also high compared to other regions.

32.     Table 3 presents regressions explaining differences in the provision of public goods and services by CRJ local governments in the Volga regions.  One explanation for the pattern is regional income, which is clearly associated with real per capita expenditures in the major categories considered.  The OLS coefficients imply that a difference of 10 rubles in monthly real per capita income in two otherwise identical regions is associated with 6.2, 6.7, and 10 rubles higher real annual per capita spending, respectively, on education, health and sports, and national economy in the higher-income region.  Spending on social protection is, however, negatively related to income, reflecting the equity considerations behind this type of spending. The predicted CRJ per capita expenditure (1990 values) on education is on average 11.8 rubles lower in "Red Belt" regions and 21.8 rubles higher in republics.

33.     CRJs of regions that experienced a sharper drop in real industrial production in the capital city tend to spend more on national economy (housing, transport, and enterprise) subsidies.  However, those in agrarian regions (regions with high ratios of agricultural to industrial production) have markedly lower real per capita spending on the national economy—weaker demand for enterprise subsidies is not offset by expanded support for agricultural producers outside city limits.

**Table 3. Determinants of CRJs Provision of Public Services**

| Regressors / Dependent Variable | Real per capita CRJs budget expenditures on: | | | |
|---|---|---|---|---|
| | Education | Health and Sports | Social Protection | National Economy |
| Constant | | | | 198.75 |
| | | | | (2.86) |
| Index of physical volume of industrial production in capital city | | | | -1.10 |
| | | | | (-2.71) |
| Real per capita monthly income | 0.62 | 0.67 | -0.07 | 1.00 |
| | (47.17) | (22.45) | (-4.94) | (3.74) |
| Time trend | | -7.38 | 5.67 | -26.03 |
| | | (-6.07) | (10.09) | (-4.00) |
| Dummy Republic | 21.76 | | | |
| | (6.46) | | | |
| Dummy Red Belt | -11.80 | | | |
| | (-4.81) | | | |
| Dummy variable Above-average rank of policy reforms in capital city | | | 6.00 | |
| | | | (3.46) | |
| Dummy variable Average rank of policy reforms in capital city | | 11.64 | | |
| | | (2.50) | | |
| Dummy Strong Agricultural Base | | | | -61.97 |
| | | | | (-4.62) |
| Sample | 1992 - 96 | 1992 - 96 | 1992 - 96 | 1992 - 96 |
| Total Panel (Balanced) Observations | 50 | 50 | 50 | 45 |
| Adjusted R-squared | 0.82 | 0.72 | 0.67 | 0.58 |
| Durbin-Watson | 1.82 | 1.05 | 1.43 | 1.36 |
| | (1.24; 1.49) ** | (1.24; 1.49) ** | (1.24; 1.49) ** | (1.20; 1.54) ** |
| White's Heteroskedasticity Test | 1.49 | 6.51 | 6.08 | 13.27 |
| | (0.68) *** | ( 0.26) *** | ( 0.30) *** | (0.15) *** |

Notes:
Unless otherwise noted, data on explanatory variables is regional and OLS coefficients are statistically significant
at the 99% level of confidence.
Unless otherwise noted, numbers in parenthesis are t-statistics. In regressions in which the estimated value of the White test statistic is statistically significant at the 95% level of confidence, the t-statistics are calculated with the White heteroskedasticity consistent standard errors of OLS coefficients.
** Lower and upper limit of the 1% significance points for the Durbin-Watson statistic.
*** P-value.

34.     Regression results indicate negative time trends of real per capita CRJ outlays on health and sports, and national economy.  In the case of national economy, this reflects the gradual withdrawal of local governments from housing and enterprise subsidies.  In the case of health and sport, it may be consistent with national health care reform objectives, which may also explain why real per capita spending on health and sports is higher in CRJs where the capital city has average, rather than above average, ranks on policy reform. Spending on social protection shows an upward trend, but this is difficult to interpret given the change in

budget classification mentioned earlier. The regressions also highlight differences in spending patterns on social protection between reform-oriented and more conservative CRJs. Those with above-average ranks on policy reforms boast real per capita outlays (in 1990 values) on average 6 rubles higher than elsewhere. Thus, local governments embarking on market reforms with high social cost appear to at least provide a better safety net for the affected parties.

## D. Housing and Utilities

35.     Excluding Moscow and St. Petersburg, city expenditures on housing and utilities occupy some 40 percent of CRJ budget outlays, or about 80 percent of their national economy budget (Appendix Table 4). In terms of the national economy, this expenditure alone may have amounted in 1997 to 3–4 percent of GDP (based also on Appendix Table 1). Eliminating or reducing this burden would clearly represent a major step in promoting transition. In the United States, for example, municipalities spent in 1991 about 20 percent of all expenditures on "environment and housing," clearly a broader category (Bahl, 1996, pp. 82-83).

36.     Most of the Volga CRJs have similar or higher housing expenditure shares; a number of cities have housing shares of 35 percent or more (Table 4). City case studies give evidence of attempts by the federal government and some governors and mayors to increase the extent of cost recovery in the housing and utility spheres against the resistance of legislatures. Resistance arises because housing and utility costs increased more than the price of goods and because charges can only be increased by administrative order. But since housing costs were initially set at very low levels, they need to be increased radically, especially during periods of inflation.

37.     One of the main obstacles to increasing the rate of cost recovery for rents and utilities[22] is the very low income of large segments of the population. Average cost recovery for housing in Russia in 1997 was 35 percent, and the average share of housing in income was 16 percent.[23] Such figures can be compared with federal government targets in 1993 to reach full cost recovery by 1998 at 20 percent of income. A more recent federal target was established in 1997, calling for full cost recovery by 2003 at 25 percent of income (Institute of Urban Economics, 1998b).

38.     CRJ data on housing subsidies for 1997 are shown in Appendix Tables 4 and 5 and Figure 4. Housing subsidies typically cover utilities, as well as housing rents. Recent data show that housing subsidies are particularly high in the city of Nizhniy Novgorod, and levels

---

[22]  "Cost recovery" refers to the percentage of the total expenditure by the housing/utilities provider that is recovered through rent and other payments.

[23] For the Volga capitals the share of housing in income in 1997 ranged from 6 percent in Ul'yanovsk to 13 percent in Samara (Institute for Urban Economics, 1998b).

of cost recovery there and in Ul'yanovsk are relatively low at around 30 percent. By contrast, cost recovery is around 40 percent in the cities of Yaroslavl', Kazan', and Samara. Budget subsidies are around 20 percent in the cities of Yaroslavl' and Kazan' and 31 percent in Samara. Part of the problem for Nizhniy Novgorod and Samara lies in the higher cost of housing in these two cities; however, differences in the housing shares in income suggest that Nizhniy Novgorod and Ul'yanovsk are lagging in the cost recovery effort.

**Table 4. City Housing Subsidies, Cost Recovery Rate and Share of Population Income**

| CRJs or Capital Cities | Housing Subsidy Share in Budget Expenditures a/ | | | Rate of Housing Cost Recovery | Housing share in Population Income | Housing Privatization in Region, % of Eligible Stock |
|---|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1997 b/ | 1997 b/ | 1997 |
| Tver | 33 | 35 | 31 | - | - | 47 |
| Yaroslavl | 30 | 30 | 30 | 40 | 10 | 42 |
| Nizhni Novgorod | 27 | 31 | 34 | 30 | 7 | 39 |
| Chuvashia / Cheboksary | 38 | 32 | 43 | - | - | 27 |
| Tatarstan / Kazan | 33 | 28 | 25 | 40 | 8 | 50 |
| Ulyanovsk | 42 | 38 | 35 | 30 | 6 | 29 |
| Samara | 32 | 32 | 35 | 40 | 13 | 38 |
| Saratov | 26 | 38 | 37 | - | - | 43 |
| Volgograd | 31 | 33 | 24 | - | - | 52 |
| Astrakhan | 42 | 41 | 36 | - | - | 48 |

*Sources:* Goskomstat, *Regionyi Rossii*, Vol. 2, 1997; (a) MOF budget data for Cities under Regional Jurisdiction (CRJs) in respective regions; (b) Data on individual cities from the Institute of Urban Economics, Moscow.

39.     Privatization helps to reduce the city's burden of rent subsidies, but not necessarily utility subsidies. In some cities—at least Samara, Kazan', and Yaroslavl'— there are also efforts to incorporate or privatize utilities, especially heating; to improve housing maintenance and management; and to introduce competitive bidding for the provision of these services. But cities are likely to remain deeply involved as partial owners. The privatization of housing was accompanied in most cities by the creation of condominium-type arrangements referred to as "housing owner associations"; these were established to represent owners in dealing with maintenance, services, and housing transactions. There is a corresponding development of private real estate companies.

40.     Table 5 shows that the share of state ownership in many Volga cities is 20 percent or less. Nonetheless, the share of municipal housing is still quite high. Although cities had

privatized a substantial share of their apartments,[24] they had in the meantime acquired additional housing from enterprises. Thus, many cities still own between one-third and one-half of all housing. The only exception in 1994 was Saratov, where a majority of housing remained under enterprise ownership. Recent partial data on ownership of city housing stock shows that at least three cities (Samara, Volgograd, and Astrakhan') have reached or are on the threshold of attaining the halfway point for private ownership of housing stock.

**Table 5. Ownership of Housing Stock in Volga Cities**

(Percent ss of January, 1997)

| Cities | State | Muncipal | Private | Public and Collective |
|---|---|---|---|---|
| Cheboksary a/ | 7 | 61 | 19 | 9 |
| Kazan a/ | 16 | 40 | 22 | 21 |
| Samara a/ | 12 | 39 | 49 | - |
| Volgograd | 4 | 42 | 50 | - |
| Astrakhan | 8 | 37 | 49 | 6 |

*Sources:* Compiled by authors from Goskomstat Rossii, 1999b, p. 18; Institute for Urban Economics, 1998a; city case studies; and city statistical bulletins.

[a/] As of January, 1996.

41.     Housing is but one part of a broader problem of urban real estate management. In recent years, Saratov and Samara have moved toward privatizing land and creating a real estate market by leasing urban property. In Yaroslavl', the World Bank is conducting an experiment in creating the legal and economic infrastructure for taxation of housing and land. Land registration and valuation are being implemented in Tver', where new information technology is being used to aid in land delimitation and conveyance, tenure registration, and dispute resolution. These and other efforts are needed in order to reduce the housing burden on municipal budgets. The creation of secured property rights in land and real estate, and a free market in these assets also will facilitate the establishment of a mortgage market, which distributes the financial burden of purchasing and renovating apartments and houses over a longer period of time and makes them more affordable.

42.     On the revenue side, Appendix Table 4 shows that Russian CRJs, the Volga cities included, have managed to raise the share of property taxes in their budgets from a mere 2 percent in 1992 to about 12 percent of all revenues or 16 percent of all tax revenues in 1997.

---

[24] These ranged from highs of 52, 48, and 47 percent in Volgograd, Astrakhan', and Tver', respectively, to lows of 27 and 29 percent in Cheboksary and Ul'yanovsk.

These property taxes fall mostly on businesses rather than residential property. By contrast, in the United States, property taxes account for 25 percent of total local revenues, half of local own-source revenues, and 75 percent of all local taxes (Bahl, 1996, p. 91; see also Mikesell, 1993, Ch. 3).

43.     A major challenge to municipalities and also to the federal government in the coming years will be removing most housing costs from the expenditure side of the budget and transforming the real estate, housing, and land sector into a tax base on the revenue side. To illustrate, a reduction of expenditures on housing by half as a share of the budget and a doubling of revenues derived from property would create a city budget surplus of 30 percent and an increase in net fiscal revenues of some 3 percentage points of GDP. Note that these levels are still far below the net contribution of housing and real estate to the local budgets of typical Western cities. Change in this direction will increase the independence and economic viability of the cities and their economy, and will also go a long way toward alleviating the national problem of tax collection and fiscal imbalance.

## IV.  COMMON TRENDS IN THE EVOLUTION OF THE CITY  AS  ECONOMIC CENTER

44.     One can find both theoretical reasons and empirical evidence to demonstrate that cities often act as "engines of growth." The theory has to do with externalities arising from the impetus for innovation and spread of knowledge provided by the proximity of people in cities (Glaeser et al., 1992). Yet, local governments are sometimes accused of being more interested in controlling than in encouraging business.[25] Such conflicting forces are further complicated in the Volga and other Russian regional cities by the fact that economic prospects depend to a large extent on the success of large state-owned industrial enterprises. Such enterprises traditionally were the major source of employment and taxes but have been adversely affected by the more competitive environment accompanying market reform.

45.     Both regional and city authorities have been engaged in efforts to maintain production and employment levels in  enterprises under their jurisdictions. These politicians have been active in lobbying the federal government to secure production orders, to extend credits, to pay wage arrears, and to reduce tax burdens for enterprises in their jurisdiction. And they have pressured banks to lend money to enterprises. In several cases, local governments have been instrumental in finding foreign investors to help restructure enterprises. Despite these efforts and substantial privatization, declines in industrial production of large enterprises continued through 1997. The growing city economy depends largely on privatized and new private small and medium-sized firms. Therefore, in the discussion that follows, we concentrate on the performance of this new private sector, on the character and diversity of the new business environment, and on the interaction of these firms with city government.

---

[25] Deloitte Touche Tohmatsu, for example, came to this conclusion during work with small and medium enterprises in Russia.

Our information is derived from a recent survey of small and medium enterprises in six Volga capitals.

### A.  Survey of Small and Medium-Sized Enterprises

46.     In October 1998, the authors commissioned VICOM, a professional polling firm in Russia, to carry out a survey of 60 firms in 6 of the 10 Volga capitals—Samara, Saratov, Kazan', Ul'yanovsk, Volgograd, and Astrakhan'.  Our questionnaire focused on aspects of the business environment that could be affected, but not necessarily controlled, by the cities. It also examined economic performance, but did not attempt to explain it, as this would have required a broader inquiry into interlocking ownership patterns and other forms of business association that often determine access to credit and to reliable suppliers and customers.[26]

47.     It was decided to concentrate the survey in one industry to control for the "noise" created by industry-specific problems.  Textiles and clothing was selected as a typical consumer goods industry with a reasonably uniform product, which included both privatized and newly private firms, and which had witnessed the start-up of many small and medium businesses in both trade and production.  A typical "light industry," it sustained a pronounced decline in output during the first years of transition.  Furthermore, the state of textiles and clothing firms in 1998 is probably a reasonable indicator of the level of recovery of the local economy.  During the survey, an effort was made in each city to include an equal number of production and retailing firms.

48.     Survey firms were selected randomly from the business registries of the cities and then screened for three criteria— number of employees, ownership, and activity.[27]  All firms are private, with at least 10 full-time employees but less than 500.  The person interviewed was the director of the firm or the director or deputy director of finance.  In order to eliminate the effect of the August 1998 financial crisis in Russia, the respondent was asked to "answer the questions as you would have answered them before the current crisis."

49.     The main firm characteristics are presented in Table 6; additional data are provided in Appendix Tables 7 and 8.  About half the firms were formerly in collective or state ownership and subsequently privatized and half were new private firms (start-ups).  The average firm age was 4.4 years, ranging from 1 to 7 years; privatized firms tend to be older. The average number of employees per firm (43) ranged from 67 in production enterprises to 23 in enterprises engaged in trade, a natural difference.  Four larger production firms were interviewed in Volgograd and two in Astrakhan', raising the average firm size in these two cities.  Otherwise, most firms had less than 100 employees.  Privatized firms tended to be

---

[26]  See Hendley et al. (1998) for a discussion of these factors.

[27] Despite prior screening, one firm in Astrakhan' and one in Ul'yanovsk did not satisfy all these criteria and were excluded. Thus, tabulations are based on 58 firms. Some questions were not answered by all firms.

larger, with an average of 68 employees versus 22 for new private firms. In what follows, we discuss the results of the survey under four subheadings: overall findings, variation by main characteristics, variation by firm profitability, and variation by city. Under each subheading we distinguish general outcomes from interaction with city government, where the latter covers a variety of areas, such as taxation and registration, where local government at least influences, if not controls, the environment.

**Table 6. Crosstabulation of Firms' Main Characteristics**

| Questions / Grouping Variables | Total | Type of Firm | | Past Ownership | | Years Private | | Size of Firm | |
|---|---|---|---|---|---|---|---|---|---|
| | | Production | Distribution | Privatized State Firm | New Private | Old ( > 4 years) | New ( < 4 years) | Large ( >= 20 Employees) | Small ( < 20 Employees) |
| I. Firms' characteristics | | | | | | | | | |
| 1. Number of firms | 58 | 27 | 28 | 27 | 31 | 39 | 19 | 28 | 30 |
| 2. Past ownership (% privatized state firms) | 47 | 48 | 43 | 100 | 0 | 56 | 26 | 57 | 37 |
| 3. Main activity (% engaged in production) | 47 | 100 | 0 | 48 | 45 | 46 | 47 | 68 | 27 |
| 4. Average period under private ownership (years) | 4.4 | 4.4 | 4.3 | 5.1 | 3.8 | 5.5 | 2.2 | 4.5 | 4.4 |
| 5. Average number of employees in 1998 | 43 | 67 | 23 | 68 | 22 | 51 | 28 | 76 | 13 |
| 6. Position of person interviewed (% owners) | 53 | 52 | 54 | 48 | 58 | 51 | 58 | 46 | 60 |
| 7. Firms reporting large positive profits in 1997 (%) | 14 | 12 | 19 | 11 | 17 | 18 | 5 | 7 | 21 |
| 8. Firms reporting negative profits in 1997 (%) | 33 | 38 | 22 | 33 | 33 | 32 | 37 | 32 | 34 |

50.     **Overall findings.** As evident in Appendix Table 7, more firms (one-third) reported losses in 1998 than reported large profits (13 percent), and more firms reported a decline in labor productivity since 1997 (40 percent) than reported a rise (21 percent). Also, more firms reported a decline in employment since 1997 (53 percent) than reported an increase (22 percent). At this stage of the transition, and after a number of years of privatization, a decline in employment is likely to reflect a problem rather than "positive" restructuring. Thus, the outlook for business in 1998 was not encouraging. The average monthly wage for a typical production or sales employee at the end of 1997 was 383 thousand rubles, only slightly above the average cost of minimum subsistence and less than half the statistically recorded monthly average wage in cities. More than half the production firms surveyed reported wage arrears, of three months on average.[28]  And yet wages were less than a quarter of expenditures excluding intermediate goods; investment accounted for 9 percent, and taxes for 67 percent.

51.     The survey also addressed various aspects of the relationship between firms and city government—taxes, registration, price control, quality of municipal services, quality of business services the city might have encouraged, government direct assistance, and attitude toward private business (Appenedix Table 7). As indicated above, firms reported that they

---

[28] This is similar to the stock of wage arrears in Volga regions reported in MFK Renaissance (1998b).

paid 67 percent of expenditures excluding inputs on 14 different taxes—including five city taxes; other taxes were regional and federal.   More than half of the firm executives interviewed considered corruption as the first or second most difficult problem they confronted, and slightly fewer ranked local government inefficiency at the top of their list; the two problems are, of course, closely related.

52.     Almost all firms needed to have licenses, but only eight indicated that they were difficult to obtain.  Twenty-three firms reported some form of price control, including seven that were subject to controls on their retail margins. More firms evaluated as "good" rather than "poor" the quality of utilities, but with more positive responses for public transportation, electricity, and communications than for water and sewage and garbage collection, which are more directly under municipal responsibility.  Net negative grades were assigned to street maintenance and lighting, public and property safety, and the quality of arrangements for legal settlement.

53.     More than half the firms recognized the existence of a business center in their city, but only eight firms indicated actual use, four of which found some business center services useful.  Although many firms would have liked to have received local government support, especially to locate space for their business and to help obtain credit, more than one-third wanted the city to simply not interfere in their business.[29]  Finally, despite these problems, the city government received a net positive evaluation of its attitude toward private business, which was better than the evaluation of attitudes of the regional government and of the general population.

54.     Business services available in the city (Appendix Table 7) other than insurance, which largely still is provided by the state, were evaluated as superior to  municipal services.  And respondents in more firms indicated that the level of trust among business partners is good rather than poor.  Only 11 firms (20 percent) reported that crime was a major problem and a much smaller number (only 4) said that organized crime, the "Krisha," concerned them the most. Still, six firms admitted paying protection to such umbrella organizations.  Finally, more firms found the attitude of the population toward  private business to be positive rather than negative, although the positive margin was not enormous (25 percent on a net basis).

55.     **Variation by main characteristics.**  We now direct our attention to an examination of survey results based on the different types of firms.  New private firms tend to be smaller, slightly younger, and somewhat more successful than privatized firms.  They have experienced a smaller declines in productivity and have higher levels of investment.  Smaller firms (less than 20 employees) more often than not are new private enterprises, engaged in

---

[29] Firm responses here can be compared to those reported in Frye and Shleifer (1997), where 74 percent said local government had no influence on business, 11 percent said it helped, and 15 percent said it hindered business. International agencies have assisted in the establishment of business centers in Nizhniy Novgorod, Volgograd, Samara, Yaroslavl', and Tver'.  These cities plus Ul'yanovsk had special programs to assist and train small businesses.

trade, and faring somewhat better than larger firms (see Table 6). They reported higher profits (but a sharper decline in profits after 1997) and paid higher wages; they also reported fewer arrears and invested more. Firms engaged in trade/distribution are smaller, younger, less in arrears, and generally slightly more successful than production firms. They pay better wages but experienced a sharper decline in employment over the period 1997–1998.

56.    In general, new private, younger, and smaller firms engaged in trade, when compared with privatized, older, and larger firms in production, are doing relatively better and are more flexible in staffing; however, their fortunes fluctuate more with ups and downs (down in 1998) in the general economy. They are part of the new wave of emerging market firms, enjoying the advantages of the market economy but suffering from its volatility. The privatized, older, and larger firms in production find it more difficult to maneuver in the new environment, as they carry with them the heavy burdens and culture of the old system.

57.    Differences also emerge with respect to the character of the various types of firms' interactions with city government. Although tax levels do not differ between trade and production firms, larger firms, privatized firms, and younger firms report paying higher taxes— in all cases above 70 percent of their expenditures excluding inputs. This compares to smaller firms, new private firms, and older firms that pay less than 65 percent. These tax differentials may be explained by the fact that larger and privatized firms are more visible, and younger firms are less experienced in dealing with the tax authorities. The representatives of the larger production firms also complained more frequently about obtaining licenses and to some extent also suffered more from price controls.

58.    Production firms and new private firms have a somewhat lower opinion of the quality of municipal and business services. Older and privatized firms were more aware of the existence of a business center. Of the eight firms that used a center, six were among the older firms. The users were mostly seeking assistance in obtaining business space and credit, but half of them agreed with non-users—mostly new, small trade firms—that the best thing government could do is not interfere.

59.    There were more complaints about government inefficiency among smaller, new private, and older firms, and more accusations of corruption among smaller and new private firms.  Smaller, older firms complained more about crime, but all four firms acknowledging a relationship with the Krisha are newly established. Three are new private firms and three are small. Trade firms found a higher level of business trust among partners than did production firms. And small, older, privatized firms in trade found the attitude toward private business of the city government and the general population to be more positive than other firms.

60.    **Variation by level of profitability.** Seven firms reported substantial profits; 30 firms small or no profits; and 18 firms reported losses. Loss-making firms tended to be smaller, older, privatized, and engaged in production. Operationally, loss-making firms had a stronger tendency to reduce employment; they suffered more from declining productivity and

paid lower wages—an average of 341 versus 461 new rubles per month for profitable firms. Loss-making firms also had more arrears and invested much less than profitable firms.

61.     A major difference between profitable and loss-making firms, and possibly a major source of the difference in profits, was the level of taxation. Loss-making firms reported paying fewer but much higher taxes—72 percent of expenditures after inputs compared with 43 percent on average for profitable firms. If true, the lower tax payments by the profitable firms must be a major factor in their high profitability. Profitable firms also had fewer problems obtaining licenses; indeed, some profitable firms may have operated without one. Two-thirds (12) of the loss-making firms, mostly in production, labored under some kind of price control, and more than half the firms under price controls lost money during the reported period. Curiously, loss-making firms did not complain more than other firms about crime or government inefficiency and corruption. Indeed, profitable firms tended to worry more about the latter. Loss-making firms encountered more positive attitudes toward them on the part of regional officials and the public than did profitable firms; on the contrary, profitable firms found only the municipal government mildly well disposed toward them.

62.     Profitable firms are as critical or appreciative as other firms are of the level of municipal services, but they are more critical of public safety and protection of property and of the level of business services. None of the successful firms utilized the services of the business center. Like other firms, most successful firms received no assistance from the city government and did not desire its intervention in daily business operations. None of the profitable firms reported relations with organized crime (all those that did were small profit earners); nor did they complain more about Krisha or crime being a problem. They did, however, report experiencing a higher level of trust among business partners. The picture of profitable firms that emerges from the survey data is that they appear to be managed by independent, possibly daring, entrepreneurs, who are striving to reduce their tax burden, avoid government interference, and who rely more on mutual business relationships to conduct business.

63.     **Variation by city.**  As proposed at the outset, this first major part of the paper concentrates mainly on general patterns of transition in the Volga cities rather than on the particular variations between them. For this reason we summarize the findings of the survey in a very concise way here, before focusing on possible reasons for divergence in economic performance among the cities in the following major section. Table 7 presents a ranking of the cities according to the performance of their surveyed firms (column 1) and then according to firms' views on the quality of municipal policies, municipal services, business services, and the overall business environment in the respective cities. The rankings are achieved by a simple weighting system that gives positive and negative points for above- and below-average ratings of the cities. All information under each category (i.e., each section) is assigned equal weights and the points are added to produce the ranks shown in the table. An overall ranking is presented in the far right-hand column. More detailed data are provided in Appendix Table 8.

**Table 7. Ranking of Firm Performance and Firms' View of Their City's Business Environment [a/]**

| Capital Cities | Firms' Performance | Local Business Environment | | | | |
|---|---|---|---|---|---|---|
| | | Municipal Policy | Municipal Services | Business Services | Business Environment | Overall Ranks of City Business Environment |
| Kazan | 2 | 4 | 2 | 3 | 1/2 | 2/3 |
| Samara | 5/6 | 1/2 | 3 | 2 | 4 | 2/3 |
| Saratov | 4 | 5/6 | 5 | 4 | 6 | 6 |
| Ulyanovsk | 1 | 3 | 6 | 5 | 5 | 5 |
| Volgograd | 3 | 1/2 | 1 | 1 | 3 | 1 |
| Astarkhan | 5/6 | 5/6 | 4 | 6 | 1/2 | 4 |

[a/] Rankings range from 1 (highest) to 6 (lowest) and are based on firm responses to survey questions grouped by city.

64.     As shall become apparent in the second part of the paper, the overall ranking of the cities' business environment conforms closely with  their rankings on both policies and outcomes,[30] with Volgograd, Samara, and Kazan' at the top and Saratov and Ul'yanovsk at the bottom among the surveyed cities.  With respect to economic performance, firms in Ul'yanovsk are faring the best, followed at some distance by Kazan', Volgograd, and Saratov, and with Samara ranking near the bottom.  Although the performance of the firms in Samara and Ul'yanovsk is at odds with the perceived business environment (a phenomenon addressed again below), the results for the other cities are more or less consistent.

## V.  EXPLAINING DIFFERENCES IN ECONOMIC PERFORMANCE AND LIVING STANDARDS SINCE 1990

65.     In this section the focus is on the comparative experience of regional capitals as microcosms of change. We use comparative rankings to look at differences among the 10 Volga capitals in initial conditions and in the pace and pattern of economic reform.  We then suggest hypotheses about how initial conditions and policy may be related to socioeconomic outcomes.  Other factors affecting socioeconomic outcomes include institutional arrangements conferring greater flexibility to certain regions in the realm of policy formation (as codified in power-sharing agreements with the center),[31] different political arrangements

---

[30]  See also de Melo and Ofer (1999).

[31]  By August 1997, Tatarstan, followed by Chuvashia and Nizhniy Novgorod, Tver', Saratov, and Samara oblasts, had concluded bilateral "power-sharing" agreements with the federal government.  Although such agreements typically cover budgetary relations, state

within the regions[32] and other special conditions such as spillover effects caused by proximity to important neighboring regions.

## A.  Initial Conditions

66.      Table 8 presents a variety of information on the Volga capitals as of 1990, a year of relative stability and therefore a useful point of departure. The cities are listed according to their position (from upstream downward) on the Volga River.  As is apparent, five had relatively large populations in 1990 (~1 million or more), with the remaining five in the half-million population range or slightly larger.  Less than half of the cities are located in regions possessing natural resources of national significance.  Three regions, Tatarstan and Samara and Saratov, were major oil production areas in the Volga-Urals fields (Sagers, 1991, p. 260), the country's major oil-producing region in the 1960s and much of the 1970s prior to the development of the West Siberian fields.[33]     Many of the cities  possess favorable geographic locations at the intersection of important rivers, roads, rail lines, and pipelines, but Nizhniy Novgorod, Samara, Yaroslavl' and Tver seem to be particularly well situated.  As of 1990, however, these apparent advantages were not manifest in above-average living standards.

67.      Data on per capita income for the Volga capital cities are not available, but average monthly wages in 1990 (Table 8) in the cities were quite similar[34] and slightly below the Russian average of 297 rubles.  Available data on living standards fail to reveal any clear

---

property, regulation of branches of industry, and ownership and use of natural resources, the terms of the specific agreements tend to vary widely.

[32]  According to Malyakin (1997), two different political arrangements can be found in the regions covered by this study.  In one (Samara and Nizhniy Novgorod [under Boris Nemtsov] oblasts , Chuvashia, and Tatarstan), the governor forms a "power pyramid," based on an alliance with the center and acceptance by the local elite.  The governor is rewarded for this cooperation with the center by a grant of virtual autonomy.  A second arrangement is characterized by weaker regional leadership (e.g., Saratov Oblast prior to the appointment of Dmitriy Ayatskov as governor), which invites intervention by the center into the region's affairs.  Generally, the level of political independence of city leaders from regional governors tends to be much less than that of the governors from Moscow (for additional details, see de Melo and Ofer, 1999, pp. 13-15).

[33] Saratov and Astrakhan' possessed sizable commercial deposits of natural gas, but these were not well developed.

[34]The spread between the highest (Saratov, Tver') and lowest (Samara, Cheboksary) average wages was less than 5 percent.  Monthly wages at the regional level, typically lower than in the capital city, had a spread of less than 10 percent.

differences. Only Samara seems to stand out as unfortunate, with the highest infant
mortality and a low per capita trade in consumer goods and services.

**Table 8. Initial Conditions in Volga Cities, 1990**

| Capital Cities | Population (000's) | Average Monthly Wage | Monthly Per Capita Retail Trade in Consumer Goods and Services | Infant Mortality per 1,000 | Industrial Employment as Percent of Total | Defense Employment as Percent of Total a/ |
|---|---|---|---|---|---|---|
| Tver | 460 | 275 | 153 | 17.7 | 31 | <10 |
| Yaroslavl | 635 | 271 | 149 | 14.8 | 44 | 10-15 |
| Nizhni Novgorod | 1421 | 271 | 151 | 14.9 | 44 | 25-35 |
| Cheboksary b/ | 429 | 264 | 133 | 13.0 | 50 | <10 |
| Kazan b/ | 1103 | 266 | 169 | 18.4 | 47 | 25-35 |
| Ulyanovsk | 637 | 270 | 145 | 20.0 | 46 | 10-15 |
| Samara | 1260 | 264 | 140 | 23.3 | 43 | 25-35 |
| Saratov | 907 | 275 | 145 | 20.3 | 41 | 15-25 |
| Volgograd | 1003 | 271 | 140 | 15.2 | 41 | <10 |
| Astrakhan | 482 | 265 | 142 | 18.1 | 34 | <10 |
| | | | | | | |
| Memo item | | | | | | |
| Average for Volga Cities | 1197 | 269 | 147 | 17.6 | 42 | … |
| Russian Federation | 148543 | 297 | 158 | 17.4 | 30 | <10 |

*Sources:* Compiled by authors from Goskomstat Rossii, 1995, pp. 28, 32, 195; 1998a, Vol. 1, pp. 145-147, 159-161, 194-196, 180-182, 243-245, 250-252, 257-259, 271-273, 278-280, 285-287 and Vol. 2, pp. 98, 106; 1999a, p. 10; 1999c, p. 260; city case studies; various city statistical bulletins; and Segodnya, February 18, 1999, p. 6.

a/ Classification based on 1985 data in Gaddy (1996) and author's estimates.
b/ Cheboksary is the capital of the Chuvash Republic, also know as Chuvashia, and Kazan is the capital of Tatarstan Republic. All other regions are oblasts with the same name as the capital city, e.g. Tver is the capital of Tver Oblast.

68.     Although the Volga cities all were industrial centers, important differences existed in
1990 in terms of the size and structure of industry. Such differences are likely to help explain
subsequent economic outcomes, especially given the severe shocks to industry during
transition. An initial shock was the 1992 price liberalization and the associated opening of
the Russian internal market to international trade. The price liberalization resulted in a large
increase in the relative prices of energy and other raw materials, raising input costs for
heavy industry. The increased competition from imports hurt Russia's light industry. A
second shock was the drop in central government procurement orders, which affected the
demand for military production and research, construction and industrial machinery, as well
as cars and planes for civilian use. A third shock was the disintegration of the pervasive
distribution network organized by the center; most enterprises had no internal sales
departments or marketing strategies.

69.     Industrial employment shares in 1990 were as high as 50 percent in Cheboksary and as low as 31 percent in Tver' (Table 8).  Within industry, wide differences in industrial structure were apparent from an industrial census of Russian enterprises conducted in 1989 (as cited in Ivanov, 1998). Chemicals and petrochemicals, as well as energy, were important in Yaroslavl', Volgograd, Kazan', Saratov, and Samara.[35]  Metallurgy was well developed in Volgograd (25.8 percent of sales volume of industrial products in 1989); and metal working and machine-building was important in Ul'yanovsk (60.5 percent) and Nizhniy Novgorod (57.7 percent) known for cars, in Cheboksary (48.2 percent) and Volgograd (26.4 percent) known for tractors, in Saratov (27.9 percent) and Kazan' (20.2 percent) known for airplanes, and in Astrakhan' (15.2) and Yaroslavl' (25.8 percent) known for river and sea-going vessels. In addition, Astrakhan', Cheboksary, and Tver' relied heavily on food industry, textiles, and other consumer goods (light-industrial products) as bases for their industrial sector.    These variations in structure are interesting in light of Ivanov (1998), who uses an *ex post* analysis of changes in quantity, price, investment, and employment to show that light industry and machinery/metal-working have become the two least competitive sectors in Russian industry as a whole.

70.     Substantial differences among the Volga cities existed in terms of two other characteristics shown in Table 8; their implications, however, are not clear.  One is the share of defense employment in total industrial employment.  On the one hand, defense industries present an enormous task for restructuring; on the other, the high level of human capital associated with defense industries would seem to provide an advantage.  Nizhniy Novgorod (then known as Gor'kiy) was classified as a closed city during most of the Soviet era, and restrictions to foreigners also applied to Saratov, Samara, and Volgograd, presumably because of the sensitivity of the type of military production there.  The other characteristic is the relative strength of the agricultural base.  Using the ratio of agricultural to industrial output as an indicator, four cities— Tver', Cheboksary, Saratov, and Astrakhan'—are located in regions with a relatively strong agricultural base.   But here again it is not clear whether this is an advantage or a disadvantage.  On the one hand, relatively high inter-regional transport costs mean that a strong agricultural base can help keep low food prices in the capital city and promote low industrial wages.  On the other, agriculture is generally unreformed and cash poor, placing additional pressure on available public revenues.  In both cases, we shall assume that the advantages and disadvantages of these characteristics are offsetting.

---

[35] Chemicals and petrochemicals accounted for 47.7  percent of the total sales of industrial products in Yaroslavl', 31.6 percent in Kazan', 26.9 percent in Saratov, and 26.2 percent in Volgograd, and 15.4 percent in Samara.

**Table 9. Expectations of  Success in Volga Cities Based on Initial Conditions**

| Capital Cities | Share of Industrial Employment in Total a/ | Share of Industry in Two Least Competitive Sectors a/ | Industrial Specialization b/ | Favorable Location or Natural Resources c/ | Total |
|---|---|---|---|---|---|
| Tver | 2 | 0 d/ | 1 d/ | 1 | 4 |
| Yaroslavl | 1 | 2 | 0 | 1 | 4 |
| Nizhni Novgorod | 1 | 0 | 0 | 1 | 2 |
| Cheboksary | 0 | 0 | 0 | - | 0 |
| Kazan | 0 | 2 | 1 | 1 | 4 |
| Ulyanovsk | 0 | 0 | 0 | - | 0 |
| Samara | 1 | 2 | 1 | 1 | 5 |
| Saratov | 1 | 2 | 1 | 1 | 5 |
| Volgograd | 1 | 2 | 1 | - | 4 |
| Astrakhan | 2 | 2 | 1 | - | 5 |

a/ 2 = below average; 1 = average; 0 = above average.

b/ 2 = low; 1 = medium; 0 = high. See text for ranges.

c/ 1 = present.

d/ These estimates are based on partial information on industrial production in Goskomstat (1994) and Yakovleva (1998).

71.      What then might be the expectations of success for the different regional capitals based on initial conditions?  The above review suggests that the most important factor in success might be the ability to adjust to the severe industrial shocks experienced during the early years of transition.  Therefore, Table 9 provides a ranking of the cities' situations based on four criteria for ease of industrial adjustment: (1) a low share of industrial employment in the urban labor force; (2) low share of industry in the two "least competitive" sectors, light industry and  machinery/metalworking; (3) low industrial specialization; and (4) special advantage derived from a favorable location or natural resource endowment.[36]  If these

---

[36] Criterion 1 is taken from Table 8, and criteria 2 and 3 are taken from data on the industrial census of 1989 (see Ivanov 1998).  For criteria 1 and 2, a rank of 2 is 10 percent or less than the average and a rank of 0 is 10 percent or more than the average; a rank of 1 reflects close to average value.  For criterion 3, low specialization (rank of 2) is considered to exist where none of the eight industrial sectors identified in the census accounts for more than 25 percent of volume of sales, and high specialization (rank of 0) is considered to exist where at least one of these sectors accounts for more than 45 percent of sales.  None of the Volga capitals has low specialization by this definition. Criterion 4 is based on information in the preceding text.

criteria alone have a decisive impact on restructuring, Cheboksary and Ul'yanovsk, each with a total score of 0 would be expected to encounter the most pronounced problems with adjustment during transition. Nizhniy Novgorod (with a score of 2), would be expected to perform significantly better, but not as well as the four cities receiving a rank of 4. Samara, Saratov and Astrakhan', with a rank of 5, would appear to have the best prospects for success.

## B. Economic Policies

72.     The pace and pattern of economic reform varied widely among the Volga capitals between 1990 and 1997. Here we examine differences in city policies in four categories—pricing, fiscal policy, privatization, and support for business development. The section ends with a summary ranking of cities by policy reform .

73.     **Pricing.** During the Soviet era, government subsidies reduced consumer prices substantially below costs in two main categories—food products and services, the latter including housing/utilities/public transport, as well as cultural, household, and personal services. Food prices were reduced through heavy subsidies to the agricultural sector. Rent and prices for utilities and public transport were reduced by explicit or implicit government subsidies and by direct provision of housing and utilities by enterprises. Underlying subsidies were provided through low energy prices.

74.     *Food prices*. The 1992 price liberalization eliminated subsidies from the center for almost all marketed goods, including most food products. Local governments attempted to maintain low food prices through a variety of methods, including restrictions on exports to other regions (Ul'yanovsk, Saratov), administrative price controls, ceilings on production profits and trade mark-ups (Ul'yanovsk, Astrakhan', and Yaroslavl'), and requirements for enterprises to supply part of their production at lower prices, sometimes as an offset to taxes. In order to control for overconsumption, Ul'yanovsk also developed a very elaborate rationing system. Such methods typically had adverse budget implications,[37] which forced local governments to gradually abandon controls and increase the extent of recovery. Food prices tended to be the highest in Nizhniy Novgorod and Samara and lowest in Ul'yanovsk and Volgograd, with prices in Saratov, Cheboksary, and Kazan' falling in between.

75.     Direct food subsidies were partially financed at the regional level. In Ul'yanovsk Oblast, for example, food subsidies absorbed more than half of the regional administration funds for social protection, thus accounting for 5 to 10 percent of the budget at that level. More commonly, regional governments have devoted a large share of their budget to agricultural subsidies as a complement to direct price controls. The largest supporters of

---

[37] More recently, local officials have used restrictions, including taxes and quality requirements, on regional imports to keep prices higher; the most common example is restriction of vodka sales in such areas as Tatarstan, Nizhniy Novgorod, and Tver'. Here the objective is to protect producers, typically public enterprises, rather than consumers.

agriculture, as indicated by expenditure shares in the regional consolidated budget for 1997, were Saratov (17 percent) and Tatarstan (11 percent).[38]

76.     *Services.*  Data on the prices of basic municipal services[39] in eight Volga cities at the end of 1996 (de Melo and Ofer, 1999, Appendix Table 5) indicated that prices in Ul'yanovsk again tended to lie at the lower end of the spectrum.  Prices for services appeared to be highest on average in Nizhniy Novgorod.

77.     *Overall price indicators.*  Baranchuk (1998) has provided three alternative general rankings of the effects of price controls in the Volga cities (Table 10)—the proportion of goods and services subject to price control; the severity of the price control method; and a comprehensive ranking based on direct price subsidies, fixed or maximum prices, rationing, restrictions on food-industry profitability, and price mark-ups (so-called Berkowitz/Baranchuk ranking, far right column Table 10).  All three rankings show that—with the exception of Saratov, where price controls have been reduced—the "Red Belt"[40] regions have the highest level of price control.

78.     These rankings are corroborated by the costs of a standard set of 25 basic food items and a monthly subsistence minimum in the 10 Volga capitals (Appendix Table 6 in de Melo and Ofer, 1999).  Both measures indicate that costs are highest in Samara and lowest in Ul'yanovsk   They also indicate that prices are relatively lower in the cities of Astrakhan' and Volgograd than in their surrounding oblasts and relatively higher in Nizhniy Novgorod than in its surrounding oblast.  These data are consistent with the city rankings on price controls showing more pervasive price controls in Astrakhan' and Volgograd than in Nizhniy Novgorod.

---

[38] The Russian average was about 5 percent in 1997.

[39]  These included prices for city bus transportation, municipal housing, telephone service, electricity, water and sewage, hot water/heat, natural gas, central heating, and primary health care (physician services).

[40] As noted earlier, these include Astrakhan', Volgograd, Saratov, and Ul'yanovsk oblasts and the Chuvash republic.

**Table 10. Price Controls on Goods and Services in 1995-1996**

| Capital Cities | Percent of Goods and Services | Severity | Berkowitz\Baranchuk b/ |
|---|---|---|---|
| Tver | 5-10 | Below Average | 1.1 |
| Yaroslavl | 5-10 | Above Average | 1.7 |
| Nizhni Novgorod | 10-17 | Medium | 1.6 |
| Cheboksary | 18-25+ | Above Average | 2.2 |
| Kazan | 10-17 | Above Average | 2.1 |
| Ulyanovsk | 10-17 | High | 4.4 |
| Samara | 5-10 | Low | 0.9 |
| Saratov | 5-10 | Low | 1.0 |
| Volgograd | 10-17 | High | 2.6 |
| Astarkhan | 18-25 | Above Average | 2.3 |
| Memo item | | | |
| Russia | 18.1 a/ | N/A | N/A |

*Sources*: TACIS, 1996; Baranchuk, 1998, pp. 6, 13.

a/ The average percent for Russia is 18.1, 17.8 for all foods, 8.9 for non-food goods and 38.4 for services.

b/ These rankings, used by Berkowitz and Branchuk, were originally provided in TACIS 1996 as regional indicators, however the surveys were taken in the capital cities. The higher the rank, the stricter the controls.

79.     **Municipal Fiscal Policy.** As indicated in a previous section of the paper, three main sources of revenue are available to cities—shared taxes, transfers, and own revenues. None provides a clear indicator of fiscal policy at the municipal level. Shared taxes depend on the annually negotiated sharing arrangements between the city's surrounding region and the federal government, as well as on the sharing arrangements between the region and the city. City officials may influence such arrangements, which vary across regions and cities; but they do not control them. The third source, own revenues, is relatively small and may be maintained partly off budget. The incentives for cities to operate extrabudgetary funds are to maintain legal control and to hide the size of their resources from regional authorities that might otherwise reduce their tax shares. As documented by Mitchneck (1994), such funds are financed by fines, revenues from privatization, rental of municipal property, profits from direct economic activity, and carryover from any previous-year budget surplus. Zhuravskaya (1998), however, determined that extrabudgetary funds either are very small or nonexistent at the local level, partly because there are no stable sources of revenues for such funds. To the extent that this is true, this implies that budgeted own revenues could serve as a useful indicator of municipal tax effort.

80.     As noted above, the major categories of expenditure are "national economy" and public services such as education and health.  National economy expenditures are associated with the functions of the former Soviet government, which supported production through subsidies and supplied heavily subsidized housing and utilities to the population. Thus, the ratio between expenditures on "national economy" and expenditures on local government responsibilities for social services such as health and education has been seen by some as reflecting an important aspect of reform in Russian cities (Halligan, 1995; Zhuravskaya, 1998), but it is not an unambiguous indicator.  This is because it is not always clear whether the subsidies under "national economy" are the old-style production and housing subsidies or more recent attempts to compensate enterprises for their support of social services.  Social spending by Russian enterprises on education and health, as well as on public housing and transport, was large prior to transition, representing as much as 20 percent of gross wage costs (Freinkman and Starodubrovskaya, 1996).  The transfer of such social spending from enterprises to municipalities, which thereby accept financial responsibility for such activities, is an important aspect of reform; hence the ambiguity.

81.     Another factor making budgetary accounts difficult to assess is the valuation of revenues and expenditures made in kind.  At the regional level, budgetary non-cash revenues for the first 10 months of 1997 ranged from a low of 6 percent in Moscow City to a high of 76 percent in Chuvashia (MFK Renaissance, 1998b, p. 22).  Most of the Volga regions had non-cash revenues of around 50 percent, so the size of non-cash revenues and the particular prices chosen to apply to in-kind transactions have implications for city as well as regional budgets.  Typically prices chosen to value in-kind transactions are some multiple of the market price and so tend to inflate these budgets.

82.     Two indicators were selected to assess progress toward fiscal reform in the 10 Volga cities; they are shown in Table 11.  As indicated earlier, fiscal data for Cities under Regional Jurisdiction (CRJs) are used as a proxy for Volga capitals, as a consistent set of budgetary data for capital cities is not available.  The "tax effort" indicator is calculated as the per capita collection of "property tax" plus "other taxes" by CRJs in each region as a percentage of the annual wage in the capital city.[41]  Cities retain 50 percent of the property tax, which is shared with regional governments, and so have a strong incentive for collection; other municipal tax shares are much lower.   And cities retain 100 percent of any "other taxes," which they initiate.  Thus high collections of these taxes are likely to indicate proactive city administrations.  Interestingly, the highest tax effort using the average CRJ proxy over the period 1996-7 occurs in Saratov (7 percent), where wages are among the lowest, and in Kazan (6.1 percent), with one of the highest wages, and in Samara (5.6 percent).   The lowest tax effort is in Astrakhan' (2.4 percent).

83.     The "housing-subsidy burden" is calculated as the per capita housing subsidy in CRJs as a percentage of the annual wage in the capital city (average over the period 1996-97).  This

---

[41] Non-tax revenues are excluded from this measure, as it is somewhat unclear whether such revenues are included in the budget or maintained off-budget; in any case, they are small.

indicator is highest for Cheboksary (6.8 percent) and Nizhniy Novgorod (6.2 percent) and lowest for Volgograd (3.9 percent) and Ul'yanovsk (4 percent).

84.     **Privatization.**  City governments were responsible for privatization of their housing stock and of small and medium enterprises.  Privatization rates are therefore an indication of local government efforts to establish competitive markets with clear property rights. Housing privatization also helps relieve some of the fiscal burden of cities.

85.     *Small enterprises.* Most Volga cities privatized their small-scale enterprises early (1992–1993).  The most common initial approach was to lease shops or small companies, often with an option to buy; many lessees exercised this option.  After several years, tenders and auctions were used to achieve privatization.  In Nizhniy Novgorod, Volgograd, Samara, Yaroslavl', and Tver', international agencies, such as the International Finance Corporation, the European Bank for Reconstruction and Development, and the European Union were involved in privatization, and it proceeded rapidly.  In Ul'yanovsk, small-scale privatization began later, with the main wave occurring in 1994–1995. And in Cheboksary, only 58 percent of the original municipally owned enterprises were reported as privatized by mid-1997. Unfortunately, there are no readily comparable statistics on small-scale privatization for all ten Volga capitals, so the policy indicator for privatization reflects housing only.  However, cities that privatized early and quickly are likely to score well on the indictor for small enterprise development discussed below.

86.     *Housing.*  As a result of the first wave of apartment privatization, the ownership structure of city housing changed radically.  In Samara, for example, half the housing stock in 1991 was owned by enterprises and more than one-third by the city; only 15 percent was in private hands—individual townhouses, rural houses incorporated into the city as it expanded over time, and cooperatives.  By 1996, however, half of the city's housing stock was privately owned.  Privatization rates, however, are a better indicator of privatization policy than is ownership structure because of variations in initial levels of private ownership.  Table 11 shows the shares of privatized housing for 1996; the Russian average of 39 percent was attained only in Volgograd, although several of the cities (notably Nizhniy Novgorod, Astrakhan', and Tver') had almost achieved the mean.  The lowest percentages of total housing stock privatized were in Kazan' and Ul'yanovsk.

87.     **Support for business.**  City governments also were responsible for the creation of a friendly and supportive environment for business-sector development (banking and financial services, attraction of foreign investment, other business services,  a favorable tax regime, simple procedures for registration and licensing, and business information and training).   To varying degrees, local governments also have been active in lobbying the federal government to secure production orders, to extend credits, to pay wage arrears, and to reduce tax burdens for enterprises in their jurisdiction.   The number of small enterprises per thousand residents

and the efforts of city officials to attract outside (foreign) investment can serve as indicators of the commitment to foster a favorable business environment.[42]

**Table 11. Reform Indicators for Fiscal Policy, Privatization, and Support for Busuness, Average Values 1996-97**

| Capital Cities | Tax Effort a/ | Housing Subsidy Burden b/ | Privatization of Housing in Cities c/ | Small Enterprises in Region d/ | Flow of Total Foreign Investment e/ |
|---|---|---|---|---|---|
| Tver | 4.2 | 5.0 | 34 | 2.5 | 184 |
| Yaroslavl | 4.1 | 5.1 | 25 | 5.3 | 51 |
| Nizhni Novgorod | 5.4 | 6.2 | 33 | 3.9 | 41 f/ |
| Chuvashia/Cheboksary | 4.3 | 6.8 | 20 g/ | 3.2 | N/A |
| Tatarstan/Kazan | 6.1 | 5.1 | 12 | 4.3 | 46 |
| Ulyanovsk | 4.5 | 4.0 | 12 | 3.2 | 1 |
| Samara | 5.6 | 5.8 | 27 | 5.8 | 30 |
| Saratov | 7.0 | 6.1 | 28 | 3.6 | N/A |
| Volgograd | 4.1 | 3.9 | 39 | 5.0 | 16 |
| Astrakhan | 2.4 | 5.7 | 32 | 3.9 | 2 |
| | | | | | |
| Memo Item | | | | | |
| Average for Volga regions | 4.8 | 5.4 | N/A | 4.1 | N/A |
| Russian Federation | - | - | 39 h/ | 5.8 | N/A |

*Sources:* Compiled by authors from Goskomstat Rossii, 1998a, Vol. 1, pp. 145-147, 159-161, 194-196, 180-182, 243-245, 250-252, 257-259, 271-273, 278-280, 285-287 and Vol. 2, pp. 26, 300, 322-323; 1999a, p. 10-11; 1999c, p. 152; city case studies; city statistical bulletins; and authors' calculations.

a/ Per capita collection of "property tax" plus "other taxes" by local governments in CRJs as a percentage of the annual wage in the capital city.
b/ Per capita housing subsidy by local governments in CRJs as a percentage of the annual wage in the capital city.
c/ As a percentage of the entire eligible housing stock (number of units), 1996
d/ Number per thousand of residents.
e/ U.S. dollars per capita, for 1995 and 1996 combined.
f/ 1996 data only
g/ 1995 data
h/ The corresponding figure for 1998 is 44 percent.

---

[42] Hanson (1997) has observed the difficulty of devising usable indicators of a region's institutional adaptation to the market. It is all the more difficult to establish such indicators at the city level. Hanson uses primarily data on banking, foreign investment, and growth of small firms.

88.     *Small enterprise development.* Since 1991, there has been an explosion of the number of businesses registered throughout Russia.  Some were new independent businesses, others small and medium-sized enterprises privatized by the city government.  The growth of these two categories depends in part on local government privatization policies.  In addition, many small businesses were not registered at all (see, for example, Yakovleva, 1998).  According to most statistics, between one-half and two-thirds of all small businesses are in trade and restaurants; the rest are divided among consumer services, manufacturing, and construction. During the last years of the Soviet Union, 1990–1991, most Volga regions had about two enterprises per 1,000 people, resembling almost a "planning norm."  Only Nizhniy Novgorod and Samara deviated on the lower end with significantly fewer enterprises, and Tver' on the upper end with significantly more.  By 1996-97 the total number of enterprises was at least five times higher across the board.[43]

89.     The small-enterprise indicator shown in Table 11 must be interpreted with caution. First, although enterprises are concentrated in urban areas, particularly the capital cities, the indicator is for regions not cities.  Second, there are several problems with the statistics. Many Volga regions have experienced a decline in the number of registered small enterprises in recent years (e.g., see the totals for 1997 in parenthesis), possibly reflecting a consolidation of registries.  In addition, many small businesses are not registered at all (e.g., see Yakovleva, 1998) or otherwise are not included in Goskomstat statistics (see Hanson, 1997).

90.     *Foreign investment.*  Foreign investment can be an effective vehicle for enterprise restructuring, as it brings not only financing, but also modern technology, modern management, and ready-made export lines.[44]  In the Volga region, foreign investors are attracted by the oil, gas, petrochemical, aerospace, and automotive industries.  However, actual investment appears to reflect the local business environment as much as the presence of these assets.  Nizhniy Novgorod quickly gained attention by attracting foreign investment and international support for enterprise restructuring and early privatizations, but Samara Oblast and Tatarstan appear to have matched, if not overtaken, Nizhniy Novgorod in offering a favorable business environment and good public relations.  Since January 1995 Tatarstan has provided an exemption from local profits and property taxes for three to five years to companies with at least 30 percent foreign equity totaling $1 million or more.  It also permits foreign investors to own land and buildings. Tatarstan President Mintimer Shaimiyev is seeking to attract domestic as well as foreign capital by floating special investment and oil bonds and selling government equity stakes in industrial companies.  Local government

---

[43] Although most Volga regions are near the Russian average for small enterprises per 1,000 residents (the number was 5.9 per 1,000 in 1997 and 1998), the latter is low by East European standards (Frye and Shleifer, 1997).

[44] This is documented especially clearly in the case studies for Samara, Ul'yanovsk, Volgograd, and Kazan' (Volchkova, 1997; Lukyanova, 1997; Parfinenko and and Shcherbich, 1998; Andriyenko, 1997, respectively).

officials in Samara have welcomed foreign businessmen enthusiastically and describe themselves as facilitators rather than controllers of business partners. Astrakhan' also has substantial international contacts, but these have not yet translated into substantial foreign investment.

91.     Available city data for 1995 and 1996 in Table 11 indicate that Tver' received the highest level of foreign investment by far, followed by Kazan', Yaroslavl', Nizhniy Novgorod, and Samara. Typically the capital city receives higher foreign direct investment per capita than the remainder of the region, although this is not the case for Kazan' and Samara oblasts, where some of the largest enterprises lie outside the capital city.[45]  Tver's high ranking reflects the region's five-year exemption, granted to private investors starting in 1995, from profit, property, and land taxes. Subsequent data for 1997 show dramatic declines in foreign investment at the regional level in Tver', so we also looked at studies ranking the general investment environment in Russian regions. All placed Samara, Tatarstan, Nizhniy Novgorod, and, more recently, Saratov, at the top of the list, followed by Yaroslavl', Volgograd, and Tver', with Ul'yanovsk, Chuvashia, and Astrakhan' at the bottom.[46] This ranking generally substantiates the use of data on foreign direct investment in cities as a proxy for favorable business environment.

92.     **Overall ranking on policy reforms.** Table 12 provides a ranking of policy reform in Volga capitals. The comprehensive Berkowitz/Baranchuk indicator from Table 10 is used for price liberalization. The other indicators are based on the data in Table 11. Tax effort and "housing-subsidy containment" (the inverse of the "housing-subsidy burden" assessed earlier) are used to measure fiscal policy reform. Housing privatization is used to reflect privatization policy; and the number of small-scale enterprises per 1,000 residents and foreign investment levels are used as indicators of support for local business development. The ranks reflect the standing of individual capital cities on these indicators. With the exception of foreign investment, which exhibits a very wide variation among cities, a rank of 2 is given where the value is 10 percent or more than the average, and a rank of 0 is given where the value is 10 percent or less than the average. A rank of 1 reflects close to average value. The rankings in the right-hand column suggest that Samara and Nizhniy Novgorod are the most active reformers, followed by Tver', Yaroslavl' and Volgograd. Kazan' and Saratov are located in the middle—less reformist than the aforementioned cities but more reformist than Astrakhan'. Cheboksary and  Ul'yanovsk lie at the bottom of the list.

---

[45] See Appendix Table 2 in de Melo and Ofer (1999).

[46] See Expert (1996) and  MFK Renaissance (1998b). Volchkova (1997) reported 212 joint ventures in Samara, as well as substantial involvement of large Western companies (Nestle, GM, Corning), and loans from both the World Bank and EBRD.

**Table 12. Overall Ranking of Volga Cities on Policy Reform**

| Capital Cities | Price Liberalization a/ | Tax Effort b/ | Housing Subsidy Containment b/ | Housing Privatization b/ | Small Business Development b/ | Foreign Investment a/ | Total Points |
|---|---|---|---|---|---|---|---|
| Tver | 2 | 0 | 1 | 2 | 0 | 3 | 8 |
| Yaroslavl | 2 | 0 | 1 | 1 | 2 | 2 | 8 |
| Nizhni Novgorod | 2 | 2 | 0 | 2 | 1 | 2 | 9 |
| Cheboksary | 1 | 0 | 0 | 0 | 0 | 0 c/ | 1 |
| Kazan | 1 | 2 | 1 | 0 | 1 | 2 | 7 |
| Ulyanovsk | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| Samara | 2 | 2 | 1 | 1 | 2 | 2 | 10 |
| Saratov | 2 | 2 | 0 | 1 | 0 | 1 c/ | 6 |
| Volgograd | 1 | 0 | 2 | 2 | 2 | 1 | 8 |
| Astrakhan | 1 | 0 | 1 | 2 | 1 | 0 | 5 |

*Sources*: Tables 9 and 10.

a/ 0 = low; 1 = medium; 2 = high; 3 = very high.

b/ 0 = below average; 1 = average; 2 = above average.

c/ Assumption based on regional data.

## C.  Outcomes

93.     Economic and social outcomes for the period 1990–1997 are no easier to measure than economic reforms.   One problem is that there is no satisfactory comprehensive indicator of economic growth in the Volga capitals.  Estimates of money income and GNP are available only at the regional level, and the city index of industrial production ignores any growth in services.  Another problem is that, because of differential inflation, indicators expressed in current rubles must be converted to more comparable values.[47]  There are three deflator options: the cost of 25 basic food items in the capital city, the cost of minimum subsistence for the region, and the regional Consumer Price Index (CPI).   In the analysis that follows, "real" economic values are calculated using the CPI, which is the most broadly based deflator available over the longest period.  The CPI currently distinguishes nearly 400 goods and services.[48]  In measuring the living standard of lower-income groups, we use the cost of minimum subsistence, as it is more broadly based than the cost of the 25 food items.

---

[47] Prices of non-traded goods can be expected to differ, but studies show that prices of traded goods also differ substantially from region to region, and only partly because of transport costs (Gluschenko, 1998; Berkowitz  and DeJong, 1998).

[48] Regional weights for the CPI are based on local household budget surveys, but they do not differ greatly across regions. Both the list of goods and weights change annually, allowing for variation in quality and taste, but variations from year to year are modest (see Gluschenko, 1998 for more details). The main problem with the CPI is that, although it provides the rate

**Figure 3. Real Monthly Wage and Ratio of Average Monthly Wage to Subsistence Minimum in Volga Cities, 1997**



Real monthly wage in 1990 rubles (left scale)
Ratio of average monthly wage to subsistence minimum (right scale)
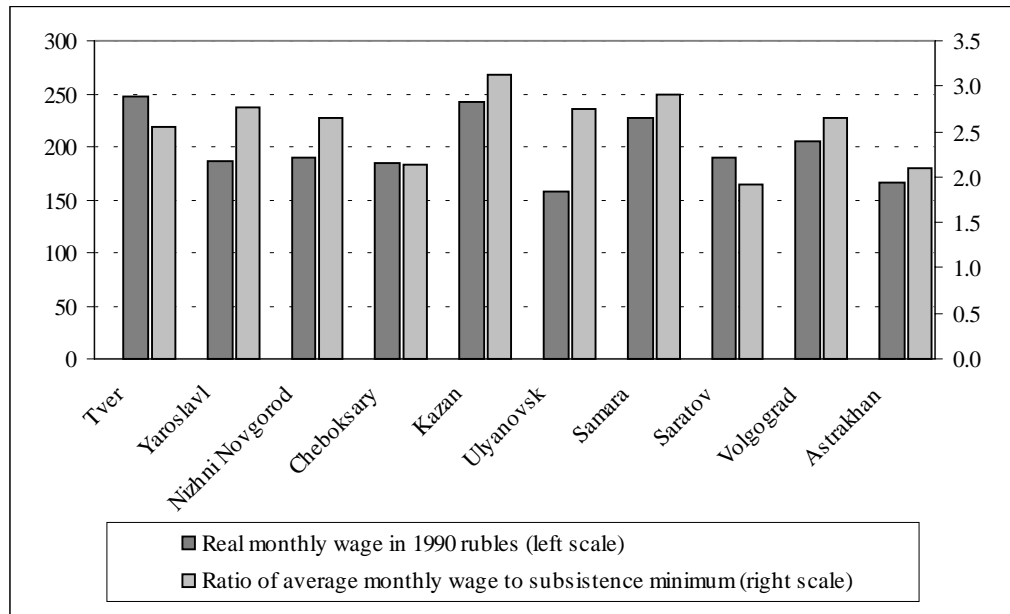
**Figure 4. Index of Physical Volume of Industrial Production in Volga Cities in 1997 (1990=100)**
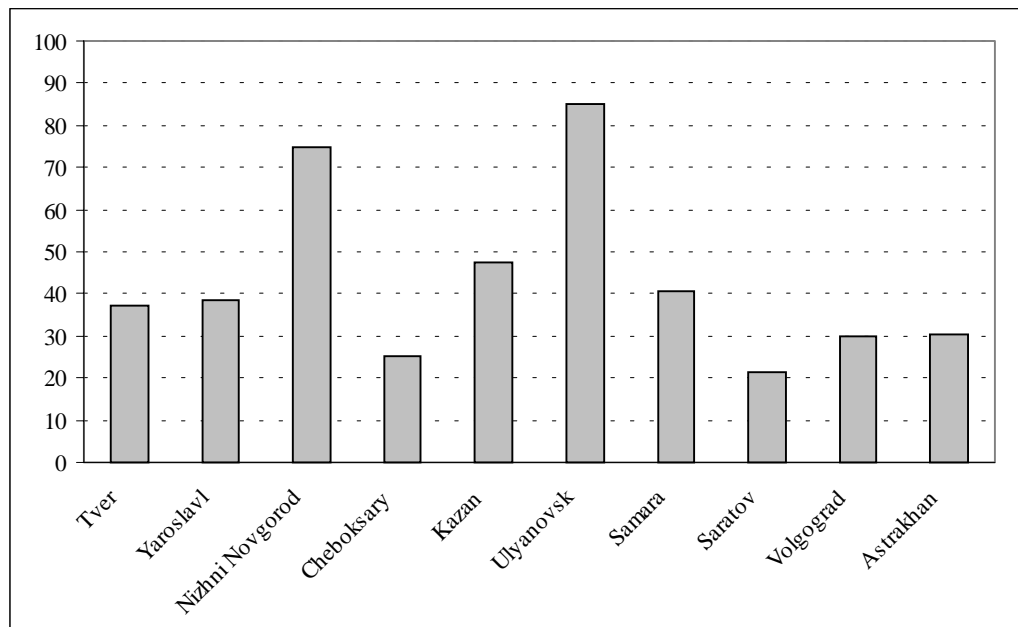


of change starting in mid-1991, no initial price level is provided on which to base this change. Since most prices in 1990–1991 were still fixed, and since they were fixed at the same level in the Volga regions, we assume that initial price levels were the same and the annual rate of price change for 1990–1991 was the same as that for the country as a whole.

94.     **Economic outcomes.**  As was the case in 1990, no data are available at the city level on per capita income, although this would be the single most comprehensive measure of economic success and living standards.  We therefore use the average real wage as an indicator of economic outcomes in Table 14.  Early in the transition, the real wage was a reasonably comprehensive measure of economic outcome.  But as the market economy develops, households benefit increasingly from new sources of income, including business profits, rents, and returns on financial assets.  We therefore discuss briefly here several other possible indicators of economic outcomes, including the available city-level data on industrial production and employment and overall changes in wages and employment.

95.     *Real economic wage.*  Figure 3 and Table 13 show the 1997 average monthly wages in the Volga capitals in 1990 rubles—what is referred to here as the "real economic wage." Unlike 1990, when wages were virtually identical across regions (Table 8), they now vary significantly.  Tver' had the highest real economic wage, followed by Kazan', Samara, and Volgograd.  Ul'yanovsk had the lowest wages, only 60 percent of those in Tver'.  However, not only do wages vary among cities, but their disparity *within* cities has increased as well.[49]

96.     *Industrial production and employment.*  A decline in the absolute level of industrial production is associated with the shock of transition (see Easterly et al., 1994), and the index of industrial production declined continuously through 1996.  In 1997, the physical index of industrial production continued to decline in Volgograd, bottomed out in Astrakhan, Kazan, and Cheboksary, and reversed its trend in the other Volga cities. As shown in Figure 4, the smallest cumulative declines by 1997 were in Ul'yanovsk, Nizhniy Novgorod, and Kazan'. All three cities worked hard to protect their industry, and to some extent succeeded during the period under review.  The two largest declines were in Cheboksary and Saratov.  In Cheboksary, 80 percent of industry was in machinery/metalworking or light industry, the sectors noted earlier as being the least competitive.  In Saratov, only 34 percent of industry was concentrated in these two sectors, but the regional governor Dmitriy Ayatskov and his predecessors imposed a hard budget on enterprises without any serious efforts to improve the regulatory framework and market services required for business recovery.  In all Volga capitals, industrial employment also declined, but less radically than did production.  The disparity is explained in large part by substantial disguised unemployment, suggesting that further loss of jobs in declining industries can be expected in the future.

97.     *Changes in wages and employment.*  Table 13 also shows changes in city employment and average real wages for 1990–1997; official city unemployment in 1997; and the stock of regional wage arrears at the end of 1997 as a percent of the monthly wage bill.  All these

---

[49]  Data for Samara, for example, indicate substantial differences arose among the various branches of employment.  that While the decline in the industrial wage was greater than the decline in the average wage, wages in the financial sector rose to five times the average wage and wages in education, science, culture, and health care fell to 60 percent of the average wage.

indicators deteriorated everywhere in Russia, but the pattern of change suggests differences among the cities in labor market flexibility and associated policy interventions. Some cities allowed wages to fall in order to preserve employment, and others tried to maintain wages and let employment absorb market pressures.

**Table 13. Real Economic and Social Wages, Employment and Unemployment, and Regional Wage Arrears in Volga Capital Cities**

(percentage changes over 1990-97 or 1997 levels)

| Capital Cities | Real Economic Wage (1990 Rubles) | Real Social Wage (ratio to subsistence minimum) | Percentage Change in Real Economic Wage | Percentage Change in Employment | Official Unemployment Rate | Regional Wage Arrears a/ |
|---|---|---|---|---|---|---|
| Tver | 247 | 2.6 | -3 | -15 | 1.1 | 25 |
| Yaroslavl | 187 | 2.8 | -31 | -22 | 2.1 | 32 |
| Nizhni Novgorod | 190 | 2.7 | -30 | -11 b/ | N/A | 22 |
| Cheboksary | 185 | 2.1 | -30 | -17 | 5.3 | 37 |
| Kazan | 242 | 3.1 | -9 | -18 | 1.7 | 50 |
| Ulyanovsk | 158 | 2.7 | -41 | -15 | 1.5 | 39 |
| Samara | 227 | 2.9 | -14 | -7 | 3.6 | 12 |
| Saratov | 190 | 1.9 | -31 | -17 b/ | N/A | 36 |
| Volgograd | 205 | 2.6 | -24 | -17 b/ | 1.4 | 35 |
| Astrakhan | 165 | 2.1 | -44 | -6 | 2.3 | 12 |

*Sources*: Compiled by authors from data in Statisticheskiy, 1992, p. 329; Le Houerou, 1995, pp. 133-134; Goskomstat Rossii, 1998a, Vol. 1, pp. 145-147, 159-161, 194-196, 180-182, 243-245, 250-252, 257-259, 271-273, 278-280, 285-287 and Vol. 2, pp. 110, 755; 1998b, p. 173; 1999c, p. 260; MFK Renaissance, 1998b, p. 49; *PlanEcon Report*, April 28, 1994, p. 17; July 18, 1997, p. 18; and October 22, 1999, p. 8; city case studies; city statistical bulletins; and unpublished World Bank estimates.

a/ Wage arrears as percent of the monthly wage bill. The stock of wage arrears is as at the end of 1997, wage data is for November, 1997.
b/ Changes in city employment in capital city are assumed to equal regional ones.

98.     A stylized view of labor market dynamics in Russia during the period 1990-96 (for which we have data for all 10 cities) is presented in Figure 5. It shows three types of change, represented by shifts in the relevant curves—a decline in demand for labor (shift of $L_D^{90}$ to $L_D^{96}$) a smaller decline in the supply of labor resulting mainly from the departure of women and a response to the decline in demand (shift of vertical $L_S^{90}$ to $L_S^{96}$); and a policy-driven countershift in the demand for labor, as city governments use a variety of means to avoid unemployment (shift from $L_D^{96}$ $L_{D'}^{96}$). Assuming that the shifts represent average movements, the equilibrium point would move from $A_0$ to $A_1$, which indicates some decline in both wages and employment. Each Volga city is then positioned in Figure 5 according to the data presented in Table 13.

## Figure 5. Labor Market in Volga Cities, 1990 and 1996
(indexes equal 100 in 1990)
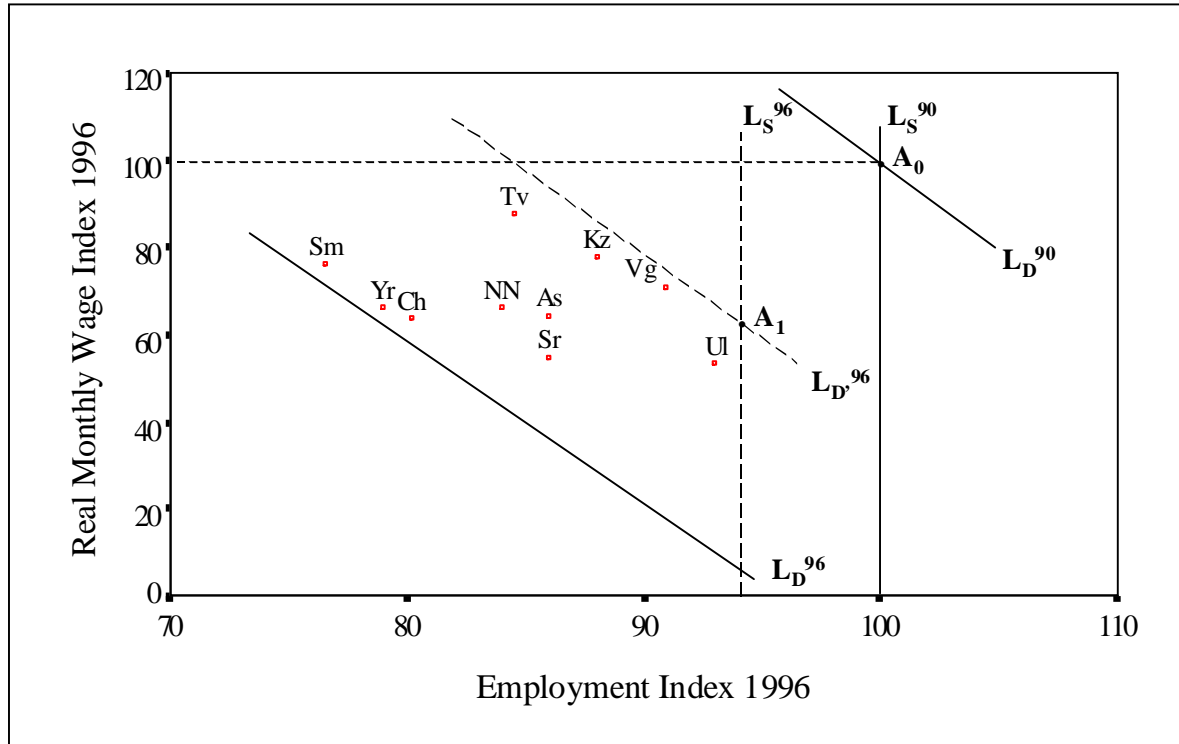


Point $A_0$ represents initial situation in each city (real monthly wage index and employment index = 100 in 1990). Stylized changes: $L_S^{96}$ = decline in labor supply (women and others leaving the labor force); $L_D^{96}$ = decline in labor demand; $L_{D'}^{96}$ = city governments and enterprises try to maintain higher employment artificially. The shifts in $L_S^{96}$, $L_D^{96}$, and $L_{D'}^{96}$ would normally differ among the cities. The location of the cities on the diagram assumes that these shifts are similar. The rate of unemployment is notionally the difference between the $L_S^{96}$ curve and the location of the city on its left, as measured by the horizontal axis.

99.     The two extreme cases are Samara (Sr) and Ul'yanovsk (Ul).  Samara had a relatively moderate decline in wages, but the highest recorded decline in employment.  Relatively low wage arrears support the premise that employment here absorbed the burden of labor-market adjustment.  Ul'yanovsk, on the other hand, strongly protected the level of employment but had to allow real wages to drop quite sharply.  Ul'yanovsk then cushioned those lower wages by price controls, leading to a lower cost of minimum subsistence.  Unemployment was kept low, but a relatively high level of wage arrears suggests the artificial nature of some of the employment.  Among the other cities, Tver' (Tv) stands out as having the lowest decline in real wages, only a modest decline in employment, low official unemployment, and low wage arrears.  Kazan' (Kz) is not far behind Tver', but the high level of wage arrears in Tatarstan suggests that employment in the city was maintained artificially.  The other city managing to retain a high level of employment was Volgograd (Vg), combining a moderate decline in wages, significant wage arrears, and pressure on enterprises to maintain jobs.  Like Samara,

Cheboksary (Ch) and Yaroslavl' (Yr) experienced large losses in employment, but with a smaller decline in wages. In both cases, official unemployment was relatively high and wage arrears significant.

100.     **Social outcomes.** We now direct our attention to the real social wage and income distribution. Additional indicators of social outcomes exist (e.g., de Melo and Ofer, 1999, Appendix Table 14), but information on them is sporadic. The social outcomes in Volga capitals are ranked in Table 14

**Table 14. Comparison of Initial Conditions and Policy Reform Ratings with Socio-economic Outcome in Regional Capitals a/**

| Capital Cities | Initial Conditions | Policy Reform | Socioeconomic Outcome, 1997 | |
| --- | --- | --- | --- | --- |
| | | | Real Economic Wage | Real Social Wage |
| Tver | 3 | 3 | 3 | 2 |
| Yaroslavl | 3 | 3 | 2 | 2 |
| Nizhni Novgorod | 2 | 3 | 2 | 2 |
| Cheboksary | 1 | 1 | 2 | 1 |
| Kazan | 3 | 2 | 3 | 3 |
| Ulyanovsk | 1 | 1 | 1 | 2 |
| Samara | 3 | 3 | 3 | 3 |
| Saratov | 3 | 2 | 2 | 1 |
| Volgograd | 3 | 3 | 2 | 2 |
| Astrakhan | 3 | 1 | 1 | 1 |

*Source:* Tables 8, 11 and 12.

a/ 3=above average; 2=average; 1=below average

101.     *Real social wage*. The average monthly wage divided by the cost of minimum subsistence is the best available measure of the living standard of the poor, and is referred to here as the "real social wage." As is apparent in Table 13 and Figure 3, the ranking of cities by this measure differs from the ranking according to the real economic wage. In particular, Ul'yanovsk, which has the lowest real economic wage, has slightly above average real social wages. And Tver', with the highest real economic wage, has only a moderately high real social wage. Saratov has by far the lowest real social wage, combining a situation of low economic wages with substantial price liberalization. In fact, Saratov suffers wide income disparities, with a large percentage of the population receiving less than the subsistence minimum. Conversely, Yaroslavl', Nizhniy Novgorod, and especially Ul'yanovsk have dramatically improved the purchasing power of low-income groups by keeping subsistence costs down.

102.    *Income distribution*.  Increasing inequality in the distribution of income is a well-recognized consequence of transition.  It has been observed in Central and Eastern Europe as well as the Newly Independent States of the former Soviet Union.  In the Russian Federation, inequality was already at OECD levels in the late 1980s and had increased to the (higher) level of middle-income countries by 1993.[50]  Typically, higher levels of inequality reflect increases in unemployment and in wage dispersion; growing regional disparities; and higher income from rent and profits, which are less equally distributed than are wages.  The Volga data provide evidence of increasing inequality both within and among the cities (see Appendix Table 14 of de Melo and Ofer, 1999).  Per capita sales of consumer goods have declined strongly in all cities covered here except Kazan', while telephones and cars per 1,000 residents have increased substantially.  This suggests that although the purchasing power of the average citizen is declining, the purchasing power of wealthier households is increasing.  The most extreme example appears to be Tver', where consumer goods sales fell by 39 percent, while the rate of car ownership more than doubled.

## D.  Interactions among Initial Conditions, Policies, and Outcomes and What Matters

103.    As discussed above, there are no comprehensive indicators of growth at the city level, and employment data may be interpreted in more than one way.  Data on most social indicators at the level of individual cities are partial at best.  Therefore we use the real economic wage and the real social wage as indicators of socioeconomic outcomes in the cities, despite their limitations.[51]  They are shown in Table 14 along with the summary indicators for initial conditions and policy reform.  The following observations on the interaction between initial conditions, policy reform, and social and economic outcomes are based on two and three-way cross-tabulations of the Volga capitals' ranks on these indicators.[52]  We characterize these observations as hypotheses rather than conclusions.

104.    **Initial conditions and policy reform.**  Rankings on initial conditions and policy reform are the same for most Volga capitals.  As exceptions, Nizhniy Novgorod ranks higher on policy reform than on initial conditions, and Kazan and Saratov rank lower on policy reform than on initial conditions; but the only real outlier is Astrakhan', which has the highest rank on initial conditions but the lowest rank on policy reform. Initial conditions were particularly poor in Cheboksary and Ul'yanovsk and policy reform has been slow in both cities, suggesting that relatively poor prospects caused local leaders to be more cautious toward reform. In Samara, Yaroslavl', Volgograd and Tver', initial conditions were favorable and policy reform has been relatively strong.  The apparent positive relationship between initial conditions and reform suggests that initial conditions are important for both the speed

---

[50] See Figure 4.1 of World Bank (1996).

[51] A rank of above average is given to wages 10 percent or more above the average, and a rank of below average is given to wages 10 percent or more below the average.

[52] The small size of our sample precludes the use of more rigorous statistical analysis.

and success of economic reforms at the municipal level, just as they are at the macro level.[53] To summarize the evidence from the two-way cross-tabulations, both cities with below-average rank on initial conditions have below average rank on policy reform, but above-average rank on initial conditions does not guarantee above-average rank on policy reform. Thus, whereas less endowed cities may see fast reform as an experiment they can ill afford, their better-off peers do not necessarily choose the fast lane themselves.

105.     **Initial conditions and social and economic outcomes.**  None of the cities with below-average ranks on initial conditions has above-average rank on either social or economic outcome. Above-average rank on initial conditions however does not guarantee above-average rank on social or economic outcomes. Thus, whereas a less favorable starting position seems to preclude the achievement of above-average social or economic outcomes, early favorites at the start of transition end-up with mixed social and economic outcomes.

106.     **Policy reform and social and economic outcomes.**  None of the cities with above-average ranks on policy reform has below-average rank on social or economic outcomes. None of the cities with below-average policy reform ranks has above-average ranks on social or economic outcomes. Thus, the implementation of faster and deeper reforms prevents the worst-case scenario in social and economic outcomes, whereas the more conservative approach to reforms robs the cities of the opportunity to achieve above-average social and economic outcomes.  From a political perspective, it is of some interest that none of the Red Belt cities has an above-average rank on either social or economic outcome, despite the fact that  Volgograd has an above-average rank on policy reform and Saratov has an average rank on policy reform.

107.     **Initial conditions, policies, and outcomes.** The three-way cross-tabulation of Volga cities' ranks suggests that fast and deep reforms preclude the worst case scenario, but this observation begs the fact that the leadership in initially less-endowed cities feels it can not afford this course of action.  It also suggests three different cases of interaction among initial conditions, policies and outcomes.

108.     Saratov epitomizes the first case, where socioeconomic outcomes are worse than one might expect given initial conditions and policy reforms.  Saratov's poor performance appears to result from weak leadership and poor governance prior to Ayatskov, and from a policy favoring agriculture over industry.  But Yaroslavl' and possibly Volgograd also fall into this category, and other factors may explain the disparity between reforms and outcomes. One explanation is a possible time lag between the initiation of reform and rising real economic wages.  Another explanation is that in reformist regions, with a more developed private sector, wages are likely to contribute less to total household incomes than in the conservative regions.  Thus outcomes measured by wages alone may be understated.

---

[53] See de Melo et al.(1997) for evidence at the macro level.

109.    Ul'yanovsk epitomizes the second case, where social, if not economic, outcomes are better than one might expect, given initial conditions and reform.  Kazan' also belongs to this group.   This case suggests that delaying reforms may help to arrest production declines, or that some "reforms" may be better than others.  Ul'yanovsk's efforts to protect consumers by delaying price liberalization for basic foods and municipal services appear to have been successful through 1996.  Despite having the lowest economic wage, Ul'yanovsk's social wage was one of the highest at this point.  Judging from the limited time horizon of this study, it would appear that higher living standards for low-income groups can in fact be achieved by price controls, particularly when those controls are increasingly limited to subsistence items and efforts are made to target or otherwise prevent overconsumption.  Kazan's success relative to its initial conditions and reform record is more easily understood.  It has extracted large concessions from the center in terms of high tax retention and fiscal transfers.  It has a more favorable endowment in natural resources and has attracted foreign investment.   It has maintained relatively stable real wages and employment and has good relations with the center.

110.    The third case includes the other five cities that have performed more or less as expected.  Samara and Tver' score relatively well on socioeconomic outcomes as well as on initial conditions and reforms.  Cheboksary and Astrakhan', on the other hand, score poorly on most indicators, and Nizhniy Novgorod occupies an intermediate position.  These examples appear to highlight the fact Red Belt cities typically have lagged in reforms and have experienced less successful economic outcomes.

111.    **What matters.**  Aside from these general relationships, the comparison of the experience of the Volga cities highlights the following points.

112.    *Resources.*  Kazan' benefits from the fact that, among the 10 Volga regions, only Tatarstan is a significant oil producer at the national level (e.g. see Sagers 1996, p. 567), accounting for some 7 to 8 percent of national output. Moreover, Kazan' clearly has benefited enormously from Tatarstan's unique arrangements with the federal government. Tatarstan has a bilateral agreement with the Federal government that includes special "single-channel" tax arrangements; during 1994–1996 it paid to the center an average of only 20 percent of regionally collected taxes, whereas the Russia-wide average was 40 percent.   The republic also was the largest recipient of federal transfers during the first nine months of 1997 and benefited particularly from political transfers associated with property deals, special agreements, and targeted programs.   Other regions received smaller transfers, primarily from the Fund for Financial Support of the Regions, an equalization fund that accounts for about half of all federal transfers.  In 1996, Saratov was one of the 10 largest recipients of FFSR transfers (MFK Renaissance, 1998a), which may partially account for its improved economic performance in 1997.

113.    Other cities and regions may have been less successful in attracting transfers from the center, but actions reflect an awareness of how much financial resources matter.  In November 1996, Volgograd mayor Yuriy Chekhov sued the federal government for 200 billion rubles ($37 million) owed to the city for wages, pensions, and social programs.

Samara is currently working on an agreement to exchange federal debt to the region for regional shares in the federally owned airport. Most cities are making major efforts to attract foreign investment and payments from federal and regional authorities to help restructure the largest enterprises. The ability of Boris Nemtsov to arrange for federal assistance for the GAZ car factory has made a significant difference in the local economy of Nizhniy Novgorod.

114. *Strong government.* This hypothesis is not as obvious as it sounds. At the beginning of transition, some observers[54] believed that the market economy and hence growth would flourish best where government was weak or absent, or at least did not intervene, since the control instinct of any post-communist government would stifle competition. The model of decentralized decision making by economic agents in this scenario did not require cooperation, much less bartering and bargaining services, to produce an orderly flow of products and factors of production.

115. The reality appears to be different, as strong leadership at the local level seems to have paid off. Weak leadership has not. This may partly reflect the fact that regional policies are typically more conservative and prevail where local leadership is weak. It may also be that without strong unified leadership at the local level, the regions win out over local authorities in the competition for resources. Uncertain alliances characterized politics at the local level in Saratov and Ul'yanovsk prior to 1996, and city councils in Yaroslavl', Tver', and Nizhniy Novgorod consist of small interest groups who make governance difficult. Most of these cities have performed less well than expected. The most obvious example of weak government is Saratov. The governors prior to Ayatskov, elected at the end of 1996, were poor leaders, as were the mayors. The city's fiscal position is poor, with a low share of cash revenues at the city level, low cost recovery on housing and utilities, and high fiscal deficits.

116. *Time lags.* Yaroslavl', a city with favorable initial conditions and the highest ranking on reform, had only a moderate-ranking real economic wage after six years of transition. At the same time, the slowest reformers—namely Ul'yanovsk, Cheboksary, and Astrakhan'— did better than their reform record would indicate if reform were positively associated with favorable socioeconomic outcomes. Ul'yanovsk is a region where the oblast government attempted to maintain enterprise production and employment despite low profitability. As a result, it had one of the lowest declines in industrial production in Russia through 1993, although quite significant declines occurred in 1994–1996.

117. One explanation for these anomalies is the time lag between outcomes and reform shown at the macroeconomic level in de Melo et al. (1996, 1997) . If it is true, for example,

---

[54] These included Yegor Gaidar, Jeffrey Sachs, and Anders Åslund, among others. Åslund (1992, p. 22), for example, noted: "The suggestion that follows from this argument [of deficiencies of the state] is that the former Communist countries need to shift to extremely liberal economies in a radical deregulation."

that the successful adaptation of defense industries is rare, the hard budget constraint on Saratov's defense industries may have resulted in large early declines in production, releasing the resources needed to promote a strong subsequent recovery. Reforms would not show up in better economic outcomes until sometime in the future. This same logic would imply that production declines in Ul'yanovsk will continue in the future even if industry elsewhere picks up. It is too soon to comment definitively on such scenarios.

118. *Red Belt, with some exceptions*: Red Belt cities all ranked low on the socioeconomic outcomes indicator, whereas non–Red Belt cities ranked high. This occurred despite the fact that one Red Belt city, Astrakhan', appeared initially to have quite favorable prospects, whereas one non-Red Belt city, Nizhniy Novgorod, did not. These outcomes likely result in part from slower reform in the Red Belt on average. Three of the Red Belt cities-- Ul'yanovsk, Cheboksary, and Astrakhan'--have clearly lagged on reforms. But there is diversity within the Red Belt group. Volgograd Oblast under Governor Ivan Shabunin and more recently, Saratov Oblast under Dmitriy Ayatskov, have broken out of the traditionalist mold, with more progressive reform profiles similar to those of Nizhniy Novgorod and Kazan'. But the "stick" of a hard budget constraint in Saratov has not been balanced by the "carrot" of institution building. In the recent business survey in six Volga cities conducted by the authors, Saratov received the lowest ranking on business environment and municipal services.

119. Furthermore, some non–Red Belt cities, such as Kazan', may have moved more slowly on reforms than expected. Kazan's high income and access to resources allowed it to pursue a wide variety of objectives, including a more socially oriented "development with a human face." Somewhat surprising is the absence of Nizhniy Novgorod from the very top rank on policy reform, as political leaders there projected a strong reformist image during the early days of transition.

120. *Spillover effects.* It may be that Moscow's proximity to Tver' provides a spillover effect for firms in the latter city. These spillover effects might not only permit economies of scale; they might also provide an impetus for innovation and the spread of knowledge. Spillover effects also appear to emanate from four adjoining regions in the middle Volga-- Tatarstan, Samara, Saratov, and Volgograd. They are supporting pro-reform politicians and attracting foreign investment. Saratov is an unlikely setting for a reform candidate, as it has traditionally been a closed city and formed part of the Red Belt. But in November 1997, Governor Ayatskov pushed through a path-breaking bill that explicitly allows the purchase and sale of land within the region by any Russian citizen (MFK Renaissance, 1998c). It is tempting to speculate that Saratov has been influenced by the proximity of reformist Samara.

121. Part of Samara Oblast's success may reflect the high urbanization rate and the unusual conglomeration of two large, neighboring cities—Samara and Togliatti. But "growth poles" can exert negative (centrifugal) as well as positive spillover effects, especially over the short run. For example, Samara appears to have lost out to Togliatti in the competition for regional leadership, with the result that local and foreign resources have been focused more on the latter city and Samara has performed less well than might be expected. Togliatti, a city of

720,000 people, has a youthful population and experienced a 6 percent plus increase in industrial production in 1996. At that time, the average monthly wage in Togliatti was 50 percent higher than for Samara Oblast as a whole.[55]

122.    *City size.*  With the exception of Tver', economic outcomes appear to be more favorable in the larger cities than in the smaller ones.  Like Tver', Yaroslavl' has been an active reformer, but results are disappointing.  The other three smaller cities— Ul'yanovsk, Cheboksary, and Astrakhan'—have the lowest real economic wage.  If small size is a disadvantage, it could be another reason why these cities have been more cautious on reforms.  One explanation for less success would be that, compared to larger cities, smaller cities do not have as much political influence, and hence claim on resources, at either the regional or federal level.  Another explanation would be the lower industrial diversity typical of small cities.

123.    *Closed cities.*  Of the four formerly closed cities (Nizhniy Novgorod, Samara, Saratov, and Volgograd), only Samara has a reputation for having an active free press and freely available information.

124.    So the factors listed above appear to have exerted an influence.  Conversely,  some factors appear not to have mattered much.

125.    *Natural resources.*  The energy sector did attract some foreign investment in Kazan' and Samara, and to a lesser extent in Saratov and Volgograd.   But, with the possible exception of Kazan, it did not appear to be a determining factor in overall foreign investment, much less general economic performance.  This reflects in part the difficulties encountered in Astrakhan' and the relative decline in the importance of the Volga resources compared to those developed elsewhere (i.e. West Siberia).  Also, with the exception of Tver', the cities in strong agricultural regions appear to have suffered, possibly from agriculture's ineffective competition for scarce resources.

126.    *Defense industry.*  We initially took a neutral position regarding the influence of the defense industry on outcomes.   Further analysis does not shed much light on this question. Leaving aside Kazan', because of its better overall access to federal transfer funds, the experiences of Nizhniy Novgorod, Samara, and Saratov suggest that these cities have not necessarily benefited from a previously high level of defense-industry output.  On the other hand, they may not have suffered either, since the large size of these cities resulted in a relatively high level of industrial diversity despite the concentration of defense-industry enterprises.[56]

---

[55] This is based on statistics from the "Togliatti in Business" city web page [www.tlt.ru] for November 20, 1998.

[56] Glaeser et al. (1992) have provided evidence for the importance of industrial diversity based on the study of U.S. cities.   Industrial diversity promotes growth, as knowledge spills

127.   **Developments in 1997 and 1998.**   The time between the end of 1996 and mid-1998 represented a period of "virtual stability" and hopes for resumed growth in Russia.  These hopes were dashed at least temporarily by the August 1998 financial crisis, but warning signs were on the horizon even earlier.  Foreign direct investment had been increasing, but flows of financial capital dominated, as high interest rates discouraged real investment.  Barter transactions and the use of other money surrogates increased and arrears proliferated.

128.   *Production*.  Nonetheless, several cities (Saratov, Cheboksary, and some industries in Yaroslavl') experienced for the first time since 1990 a small increase in industrial production in 1997.  These increases were accompanied by declines in unemployment, explained in part by a continued decline in the size of the labor force.[57]   However, by late 1998, even though firms were asked to respond on the basis for their financial situation *before* the August crisis, the authors' survey of small textile enterprises in six Volga cities  showed more firms losing money than making profits.  Declines relative to 1997 levels also were reported by these firms in labor productivity and employment.

129.   *Foreign investment*.  In 1997, foreign direct investment to Russia increased relative to 1996, but among the Volga regions rose only in Samara Oblast (from $9 to $18 per capita), which ranked fourth among all Russian regions in FDI.  An evaluation of investment risk in Russia's (89) regions in 1998 ranked Samara fifth, Nizhniy Novgorod sixth, Tatarstan eleventh, and Saratov twenty-first (e.g., see Carana Company, 1998).

130.   *Prices*.  Goskomstat Rossii data for 1997 show that the disparity in the cost of 25 basic food items narrowed among the 10 Volga capitals, with the lowest average costs continuing to be found in Ul'yanovsk, Cheboksary, and Kazan'.  The disparity in the cost of minimum subsistence narrowed as well.  Saratov was the only city where neither of these costs increased in current rubles, so its relative position on both the real economic wage and the real social wage has improved.   Price controls still exist for certain commodities.[58]

---

over industry groups and stimulates new ideas and innovations.  In other words, competition and inter-industry, rather than intra-industry, knowledge spillovers were determined to be important for growth.

[57] Interestingly, 1997 data on registered unemployment show that the only two regions experiencing an increase in registered unemployment were Samara Oblast and Tatarstan, otherwise the most successful regions economically (see Appendix Table 12 in de Melo and Ofer, 1999).

[58] For example, in the aforementioned survey in six Volga capitals in late 1998, 40 percent of the clothing and textile firms reported that their output was still subject to price controls, with firms in Astrakhan' and Samara recording the most complaints.  Most controls were product specific, but some firms reported controls on retail margins.

131.  *Incomes and wages*.  Disparity in real incomes clearly increased among the Volga regions, and presumably the capitals, in 1997.[59]  Conversely, the disparity in real economic wages appears to have moderated somewhat, as the largest increases in 1997 were in three of the five capital cities (Chuvashia, Astrakhan', and Saratov) with the lowest real economic wage in 1996.

132.  *Fiscal conditions*.  The years 1997 and 1998 were the first two in which elected mayors and city councils were everywhere in place and fiscal relationships with the federal level were put in better formal order.  In particular, the tax shares and transfers accruing to cities became more predictable.  All cities in this study for which 1996–1998 budgetary information is available managed to increase the "own-taxes" share and thus to offset declines in shared taxes and transfers from upper-level governments.  Of the three cities for which complete 1998 budgets are available (Nizhniy Novgorod, Saratov, and Yaroslavl'), the situation in Saratov appeared the worse by 1998, with budget expenditures dropping to 63 percent of the 1996 level.[60]

133.  *Reforms*.   The rate of reform at the city level appears to have decelerated, with the exception of some continued movement away from price controls and toward more "own-share" tax revenue collection.  Privatization of small enterprises had more or less run its course, and the number of newly established private enterprises, and small enterprises more generally, declined in some cities.  Housing reform (including privatization and reduced rent and utilities subsidization) appears to have slowed down, in particular.[61]  Only one region among the 10 covered here (Samara Oblast) achieved housing cost-sharing of more than 50 percent by 1998, with three more (Tver', Chuvashia, and Volgograd) managing 35 percent or higher.

## VI.  CONCLUSIONS

134.  A number of more general observations on Russian transition emerge from this paper.  As demonstrated above,  all Volga capitals had many characteristics in common at the beginning of transition and also shared in many respects similar challenges and experiences stemming from the abolition of central planning and fairly rapid economic and political decentralization. City governments, for example, not only now administer a much larger share of the consolidated general government budget of the Russian Federation than in the

---

[59] For example, in Samara Oblast real per capita income grew by 73 percent, compared to only 19 percent in Chuvashia, over an 18-month period (see Appendix Table 2 in de Melo and Ofer, 1999).

[60] Only 43 percent of revenues were in cash by this time.

[61]  In the 1998 city budgets of Yaroslavl', Nizhniy Novgorod, and Saratov, expenditures on housing and utilities ranged from one-third to 40 percent of total expenditures, up from previous levels.

early 1990s, but fiscal decentralization has by its nature given city officials new responsibilities and more powers.

135.    This decentralization, which has occurred in Russia at both the federal and sub-national levels, reflects a mix of political and economic factors.  In focusing on the devolution of budgetary powers to the Volga cities by regional governments, we find a strong association between the level of decentralization and the decline in regional industrial production, which was located primarily in the cities.  In part, fiscal decentralization was used to help compensate cities for the rapid erosion of the local economy.  Political factors also played a role, however, and less extensive decentralization was associated with the two republics of Tatarstan and Chuvashia and the oblasts of the Red Belt.  In both cases, regional leadership was more comfortable with more centralized fiscal arrangements.  This more centralized model, characterized by higher transfers substituting for less extensive revenue decentralization, is associated with weak policy reform in the capital cities, presumably due to less freedom in policy formulation and lower incentives to provide better services in anticipation of higher tax receipts.

136.    With one exception, we found that the level of real per capita expenditures on subsidies and public goods in city budgets was positively associated with regional real income level.  Social protection represented the exception, as it exhibited a small negative relationship with income level.  But social protection is higher in cities with above average ranks on market reforms, suggesting that officials there are conscious of providing a better safety net for those adversely affected.  Education expenditure tended to be higher in the two republics and lower in Red Belt cities and remained more or less constant over time, unlike health and national economy expenditures that recorded a negative trend over time.

137.    The dominance of housing in the budgets of all cities is striking.  Housing  not only represents the single largest subsidy; it is also the single largest budgetary expenditure.  There are many obstacles to increasing cost recovery in housing provision, including a low starting point and the low real incomes of much of the population. Further privatization and development of an urban land market will be necessary for housing to be moved from the expenditure to the revenue side of the budget.

138.    All Volga capitals had large firms employing thousands of people, mostly managed by the federal government. Some firms were privatized, and some remained under state (non-municipal) ownership.  But privatization did not bring success or even necessarily good management.  Moreover, regardless of ownership, all large enterprises were affected, mostly for the worse, by increasing competition accompanying market reforms at the national level. Many were assisted by regional and local officials attempting to protect output and employment levels. Evidence on individual enterprises suggests that interventions of local politicians were important and often determined the fate of the enterprise.

139.    Even cities such as Samara—that seem to have had good leadership, an excellent geographical position, and a highly skilled workforce—are struggling to make the transition. The main obstacles faced by private enterprises appear to be factors that could be influenced,

if not totally controlled, by city governments.  These obstacles include continued price controls, heavy taxation, poor municipal services (especially public and property safety, settlement of legal disputes, and street maintenance and lighting), and corruption/inefficiency.  Those interviewed at many firms indicated that even if local governments had insufficient resources to provide meaningful direct support, they could still encourage small and medium-sized enterprises by creating a stable and fair legal and regulatory environment, by providing adequate municipal services, and by not otherwise interfering.[62]

140.    One initially surprising finding is the infrequency of payments for protection or private law enforcement and low reported reliance on private Mafia-type groups, using threats or violence, as intermediaries in dealing with government officials and regulators. This finding is, however, consistent with the findings of Hendley et al (1998), based on a much larger survey, that firms typically rely on enterprise-to-enterprise negotiations and public courts to settle disputes.  They found little evidence to suggest that enterprises resort to organized criminal groups for contract enforcement; only 3 percent of the surveyed firms reported that they used such groups to prevent or resolve problems with suppliers or to investigate their customers' ability to pay.

141.     Despite the occasional harsh criticisms of local government, representatives of the firms in our survey gave city officials a net positive evaluation regarding their attitude toward private business, which was perceived to be better than the attitudes of the regional government or the general public.  This undoubtedly reflects the fact that city officials see their own self-interest in the success of the local economy.  The pros and cons of protecting industry may have been debated at the federal level, but at the local level city governments do not hesitate to fight for the survival of their local industries on all fronts.[63]  Not only will city leaders' efforts largely determine the revenue base for city budgets, but also the large share of workers participating in the private sector, together with their dependents, may well constitute the majority for future elections.

142.    Notwithstanding the many similarities at the onset of transition, and the radical changes that have occurred in the institutions and economies in all 10 Volga capitals, differing local responses to common problems have resulted in increasing disparities in prices, wages, and levels of industrial production.  The cities have become increasingly differentiated both among themselves and in comparison with their surrounding regions.  To some extent this diversity reflects the diversity in the central government's relations with regions; it arises from its lack of resolve and ability to treat them equitably, and to some extent it is the outcome of differing policies  adopted at the regional and local levels.  As has

---

[62] Frye and Shleifer (1997) have presented additional evidence that local government relations with new private businesses make an important difference to their success.

[63] A notable exception in recent years, as noted above,  is Saratov Oblast, where Governor Ayatskov has supported a hard budget constraint for industry.

been shown, for example, most northern cities adopted policies more consistent with the central government's support of free market reforms, whereas most southern, Red Belt, cities pursued more cautious and protective policies.

143.     Most Volga capitals had rather similar prospects for adjustment to the transition, however cities with  less favorable prospects appear to have been particularly cautious on reform, raising the possibility that local leaders believed they could ill afford experimentation.  Furthermore, cities lagging in economic reforms experienced only poor or modest socioeconomic outcomes and none of the fast reformers had poor outcomes, suggesting that faster reform precludes the worst case scenario on socioeconomic outcomes. For the slower reformers, efforts to protect consumers through targeting and price controls on subsistence items seem to have had some success in protecting real social wages.

144.     These differences in approach reflect basic questions and continued uncertainties. Were the right social and industrial policies pursued during the early years of the reform? The apparent time lag between policies and outcomes over the short term makes it difficult to judge, but one cannot avoid doubting the conventional wisdom that a more "humanistic" and interventionist economic approach was misguided.   Is it possible that the partial shield provided by many local governments against radical changes helped Russia weather an extremely difficult period?

145.     The answer to this question is of more than passing interest.  With the credibility of the federal government in Russia at an all-time low,  foreign investors and others involved in the Russian economy will have no choice but to rely on the competence and reliability of local leaders, especially mayors and governors.  They will be seeking evidence of accountability in the form of the rule of law and evidence of transparency in the form of reliable public information.   Yet information at the city level in Russia is neither easily accessible nor always available.  In developed countries, publicly available statistics used to assess the business environment at the local level include information on municipal employment; planned and actual city budgets and any extrabudgetary funds; municipal services such as public transport, police and fire protection, and garbage collection; social statistics on education, health, and crime; data on air and water pollution levels; information on the organization and composition of city courts; business statistics on firm ownership, activities, and number of employees; tourism data; and information on public construction projects (such as roads and housing).  The availability of good information of this type will encourage local and other researchers to monitor conditions, make it possible to document progress and/or ensure accountability of local officials, help diagnose significant problems, and identify important issues for public policy debate and political decisions.  In this study we have attempted to demonstrate what is possible when some information of this type is available.

## REFERENCES

**Andriyenko, Yuriy,** "Case Study of Kazan." Moscow:  The New Economic School, mimeo, 1997.

**Åslund, Anders,** *Post-Communist Economic Revolutions: How Big a Bang?* Washington, DC: Center for Strategic and International Studies, 1992.

**Bahl, Roy,** "Local Government Expenditures and Revenues," in J. Richard Aronson and Eli Schwartz, eds., *Management Policies in Local Government Finance*, fourth ed. Washington, DC: International City Management Association, 1996, 77-98.

**Baranchuk, Nina,** "Liberalization Processes in Volga Cities." Moscow: The New Economic School, mimeo, 1998.

**Bater, James H.,** *The Soviet City: Ideal and Reality.* Beverly Hills, CA: Sage Publications, 1980.

**Bradshaw, Michael J. and Philip Hanson,** "Understanding Regional Patterns of Economic Change in Russia: An Introduction," *Communist Economies and Economic Transformation*, **10**, 3:285-304, 1998.

**Berkowitz, Daniel and David N. DeJong,** "Economic Consequences of Russia's Internal Border." Pittsburgh: University of Pittsburgh, Department of Economics, mimeo, November 1998.

**Carana Company,** "Diagnostic Report on Investment Environment and Promotion Efforts in Samara Region." Moscow: Carana Company, mimeo, October 1998.

**Clem, Ralph S. and Peter R. Craumer,** "Roadmap to Victory: Boris Yel'tsin and the Russian Presidential Elections of 1996," *Post-Soviet Geography*, **37**, 6:335-354, June 1996.

**de Melo, Martha, Cevdet Denizer, and Alan Gelb,** "Patterns of Transition from Plan to Market," *The World Bank Economic Review*, **10**, 3:397-424, September 1996.

**de Melo, Martha, Cevdet Denizer, and Alan Gelb, and Stoyan Tenev,** *Circumstance and Choice: The Role of Initial Conditions and Policies in Transition Economies.* Washington, DC: The World Bank, Development Research Group, Policy Research Working Paper No. 1866, 1997.

**de Melo, Martha and Gur Ofer,** *The Russian City in Transition.* Washington, DC: The World Bank, Development Research Group, Policy Research Working Paper No. 2165, 1999.

**Easterly, William, Martha de Melo, and Gur Ofer, 1994,** *Services as a Major Source of Growth in Russia and Other Former Soviet States.* Washington, DC: World Bank, Development Research Group, Policy Research Working Paper No. 1292, April 1994.

**Freinkman, Lev and Irina Starodubrovskaya,** *Restructuring of Enterprise Social Assets in Russia*.  Washington, DC: World Bank, Development Research Group, Policy Research Working Paper No. 1635, 1996.

**Freinkman, Lev, Daniel Treisman, and Stepan Titov**,  "Pre-empting a Potential Debt Crisis: Fiscal Performance in Russia's Regions." Washington, DC:  World Bank, Europe and Central Asia Region, draft report, 1998.

**Freinkman, Lev, and Plamen Yossifov,** *Decentralization in Regional Fiscal Systems in Russia: Trends and Links to Economic Performance*.  Washington, DC: The World Bank, Policy Research Working Paper No. 2100 April 1999.

**Frye, Timothy and Andrei Schleifer,** "The Invisible Hand and the Grabbing Hand," *American Economic Review*, **87**, 2:354-358, May 1997.

**Gaddy, Clifford G.,** *The Price of the Past: Russia's Struggle with the Legacy of a Militarized Economy*.  Washington, DC: The Brookings Institution, 1996.

**Glaeser, Edward L., Hedi D. Kallal, Jose A Scheinkman, and Andrei Shleifer,** "Growth in Cities," *Journal of Political Economy*, **100**, 6:1127-1152, December 1992.

**Glushchenko, Konstantin,** "Interregional Variability of Inflation Rates."  Novosibirsk: Institute of Economics and Industrial Organization, Siberian Branch, Russian Academy of Sciences, mimeo, December 1998.

**Goskomstat Rossii,** *Socioeconomic Statistics of Capitals of Republics, Krais, and Oblasts of the Russian Federation*. Moscow: Goskomstat Rossii, 1994.

**Goskomstat Rossii**, *Cities of the Russian Federation*.  Moscow: Goskomstat Rossii, 1995.

**Goskomstat Rossii,** *Regiony Rossii* (*Regions of Russia*).  Vols.1 and Vol.2.  Moscow: Goskomstat Rossii, 1997a.

**Goskomstat Rossii,** *The Demographic Yearbook of Russia*.  Moscow: Goskomstat Rossii, 1997b.

**Goskomstat Rossii,** *Regiony Rossii* (*Regions of Russia*),  Vols. 1 and Vol.2.  Moscow: Goskomstat Rossii, 1998a.

**Goskomstat Rossii,** *Rossiyskiy statisticheskiy yezhegodnik.  Statisticheskiy sbornik* (*Russian Statistical Yearbook.  A Statistical Handbook*).  Moscow: Goskomstat Rossii, 1998b.

**Goskomstat Rossii,** *Sotsial'no-ekonomicheskoye polozheniye Rossii* (*The Social and Economic Situation in Russia*).  Moscow: Goskomstat Rossii, No. 1, January 1998c.

**Goskomstat Rossii,** *Chislennost' naseleniya Rossiyskoy Federatsii po gorodam, poselkam gorodskogo tipa i rayonam na 1 yanvarya 1999 g.* (*Population of the Russian Federation by Cities, Settlements of Urban Type, and Rayons on 1 January 1999)*. Moscow: Goskomstat Rossii, 1999a.

**Goskomstat Rossii,** *Russia '99.  Statistical Pocketbook.*  Moscow: Goskomstat Rossii, 1999b.

**Goskomstat Rossii,** *Sotsial'no-ekonomicheskoye polozheniye Rossii.  1998 god* (*The Social and Economic Situation in Russia in 1998*).  Moscow: Goskomstat Rossii, 1999c.

**Halligan, Lian, Richard Layard, Pavel Teplukhin, and Dirk Willer,** "Local Budget in Russia and Restructuring: Evidence from Yaroslavl and Novgorod." St. Petersburg: TACIS, mimeo, 1995.

**Hanson, Philip,** "Samara:  A Preliminary Profile of a Russian Region and its Adaptation to the Market," *Europe-Asia Studies*, **49**, 3:407-429, 1997.

**Hendley, Kathryn, Peter Murrell, and Randi Ryterman,** "Law, Relationships, and Private Enforcement: Transactional Strategies of Russian Enterprises."  Washington, DC: The World Bank, mimeo, August 12, 1998.

**Hooson, David J.  M.,** "The Middle Volga—An Emerging Focal Region in the Soviet Union," *The Geographical Journal*, 182-190, June 1960.

**Hooson, David J. M.,** *A New Soviet Heartland?*  New York: Van Nostrand, 1964.

**Institute for Urban Economics,** "Housing Reform," *Information Bulletin* (Moscow), 1:11, January 1998a.

**Institute for Urban Economics,** "Sub-national Structural Reform Indicators." Moscow: Institute of Urban Economics, mimeo, 1998b.

**Ivanov, Maxim,** "Industrial Structure in Transition: Experience of Change in Volga Cities." Moscow:  The New Economic School, mimeo, 1998.

**Lavrov, Aleksey, ed.,** "Budget System of Subjects of the Russian Federation."  Washington, DC: The World Bank, Europe and Central Asia Region, mimeo, November 1996.

**Le Houerou, Philippe,** *Fiscal Management in the Russian Federation.* Washington, DC: The World Bank, Report No. 14862-RU, 1995.

**Lukuyanova, Elena,** "Case Study of Ulyanovsk."  Moscow:  The New Economic School, mimeo, 1997.

**Malyakin, Il'ya,** "The New Political Situation in Russia's Regions: The View from Saratov." Washington, DC: The Jamestown Foundation, mimeo, 1997.

**MFK Renaissance,** *Passing the Buck — A Guide to Fiscal Federalism in Russia*. Moscow: MFK Renaissance, 1998a.

**MFK Renaissance,** *From the Sublime to the Ridiculous — A Credit Rating Model of Russia's Regions*. Moscow: MFK Renaissance, Fixed Income Research, 1998b.

**MFK Renaissance,** various regional case studies. Moscow: MFK Renaissance, 1998c.

**Mikesell, John L.,** *City Finances, City Futures*. Columbus, OH: Ohio Municipal League Educational and Research Fund, 1993.

**Mitchneck, Beth,** "The Changing Role of the Local Budget in Russian Cities: The Case of Yaroslavl'," in Theodor Friedgut and Jeffrey W. Hahn, eds., *Local Power and Post-Soviet Politics*. Armonk, NY: 1994, 73-95.

**Parfinenko, Nina, and Sveta Shcherbich**, "Case Study of Volgograd." Moscow: The New Economic School, mimeo, 1998.

**Sagers, Matthew J.,** "Review of Soviet Energy Industries in 1990," *Soviet Geography*, **32**, 4:251-290, April 1991.

**Sagers, Matthew J.,** "Russian Crude Oil Production in 1996: Conditions and Prospects," *Post-Soviet Geography and Economics*, **37**, 9:523-587, November 1996.

**Stein, Robert M.,** *Urban Alternatives: Public and Private Markets in the Provision of Local Services*. Pittsburgh: University of Pittsburgh Press, 1990.

**Statisticheskiy komitet Sodruzhestva Nezavisimykh Gosudarstv (Statistical Committee of the Commonwealth of Independent States),** *Strany-Chleny SNG. Statisticheskiy yezhegodnik* (*Member Countries of the Commonwealth of Independent States. A Statistical Yearbook*). Moscow: Finansovyy inzhiniring, 1992, 605 pp.

**TACIS**, *Analysis of Tendencies of Russia's Regions Development in 1992–1995*. Brussels: TACIS Directorate General 1A, European Commission.

**Teague, Elizabeth,** "Russia and Tatarstan Sign Power-Sharing Treaty," *RFE/RL Research Report*, **3**, 14:19-27, April 8, 1994.

**Turuhambetova, Gauhar,** "Case Study of Astrakhan." Moscow: The New Economic School, mimeo, 1997.

**Volchkova, Natalya**, "Case Study of Samara." Moscow:  The New Economic School, mimeo, 1997.

**Yakovleva, Nadya,** "Case Study of Tver'."  Moscow:  The New Economic School, mimeo, 1998.

**World Bank,** *World Development Report 1996.  From Plan to Market*.  Washington, DC and New York:   International Bank for Reconstruction and Development/World Bank and Oxford University Press, 1996.

**Zhuravskaya, Yekaterina V.,** "Incentives to Provide Local Public Goods: Fiscal Federalism, Russian Style." Moscow:  Harvard University and Russian European Center for Economic Policy, mimeo, 1998.

# APPENDIX TABLES

## Appendix Table 1. Fiscal Role of Municipalities in the Russian Federation
(percentage, in each category, of consolidated general government)

| Budget Data / Years | 1992 | 1996 | 1997 |
|---|---|---|---|
| Expenditures | 14 | 23 | 25 |
|    Transfers | 2 | 3 | 2 |
| Expenditures net of transfers | 15 | 26 | 29 |
|    Administration | 14 | 17 | 18 |
|    National economy | 11 | 40 | 44 |
|    Education | 52 | 68 | 67 |
|    Health | 60 | 57 | 54 |
|    Social Protection | 8 | 42 | 28 |
| Revenues | 23 | 29 | 30 |
|    Transfers | 60 | 53 | 56 |
| Revenues net of transfers | 19 | 24 | 24 |
|    Total taxes | 20 | 27 | 28 |
|      Profit tax | 29 | 25 | 24 |
|      VAT | 10 | 10 | 11 |
|      PIT | 77 | 66 | 67 |
|      Excise | 10 | 3 | 5 |
|      Property tax | 48 | 55 | 51 |
|      Natural resources | 36 | 36 | 32 |
|      Other taxes | 6 | 40 | 37 |
|    Non-tax revenues | 7 | 6 | 7 |
| Memorandum items (expenditures as a percent of GDP) | | | |
| Consolidated general government a/ | 52 | 35 | 35 |
|    Federal | 41 | 22 | 20 |
|    Regional | 7 | 9 | 10 |
|    Municipal | 8 | 9 | 10 |

*Source:* Freinkman, Treisman and Titov 1998 and authors' estimates.

a/ The share of consolidated general government expenditures in GDP is not equal to the sum of the individual shares of its tiers, because of the netting out of vertical transfers among them.

**Appendix Table 2. Fiscal Decentralization and Subordination in Cities under Regional Jurisdiction, within Regions, and on Federal Level**

(%)

| Measures of Fiscal Decentralization and Subordination | Average in Volga Regions | | | | Russian Federation a/ | | | |
|---|---|---|---|---|---|---|---|---|
| | 1992 | 1995 | 1996 | 1997 | 1992 b/ | 1995 | 1996 | 1997 |
| **I. In CRJs c/** | | | | | | | | |
| 1. Ratio of per capita total revenues of local governments in CRJs and consolidated regional government | 66 | 71 | 76 | 69 | 70 | N/A | N/A | N/A |
| 2. Ratio of per capita total expenditures of local governments in CRJs and consolidated regional government | 67 | 68 | 67 | 65 | 68 | N/A | N/A | N/A |
| 3. Ratio between net regional transfers to local governments in CRJs and their total expenditures including transfers to regions | 15 | 14 | 16 | 15 | 15 | 17 | 19 | 21 |
| **II. Within regions d/** | | | | | | | | |
| 1. Ratio between local governments total revenues and consolidated regional budget revenues | 68 | 69 | 71 | 66 | 68 | 70 | 73 | 70 |
| 2. Ratio between local governments total expenditures before transfers and consolidated regional budget expenditures | 66 | 66 | 66 | 63 | 65 | 68 | 69 | 66 |
| 3. Ratio between regional transfers to local governments and local governments total expenditures icluding transfers to regions | 30 | 27 | 29 | 26 | 25 | 29 | 31 | 30 |
| **III On federal level d/** | | | | | | | | |
| 1. Ratio between consolidated regional budget revenues and consolidated general government budget revenues | - | - | - | - | 43 | 54 | 55 | 61 |
| 2. Ratio between consolidated regional budget expenditures before transfers and consolidated general government budget expenditures | - | - | - | - | 25 | 48 | 45 | 55 |
| 3. Ratio between net federal transfers to regions and consolidated regional total expenditures including transfers to the federal governement | 3 | 8 | 14 | 13 | 7 | 13 | 17 | 15 |

*Source:* Ministry of Finance of the Russian Federation and authors calculations.

a/ Data for the Russian Federation is a weighted average of regional data, excluding St. Petersburg and Moscow Regions, which have a dual status of "region-municipality".

b/ 1993 data for the two measures of fiscal decentralization in CRJs.

c/ Unless otherwise noted, total revenues and expenditures are calculated on net transfer basis. Total revenues on net transfer basis equal the sum of tax and non-tax revenues plus the net transfers from higher levels of government. To obtain the value of total revenues on net transfer basis from the standard reporting forms filed with the Ministry of Finance, we take the gross budget revenues and subtract (1) expenditures on transfers to higher levels of government, and (2) revenues from transfers from lower levels of government. Total expenditures on net transfer basis equal the sum of itemized expenditures plus the net transfers to lower levels of government. To obtain the value of total expenditures on net transfer basis from the standard reporting forms filed with the Ministry of Finance, we take the gross budget expenditures and subtract (1) revenues from transfers from lower levels of government, and (2) expenditures on transfers to higher levels of government. Net regional transfers to local governments are calculated as the difference between local governments revenues from transfers from the regional administration and local governments expenditures on transfers to the regional administration.

d/ Total revenues and expenditures exclude horizontal transfers within the respective government tier, and consolidated regional and general government budget revenues and expenditures exclude vertical transfers within their jurisdictions. Net federal transfers to regions are calculated as the difference between the regional revenues from transfers from the federal government and the regional expenditures on transfers to the federal government.

**Appendix Table 3. Fiscal Decentralization and Subordination in Cities under Regional Jurisdiction a/, 1992 - 1997**

(%)

| Regions / Measures of Fiscal Decentralization and Subordination in CRJs | Ratio of per capita total revenues of CRJs and consolidated regional governments | | | | Ratio of per capita total expenditures of CRJs and consolidated regional governments | | | | Net Regional Transfers as Percent of CRJs Total Expenditures Including Transfers to Regions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1994 | 1996 | 1997 | 1992 | 1994 | 1996 | 1997 | 1992 | 1994 | 1996 | 1997 |
| Tver | 71 | 73 | 76 | 79 | 75 | 75 | 81 | 73 | 14 | 13 | 14 | 24 |
| Yaroslavl | 79 | 84 | 79 | 68 | 79 | 85 | 65 | 65 | 5 | 9 | 13 | 13 |
| Nizhni Novgorod | 68 | 84 | 91 | 88 | 69 | 84 | 80 | 80 | 9 | 15 | 11 | 11 |
| Chuvashia | 55 | 62 | 76 | 83 | 55 | 62 | 63 | 81 | 6 | 24 | 20 | 37 |
| Tatarstan | 51 | 56 | 57 | 35 | 51 | 55 | 50 | 37 | 15 | 13 | 17 | 16 |
| Ulyanovsk | 55 | 56 | 65 | 55 | 55 | 55 | 48 | 49 | 21 | 23 | 7 | 8 |
| Samara | 62 | 70 | 81 | 71 | 61 | 70 | 74 | 72 | 13 | 7 | 5 | 9 |
| Saratov | 71 | 66 | 79 | 63 | 77 | 67 | 74 | 55 | 14 | 25 | 13 | 12 |
| Volgograd | 83 | 75 | 80 | 78 | 79 | 75 | 72 | 78 | 12 | 8 | 11 | 7 |
| Astrakhan | 70 | 55 | 77 | 66 | 68 | 53 | 65 | 60 | 44 | 39 | 48 | 19 |
| | | | | | | | | | | | | |
| Memo Item | | | | | | | | | | | | |
| Average in Volga Regions | 66 | 68 | 76 | 69 | 67 | 68 | 67 | 65 | 15 | 18 | 16 | 15 |
| Russian Federation b/ | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 15 | 23 | 19 | 21 |

*Source:* Ministry of Finance of the Russian Federation and authors calculations.

a/ Unless otherwise noted, total revenues and expenditures are calculated on net transfer basis (see notes to Appendix Table 2).

b/ Data for the Russian Federation is a weighted average of regional data, excluding St. Petersburg and Moscow Regions, which have a dual status of "region-municipality".

**Appendix Table 4. Structure of Local Governments' Budgets in CRJs, 1992 and 1997**
(Shares of total)

| CRJ Budget Data | Average in Volga Regions | | Russian Federation a/ | | | |
|---|---|---|---|---|---|---|
| | | | CRJ | | Region | |
| | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 |
| **I.    Total Revenues** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers from Higher Levels of Government | 0.13 | 0.16 | 0.14 | 0.22 | 0.07 | 0.17 |
| 2. Total Tax Revenues | 0.83 | 0.79 | 0.83 | 0.75 | 0.82 | 0.74 |
| Profit Tax | 0.35 | 0.12 | 0.36 | 0.12 | 0.33 | 0.14 |
| Personal Income Tax | 0.23 | 0.23 | 0.23 | 0.22 | 0.16 | 0.16 |
| VAT | 0.15 | 0.10 | 0.13 | 0.09 | 0.19 | 0.12 |
| Excise Taxes | 0.02 | 0.02 | 0.02 | 0.01 | 0.04 | 0.03 |
| Property Taxes | 0.02 | 0.11 | 0.02 | 0.12 | 0.02 | 0.11 |
| Natural Resources Tax | 0.01 | 0.03 | 0.02 | 0.04 | 0.05 | 0.08 |
| Other Taxes | 0.06 | 0.17 | 0.05 | 0.14 | 0.04 | 0.10 |
| 3. Non-Tax Revenues | 0.04 | 0.05 | 0.03 | 0.03 | 0.11 | 0.09 |
| **II.   Total Expenditures** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers to Lower Levels of Government | 0.00 | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 |
| 2. Administration and Justice | 0.02 | 0.04 | 0.02 | 0.05 | 0.03 | 0.07 |
| 3. National Economy | 0.45 | 0.41 | 0.41 | 0.41 | 0.37 | 0.35 |
| 3a. Housing | N/A | 0.33 | N/A | 0.34 | N/A | 0.22 |
| 3b. Transport and Communication | N/A | 0.06 | N/A | 0.05 | N/A | 0.04 |
| 3c. Industry | N/A | 0.01 | N/A | 0.01 | N/A | 0.05 |
| 3d. Agriculture | N/A | 0.01 | N/A | 0.01 | N/A | 0.05 |
| 4. Education | 0.20 | 0.24 | 0.19 | 0.24 | 0.18 | 0.22 |
| 5. Social Protection | 0.01 | 0.06 | 0.01 | 0.06 | 0.02 | 0.07 |
| 6. Health and Sport | 0.21 | 0.17 | 0.21 | 0.16 | 0.17 | 0.14 |
| 7. Culture and Mass Media | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 |
| 8. Other Expenditures | 0.09 | 0.04 | 0.09 | 0.04 | 0.17 | 0.09 |
| 9. Loans | 0.03 | 0.01 | 0.03 | 0.01 | 0.04 | 0.03 |
| III.   Budget Balance as percent of Total Expenditures | 0.13 | -0.06 | 0.10 | -0.04 | 0.08 | -0.09 |
| IV.   Ratio between Expenditures on National Economy and Expenditures on Education and Health and Sports | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 |
| V.    Real per Capita (1990 Rubles): | | | | | | |
| Local Governments Own Revenues b/ | 51 | 115 | - | - | - | - |
| Total Budget Expenditures | 387 | 396 | - | - | 606 | 458 |
| Education | 76 | 96 | - | - | - | - |
| Health and Sport | 77 | 68 | - | - | - | - |
| Social Protection | 3 | 24 | - | - | - | - |
| VI.   Per Capita Total Budget Expenditures as Percent of the Annual Average Money Income in Region | 25 | 22 | - | - | 40 | 27 |

*Source:* Ministry of Finance of the Russian Federation and authors calculations.

a/ Data for the Russian Federation is weighted averages of CRJs and consolidated regional data, excluding St. Petersburg and Moscow.

b/ Own Revenues equal the sum of revenues from the Property Tax, Other Taxes and Non-Tax Revenues.

**Appendix Table 5. Structure of CRJs Budgets in Volga Regions, 1992, 1997**
(Shares of total as shown)

| CRJ Budget Data | Tver | | Yaroslavl | | Nizhni Novgorod | | Chuvashia | | Tatarstan | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 |
| **I.    Total Revenues** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers from Higher Levels of Government | 0.12 | 0.25 | 0.04 | 0.14 | 0.08 | 0.11 | 0.06 | 0.38 | 0.12 | 0.17 |
| 2. Total Tax Revenues | 0.77 | 0.72 | 0.93 | 0.83 | 0.88 | 0.82 | 0.91 | 0.57 | 0.85 | 0.73 |
| Profit Tax | 0.20 | 0.12 | 0.52 | 0.17 | 0.31 | 0.09 | 0.26 | 0.08 | 0.60 | 0.20 |
| Personal Income Tax | 0.31 | 0.16 | 0.16 | 0.21 | 0.28 | 0.24 | 0.36 | 0.20 | 0.16 | 0.21 |
| VAT | 0.16 | 0.11 | 0.19 | 0.19 | 0.19 | 0.16 | 0.21 | 0.08 | 0.00 | 0.00 |
| Excise Taxes | 0.02 | 0.03 | 0.01 | 0.00 | 0.02 | 0.03 | 0.01 | 0.01 | 0.00 | 0.00 |
| Property Taxes | 0.02 | 0.12 | 0.01 | 0.09 | 0.02 | 0.09 | 0.02 | 0.09 | 0.03 | 0.15 |
| Natural Resources Tax | 0.02 | 0.03 | 0.00 | 0.02 | 0.00 | 0.02 | 0.01 | 0.03 | 0.00 | 0.02 |
| Other Taxes | 0.05 | 0.15 | 0.04 | 0.15 | 0.05 | 0.18 | 0.04 | 0.08 | 0.06 | 0.15 |
| 3. Non-Tax Revenues | 0.11 | 0.03 | 0.03 | 0.03 | 0.04 | 0.07 | 0.04 | 0.05 | 0.03 | 0.10 |
| **II.   Total Expenditures** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers to Lower Levels of Government | 0.03 | 0.03 | 0.01 | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2. Administration and Justice | 0.02 | 0.05 | 0.02 | 0.05 | 0.02 | 0.04 | 0.02 | 0.01 | 0.01 | 0.05 |
| 3. National Economy | 0.32 | 0.38 | 0.53 | 0.45 | 0.38 | 0.40 | 0.33 | 0.46 | 0.48 | 0.34 |
| 3a. Housing | N/A | 0.31 | N/A | 0.30 | N/A | 0.34 | N/A | 0.43 | N/A | 0.25 |
| 3b. Transport and Communication | N/A | 0.05 | N/A | 0.10 | N/A | 0.05 | N/A | 0.03 | N/A | 0.07 |
| 3c. Industry | N/A | 0.01 | N/A | 0.03 | N/A | 0.01 | N/A | 0.00 | N/A | 0.00 |
| 3d. Agriculture | N/A | 0.01 | N/A | 0.01 | N/A | 0.01 | N/A | 0.00 | N/A | 0.01 |
| 4. Education | 0.22 | 0.24 | 0.17 | 0.24 | 0.19 | 0.20 | 0.26 | 0.25 | 0.20 | 0.28 |
| 5. Social Protection | 0.01 | 0.09 | 0.01 | 0.05 | 0.01 | 0.05 | 0.00 | 0.11 | 0.00 | 0.01 |
| 6. Health and Sport | 0.21 | 0.12 | 0.14 | 0.14 | 0.22 | 0.20 | 0.25 | 0.12 | 0.17 | 0.25 |
| 7. Culture and Mass Media | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 |
| 8. Other Expenditures | 0.07 | 0.06 | 0.04 | 0.06 | 0.09 | 0.04 | 0.13 | 0.03 | 0.10 | 0.02 |
| 9. Loans | 0.11 | 0.01 | 0.05 | 0.00 | 0.05 | 0.03 | 0.00 | 0.00 | 0.03 | 0.03 |
| **III.  Budget Balance** | **0.13** | **-0.05** | **0.15** | **-0.05** | **0.18** | **-0.05** | **0.03** | **-0.03** | **0.22** | **-0.09** |
| IV.  Real per Capita (1990 Rubles): | | | | | | | | | | |
| Local Governments Own Revenues | 73 | 133 | 51 | 101 | 48 | 131 | 32 | 84 | 77 | 165 |
| Total Budget Expenditures | 359 | 471 | 574 | 389 | 341 | 461 | 290 | 455 | 553 | 541 |
| Education | 79 | 113 | 100 | 92 | 65 | 91 | 77 | 112 | 110 | 151 |
| Health and Sport | 76 | 57 | 83 | 53 | 76 | 91 | 71 | 56 | 92 | 135 |
| Social Protection | 3 | 42 | 6 | 19 | 2 | 25 | 1 | 52 | 1 | 5 |

*Source:* Ministry of Finance of the Russian Federation and authors calculations.

| CRJ Budget Data | Ulyanovsk | | Samara | | Saratov | | Volgograd | | Astrakhan | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 | 1992 | 1997 |
| **I. Total Revenues** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers from Higher Levels of Government | 0.19 | 0.09 | 0.12 | 0.09 | 0.13 | 0.13 | 0.10 | 0.07 | 0.39 | 0.20 |
| 2. Total Tax Revenues | 0.77 | 0.83 | 0.87 | 0.88 | 0.85 | 0.84 | 0.87 | 0.90 | 0.57 | 0.75 |
| Profit Tax | 0.24 | 0.10 | 0.25 | 0.08 | 0.37 | 0.04 | 0.55 | 0.16 | 0.17 | 0.12 |
| Personal Income Tax | 0.17 | 0.14 | 0.22 | 0.34 | 0.27 | 0.20 | 0.23 | 0.35 | 0.14 | 0.22 |
| VAT | 0.25 | 0.11 | 0.27 | 0.12 | 0.10 | 0.05 | 0.00 | 0.06 | 0.17 | 0.18 |
| Excise Taxes | 0.02 | 0.03 | 0.03 | 0.02 | 0.04 | 0.04 | 0.00 | 0.00 | 0.02 | 0.04 |
| Property Taxes | 0.02 | 0.20 | 0.03 | 0.07 | 0.01 | 0.16 | 0.02 | 0.11 | 0.01 | 0.04 |
| Natural Resources Tax | 0.00 | 0.03 | 0.00 | 0.04 | 0.00 | 0.04 | 0.01 | 0.06 | 0.00 | 0.03 |
| Other Taxes | 0.07 | 0.22 | 0.06 | 0.20 | 0.05 | 0.31 | 0.07 | 0.16 | 0.05 | 0.12 |
| 3. Non-Tax Revenues | 0.04 | 0.08 | 0.02 | 0.03 | 0.02 | 0.03 | 0.04 | 0.03 | 0.04 | 0.05 |
| **II. Total Expenditures** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| 1. Net Transfers to Lower Levels of Government | -0.05 | 0.00 | -0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | -0.03 | 0.00 |
| 2. Administration and Justice | 0.01 | 0.03 | 0.02 | 0.06 | 0.02 | 0.04 | 0.01 | 0.07 | 0.02 | 0.05 |
| 3. National Economy | 0.48 | 0.42 | 0.47 | 0.45 | 0.43 | 0.48 | 0.53 | 0.31 | 0.50 | 0.39 |
| 3a. Housing | N/A | 0.35 | N/A | 0.35 | N/A | 0.37 | N/A | 0.24 | N/A | 0.36 |
| 3b. Transport and Communication | N/A | 0.07 | N/A | 0.09 | N/A | 0.08 | N/A | 0.05 | N/A | 0.01 |
| 3c. Industry | N/A | 0.00 | N/A | 0.00 | N/A | 0.01 | N/A | 0.01 | N/A | 0.00 |
| 3d. Agriculture | N/A | 0.00 | N/A | 0.00 | N/A | 0.03 | N/A | 0.00 | N/A | 0.01 |
| 4. Education | 0.21 | 0.22 | 0.17 | 0.25 | 0.22 | 0.19 | 0.14 | 0.26 | 0.21 | 0.28 |
| 5. Social Protection | 0.00 | 0.07 | 0.03 | 0.02 | 0.01 | 0.05 | 0.01 | 0.09 | 0.00 | 0.06 |
| 6. Health and Sport | 0.23 | 0.21 | 0.21 | 0.16 | 0.23 | 0.18 | 0.21 | 0.16 | 0.18 | 0.17 |
| 7. Culture and Mass Media | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| 8. Other Expenditures | 0.10 | 0.01 | 0.09 | 0.03 | 0.08 | 0.02 | 0.07 | 0.05 | 0.10 | 0.05 |
| 9. Loans | 0.00 | 0.03 | 0.03 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 |
| **III. Budget Balance** | **0.12** | **-0.07** | **0.13** | **-0.01** | **0.06** | **-0.08** | **0.19** | **-0.07** | **0.12** | **-0.06** |
| IV. Real per Capita (1990 Rubles): | | | | | | | | | | |
| Local Governments Own Revenues | 44 | 99 | 58 | 136 | 29 | 156 | 57 | 91 | 38 | 58 |
| Total Budget Expenditures | 283 | 211 | 453 | 461 | 315 | 342 | 381 | 325 | 319 | 302 |
| Education | 60 | 46 | 76 | 117 | 68 | 65 | 54 | 85 | 68 | 83 |
| Health and Sport | 66 | 44 | 93 | 75 | 73 | 63 | 80 | 53 | 58 | 51 |
| Social Protection | 1 | 15 | 12 | 10 | 3 | 19 | 2 | 30 | 1 | 19 |

*Source:* Ministry of Finance of the Russian Federation and authors calculations.

**Appendix Table 6. Group Means of Selected Variables by Policy Reform Rank of Capital Cities in Volga Regions, 1992 –1996**

| Indicators / Year | 1992 | 1993 | 1994 | 1995 | 1996 | F-statistics in Repeated Measures ANOVA | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | Differences in Means Across Groups | Differences in Rate of Change of Group Means Across Time |
| The ratio between per capita total revenues on net transfer basis of CRJs and consolidated regional government (%) | | | | | | 9.65 (0.01) | 6.24 (0.00) |
| - below average rank | 60 | 56 | 57 | 63 | 73 | | |
| - average rank | 61 | 52 | 61 | 65 | 68 | | |
| - above average rank | 73 | 74 | 77 | 79 | 81 | | |
| The ratio between per capita total expenditures on net transfer basis of CRJs and consolidated regional government (%) | | | | | | 8.75 (0.01) | 0.27 (0.89) |
| - below average rank | 59 | 54 | 57 | 59 | 59 | | |
| - average rank | 64 | 61 | 61 | 62 | 62 | | |
| - above average rank | 73 | 75 | 78 | 76 | 74 | | |
| Net regional transfers as percent of CRJs total expenditures on net transfer basis (%) | | | | | | 3.84 (0.08) | 0.74 (0.57) |
| - below average rank | 24 | 25 | 29 | 22 | 25 | | |
| - average rank | 15 | 15 | 19 | 16 | 15 | | |
| - above average rank | 11 | 9 | 11 | 8 | 11 | | |
| Real per capita CRJs revenues from shared taxes (1990 Rubles) | | | | | | 4.15 (0.07) | 23.12 (0.00) |
| - below average rank | 213 | 220 | 186 | 115 | 105 | | |
| - average rank | 388 | 301 | 191 | 163 | 174 | | |
| - above average rank | 384 | 384 | 302 | 206 | 198 | | |
| Real per capita CRJs revenues from own taxes (1990 Rubles) | | | | | | 12.72 (0.01) | 46.91 (0.00) |
| - below average rank | 25 | 39 | 62 | 44 | 80 | | |
| - average rank | 40 | 58 | 115 | 102 | 163 | | |
| - above average rank | 36 | 67 | 95 | 69 | 121 | | |
| Real per capita CRJs budget expenditures on Health and Sports (1990 Rubles) | | | | | | 4.65 (0.05) | 24.53 (0.00) |
| - below average rank | 65 | 72 | 59 | 38 | 46 | | |
| - average rank | 83 | 113 | 97 | 75 | 91 | | |
| - above average rank | 82 | 105 | 83 | 52 | 62 | | |
| Real per capita CRJs budget expenditures on National Economy (1990 Rubles) | | | | | | 2.94 (0.12) | 4.63 (0.01) |
| - below average rank | 131 | 139 | 143 | 105 | 102 | | |
| - average rank | 201 | 185 | 137 | 142 | 175 | | |
| - above average rank | 193 | 232 | 202 | 138 | 157 | | |
| Real per capita monthly income in region (1990 Rubles) | | | | | | 6.31 (0.03) | 14.7 (0.00) |
| - below average rank | 116 | 132 | 134 | 106 | 120 | | |
| - average rank | 124 | 151 | 152 | 130 | 143 | | |
| - above average rank | 150 | 172 | 166 | 138 | 158 | | |
| Life expectancy in region (years) | | | | | | 3.59 (0.08) | 145.5 (0.00) |
| - below average rank | 69 | 67 | 66 | 66 | 67 | | |
| - average rank | 69 | 67 | 66 | 66 | 67 | | |
| - above average rank | 68 | 65 | 64 | 65 | 66 | | |

## Appendix Table 7. Survey Responses Grouped by Selected Firms' Characteristics

| Questions / Grouping Variables | Total | Type of Firm | | Past Ownership | | Years Private | | Size of Firm | | Firm's Profits in 1997 | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Production | Distribution | Privatized State Firm | New Private | Old (> 4 years) | New (< 4 years) | Large ( >= 20 Employees) | Small ( < 20 Employees) | Large | Break Even or Small | Negative |
| **I. Firms' performance** | | | | | | | | | | | | |
| 1. Profitability in 1997 (% of firms reporting large positive profits minus % of firms reporting negative profits) | -20 | -27 | -8 | -27 | -14 | -14 | -32 | -25 | -15 | 100 | 0 | -100 |
| 2. Change in employment, 1997-98 (% of firms reporting increase in employment minus % of firms reporting decrease in employment) | -31 | -11 | -46 | -59 | -6 | -36 | -21 | 0 | -60 | 0 | -30 | -44 |
| 3. Change in productivity, 1997-98 (% of firms reporting increase in productivity minus % of firms reporting decrease in productivity) | -19 | -15 | -18 | -26 | -13 | -18 | -21 | -25 | -13 | 14 | -20 | -33 |
| 4. Average monthly wage of an entry-level production worker or sales clerk, end of 1997 ( '000 roubles) | 383 | 327 | 437 | 381 | 385 | 377 | 397 | 332 | 431 | 461 | 384 | 341 |
| 5. Wage arrears (% of firms in arrears) | 33 | 52 | 11 | 38 | 29 | 36 | 28 | 52 | 17 | 29 | 27 | 53 |
| 6. Wage arrears (duration in months) | 3.1 | 3.2 | 3.0 | 3.4 | 2.7 | 2.6 | 4.2 | 3.0 | 3.2 | 2.5 | 3.3 | 3.0 |
| 7. Investment as percent of gross revenues minus expenditures on inputs, utilities and rent | 9 | 8 | 12 | 3 | 15 | 9 | 9 | 3 | 16 | 20 | 9 | 6 |
| **II. Taxation, government policy and attitude** | | | | | | | | | | | | |
| 1. Tax payments as percent of gross revenues minus expenditures on inputs, utilities and rent | 67 | 65 | 66 | 71 | 63 | 65 | 72 | 73 | 60 | 43 | 69 | 72 |
| 2. Total number of taxes paid | 14 | 13 | 14 | 14 | 13 | 14 | 13 | 14 | 13 | 18 | 13 | 13 |
| 3. Under licensing regime (% of firms) | 88 | 81 | 93 | 81 | 94 | 85 | 95 | 79 | 97 | 71 | 90 | 89 |
| 4. Difficulty of obtaining a license for trade (% of firms that answered "difficult") | 14 | 27 | 4 | 14 | 14 | 9 | 22 | 23 | 7 | 40 | 7 | 19 |
| 5. Price controls (number of firms affected) | 23 | 13 | 8 | 12 | 11 | 14 | 9 | 14 | 9 | 2 | 9 | 12 |
| 6. Price controls in production (number of firms affected) | 11 | 10 | 0 | 5 | 6 | 6 | 5 | 9 | 2 | 1 | 3 | 7 |
| 7. Limit on retail markup (number of firms affected) | 7 | 1 | 6 | 4 | 3 | 4 | 3 | 3 | 4 | 0 | 5 | 2 |
| 8. Local government inefficiency (number of firms that ranked the problem as 1st or 2nd in importance) | 25 | 11 | 14 | 7 | 18 | 15 | 10 | 8 | 17 | 4 | 16 | 4 |
| 9. Corruption (number of firms that ranked the problem as 1st or 2nd in importance) | 31 | 15 | 15 | 13 | 18 | 20 | 11 | 15 | 16 | 5 | 13 | 11 |
| 10. City government (% of respondents rating the attitude of city government as "positive" minus % of respondents rating the attitude as "negative") | 36 | 17 | 50 | 45 | 29 | 41 | 26 | 17 | 52 | 29 | 41 | 19 |
| 11. Regional government (% of respondents rating the attitude of regional government as "positive" minus % of respondents rating the attitude as "negative") | 23 | 21 | 22 | 33 | 18 | 22 | 25 | 11 | 32 | -17 | 30 | 27 |

| Questions / Grouping Variables | Total | Type of Firm | | Past Ownership | | Years Private | | Size of Firm | | Firm's Profits in 1997 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Production | Distribution | Privatized State Firm | New Private | Old (> 4 years) | New (< 4 years) | Large (>= 20 Employees) | Small (< 20 Employees) | Large | Break Even or Small | Negative |
| **III. Business Center** | | | | | | | | | | | | |
| 1. Existence of business center (number of firms answered affirmatively) | 35 | 16 | 17 | 14 | 21 | 24 | 11 | 17 | 18 | 4 | 19 | 11 |
| 2. Number of firms that have used the business center | 8 | 4 | 3 | 4 | 4 | 6 | 2 | 3 | 5 | 0 | 4 | 4 |
| 3. Number of firms that found the services of the business center useful | 4 | 2 | 1 | 2 | 2 | 3 | 1 | 3 | 1 | 0 | 3 | 1 |
| 4. Number of firms that claim that local governments have not helped their businesses at all | 24 | 12 | 12 | 6 | 18 | 12 | 12 | 7 | 17 | 6 | 9 | 8 |
| 5. How can local governments help your business (numnber of firms that selected the option) | | | | | | | | | | | | |
| - Leasing or finding production/retail space | 31 | 14 | 16 | 6 | 25 | 17 | 14 | 12 | 19 | 5 | 17 | 8 |
| - Help to get credit | 38 | 21 | 14 | 22 | 16 | 28 | 10 | 22 | 16 | 3 | 20 | 15 |
| - Registration | 9 | 3 | 5 | 2 | 7 | 4 | 5 | 4 | 5 | 0 | 6 | 3 |
| - Help in finding suppliers/consumers | 16 | 10 | 6 | 8 | 8 | 10 | 6 | 10 | 6 | 2 | 5 | 9 |
| - Help in contacts with upper levels of government | 11 | 4 | 6 | 4 | 7 | 6 | 5 | 6 | 5 | 2 | 5 | 4 |
| - Legal advice and help | 16 | 7 | 7 | 7 | 9 | 11 | 5 | 5 | 11 | 1 | 6 | 8 |
| - By not interfering | 22 | 8 | 13 | 6 | 16 | 12 | 10 | 6 | 16 | 3 | 8 | 9 |
| **IV. Municipal services and utilities** (% of respondents rating the quality of service as "good" minus % of respondents rating the quality of | | | | | | | | | | | | |
| 1. Public transport | 22 | 22 | 25 | 32 | 12 | 22 | 22 | 26 | 19 | 20 | 23 | 13 |
| 2. Water and sewage | 11 | 4 | 19 | 12 | 10 | 11 | 11 | 22 | 0 | 0 | 7 | 17 |
| 3. Electricity | 40 | 31 | 50 | 35 | 45 | 34 | 53 | 15 | 63 | 29 | 41 | 33 |
| 4. Telecommunications | 25 | 23 | 30 | 38 | 13 | 34 | 6 | 15 | 34 | 0 | 14 | 39 |
| 5. Garbage collection | 7 | 0 | 19 | 27 | -10 | 14 | -6 | 19 | -3 | 17 | 14 | -11 |
| 6. Street repairs/lightening/cleaning | -59 | -70 | -46 | -37 | -77 | -62 | -53 | -54 | -63 | -57 | -60 | -56 |
| 7. Public safety and property protection | -60 | -64 | -59 | -60 | -59 | -62 | -56 | -67 | -54 | -100 | -68 | -38 |
| 8. Legal settlement | -27 | -35 | -20 | -26 | -27 | -25 | -29 | -37 | -18 | -33 | -38 | 0 |
| **V. Business services** (% of respondents rating the quality of service as "good" minus % of respondents rating the quality of service as "poor") | | | | | | | | | | | | |
| 1. Banking | 35 | 17 | 46 | 29 | 39 | 25 | 53 | 36 | 33 | 29 | 54 | 0 |
| 2. Insurance | -16 | -42 | 0 | -7 | -22 | -14 | -18 | -36 | -5 | -80 | -11 | -14 |
| 3. Advertizing | 50 | 48 | 56 | 64 | 39 | 50 | 50 | 48 | 52 | 33 | 56 | 43 |
| 4. Delivery of goods | 36 | 43 | 38 | 50 | 29 | 29 | 47 | 33 | 37 | 0 | 44 | 36 |
| **VI. Business Environment** | | | | | | | | | | | | |
| 1. Trust between business partners (% of respondents rating the trust between business partners as "good" minus % of respondents rating it as "poor") | 24 | 8 | 38 | 25 | 23 | 22 | 28 | 20 | 27 | 43 | 31 | 6 |
| 2. Crime (number of firms that ranked the problem as 1st or 2nd in importance) | 11 | 4 | 6 | 6 | 5 | 8 | 3 | 4 | 7 | 2 | 5 | 2 |
| 3. "Krisha" (number of firms that ranked the problem as 1st or 2nd in importance) | 4 | 2 | 2 | 1 | 3 | 0 | 4 | 1 | 3 | 0 | 3 | 1 |
| 4. Number of firms that paid for protection in 1997 | 6 | 1 | 5 | 1 | 5 | 4 | 2 | 4 | 2 | 0 | 6 | 0 |
| 5. Citizens (% of respondents rating the attitude of citizens as "positive" minus % of respondents rating the attitude as "negative") | 25 | 17 | 31 | 52 | 4 | 18 | 39 | 8 | 42 | -20 | 14 | 53 |

**Appendix Table 8. Survey Responses by City**

| Questions / Grouping Variable | Kazan | Ulyanovsk | Samara | Saratov | Volgograd | Astrakhan | Total |
|---|---|---|---|---|---|---|---|
| **I.   Firms' characteristics** | | | | | | | |
| 1. Number of firms | 10 | 9 | 10 | 10 | 10 | 9 | 58 |
| 2. Position of person interviewed (% owners) | 80 | 78 | 60 | 50 | 20 | 33 | 53 |
| 3. Past ownership (% privatized state firms) | 40 | 11 | 60 | 0 | 90 | 78 | 47 |
| 4. Main activity (% engaged in production) | 40 | 33 | 50 | 50 | 50 | 56 | 47 |
| 5. Average period under private ownership (years) | 3 | 5 | 5 | 3 | 5 | 5 | 4 |
| 6. Average number of employees in 1998 | 21 | 20 | 26 | 21 | 122 | 48 | 43 |
| **II.   Firms' performance** | | | | | | | |
| 1. Profitability (% of firms reporting large positive profits minus % of firms reporting negative profits) | -56 | 0 | -30 | 10 | -22 | -22 | -20 |
| 2. Change in employment, 1997-1998  (% of firms reporting increase in employment minus % of firms reporting decrease in employment) | -70 | -22 | -70 | 30 | -10 | -44 | -31 |
| 3. Change in productivity (% of firms reporting increase in productivity minus % of firms reporting decrease in productivity) | -10 | 22 | 10 | -60 | -20 | -56 | -19 |
| 4.   Average monthly wage of an entry-level production worker or sales clerk, end 1997 ( '000 roubles) | 550 | 428 | 355 | 268 | 375 | 339 | 383 |
| 5. Wage arrears (% of firms in arrears) | 20 | 22 | 40 | 50 | 44 | 22 | 33 |
| 6. Wage arrears (duration in months) | 2.5 | 2.5 | 4.8 | 2.4 | 3.0 | 2.5 | 3.1 |
| 7. Investment as percent of gross revenues minus expenditures on inputs, utilities and rent | 13 | 24 | 16 | 3 | 1 | 0 | 9 |
| 8. Number of firms that paid for protection in 1997 | 1 | 4 | 1 | 0 | 0 | 0 | 6 |
| **III.   Taxation, government policy and attitude** | | | | | | | |
| 1. Tax payments as percent of gross revenues minus expenditures on inputs, utilities and rent | 71 | 55 | 60 | 75 | 69 | 74 | 67 |
| 2. Total number of taxes paid | 18 | 9 | 11 | 10 | 15 | 16 | 14 |
| 3. Under licensing regime (% of firms) | 100 | 89 | 100 | 100 | 80 | 56 | 88 |
| 4. Difficulty of obtaining a license for trade (% of firms that answered "difficult") | 30 | 0 | 10 | 20 | 13 | 0 | 14 |
| 5. Price controls (number of firms affected) | 5 | 1 | 6 | 0 | 5 | 6 | 23 |
| 6. Price controls in production (number of firms affected) | 3 | 0 | 3 | | 1 | 4 | 11 |
| 7. Limit on retail markup (number of firms affected) | 1 | 0 | 2 | | 2 | 2 | 7 |
| 8. Local government inefficiency  (number of firms that ranked the problem as 1st or 2nd in importance) | 4 | 6 | 3 | 9 | 2 | 1 | 25 |
| 9. Corruption  (number of firms that ranked the problem as 1st or 2nd in importance) | 6 | 5 | 2 | 5 | 4 | 9 | 31 |
| 10. City government  (% of respondents rating the attitude of city government as "positive" minus % of respondents rating  the attitude as "negative") | 40 | 25 | 50 | 20 | 67 | 22 | 36 |
| 11. Regional government (% of respondents rating the attitude of regional government as "positive" minus % of respondents rating  the attitude as "negative") | 50 | -57 | 44 | 22 | 50 | 25 | 23 |

| Questions / Grouping Variable | Kazan | Ulyanovsk | Samara | Saratov | Volgograd | Astrakhan | Total |
|---|---|---|---|---|---|---|---|
| IV. Business Center | | | | | | | |
| 1. Existence of business center (number of firms answered affirmatively) | 5 | 8 | 6 | 9 | 5 | 2 | 35 |
| 2. Number of firms that have used the business center | 3 | 1 | 2 | 0 | 2 | 0 | 8 |
| 3. Number of firms that found the services of the business center useful | 2 | 0 | 1 | | 1 | | 4 |
| 4. Number of firms that claim that local governments have not helped their businesses at all | 6 | 3 | 2 | 10 | 1 | 2 | 24 |
| 5. How can local governments help your business (numnber of firms that selected the option) | | | | | | | |
| - Leasing or finding production/retail space | 6 | 8 | 6 | 9 | 2 | 0 | 31 |
| - Help to get credit | 6 | 3 | 7 | 6 | 7 | 9 | 38 |
| - Registration | 4 | 2 | 2 | 1 | 0 | 0 | 9 |
| - Help in finding suppliers/consumers | 2 | 3 | 5 | 0 | 4 | 2 | 16 |
| - Help in contacts with upper levels of government | 3 | 4 | 1 | 2 | 1 | 0 | 11 |
| - Legal advice and help | 5 | 4 | 4 | 0 | 2 | 1 | 16 |
| - By not interfering | 8 | 3 | 5 | 5 | 1 | 0 | 22 |
| V. Municipal services and utilities (% of respondents rating the quality of service as "good" minus % of respondents rating the quality of service as "poor") | | | | | | | |
| 1. Public transport | 0 | -43 | 67 | 20 | 56 | 13 | 22 |
| 2. Water and sewage | 0 | 0 | 0 | 0 | 50 | 11 | 11 |
| 3. Electricity | 44 | 11 | 60 | 60 | 80 | -22 | 40 |
| 4. Telecommunications | 50 | 33 | 30 | -50 | 80 | 11 | 25 |
| 5. Garbage collection | 0 | -13 | 20 | -20 | 70 | -22 | 7 |
| 6. Street repairs/lightening/cleaning | -30 | -89 | -30 | -90 | -50 | -67 | -59 |
| 7. Public safety and property protection | -33 | -71 | -80 | -60 | -50 | -63 | -60 |
| 8. Legal settlement | -10 | -60 | -60 | -33 | 0 | -17 | -27 |
| VI. Business services (% of respondents rating the quality of service as "good" minus % of respondents rating the quality of service as "poor") | | | | | | | |
| 1. Banking | 50 | 11 | 30 | 60 | 57 | 0 | 35 |
| 2. Insurance | 0 | 0 | -29 | -75 | 20 | -20 | -16 |
| 3. Advertizing | 20 | 22 | 90 | 44 | 100 | 0 | 50 |
| 4. Delivery of goods | 33 | 14 | 43 | 20 | 100 | 0 | 36 |
| VII. Business Environment | | | | | | | |
| 1. Trust between business partners (% of respondents rating the trust between business partners as "good" minus % of respondents rating it as "poor") | 30 | 33 | 40 | -20 | 13 | 50 | 24 |
| 2. Crime (number of firms that ranked the problem as 1st or 2nd in importance) | 1 | 2 | 5 | 2 | 1 | 0 | 11 |
| 3. "Krisha" (number of firms that ranked the problem as 1st or 2nd in importance) | 1 | 0 | 2 | 1 | 0 | 0 | 4 |
| 4. Citizens (% of respondents rating the attitude of citizens as "positive" minus % of respondents rating the attitude as "negative") | 71 | 0 | 60 | -60 | 56 | 33 | 25 |