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The Russian City in Transition

The First Six Years in 10 Volga Capitals

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Reform in 10 regional capitals along the Volga River is associated with favorable initial conditions. And both reform and favorable initial conditions are associated with relatively successful economic outcomes — except where access to extra resources improves outcomes or where weak government undermines success.

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Summary findings

After studying the nature and variety of transition in 10 regional capitals of Russia, de Melo and Ofer observe that:

- All cities have experienced radical changes in their institutions and economies — changes associated on the one hand with the abolition of central planning and the introduction of freer markets, and on the other hand with political decentralization and the introduction of local elections.
- These changes have led to a wide diversity in economic and social outcomes, reflecting differences in the central government's (inequitable) economic relations with regions as well as differing local and regional policies. Most northern cities adopted policies more consistent with the central government's support of free market reforms; most southern (Red Belt) cities pursued more cautious, protective policies.
- City governments are using more proactive economic policies, including interventions to save local industries. Such efforts highlight the dual nature of the Russian transition, characterized by a shift in power from central to local government as well as from public to private enterprises.
- A major difficulty facing Russian cities is the cost of subsidies to housing and utilities. Real estate in general constitutes a major expenditure category for local government rather than, as in most western cities, a major source of revenue. A transition in this area alone could revolutionize the finances and independence of Russian cities.
- The jury is still out on what the right social and industrial policies were during the first years of reform. Ulyanovsk clearly lagged on market reforms, and Saratov represents a model of liberalization without institutional support. Both extremes have failed, but so far the social consequences of the Saratov model appear to be worse than those of the Ulyanovsk model.
- With the credibility of Russia's federal government at an all-time low, foreign investors have no choice but to rely on the competence and reliability of local leaders, especially mayors and governors. They will be looking for evidence of accountability in the form of the rule of law, and transparency in the form of reliable public information. Information at the city level — often unavailable and not easily accessible — would be very useful in attracting local researchers to monitor progress (as a basis for accountability) and diagnose problems (as a basis for public policy debate and political decisions).

This paper — a product of Public Economics, Development Research Group — is part of a larger effort in the group to study the causes and effects of fiscal decentralization. The project was carried out in cooperation with the New Economic School (NES) in Moscow. This is the first of two papers on the Volga cities. Copies are available free from the World Bank, 1818 H Street, NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC2-609, telephone 202-473-7698, fax 202-522-1154, Internet address hsladovich@worldbank.org. Policy Research Working Papers are also posted on the Web at http://www.worldbank.org/html/dec/Publications/Workpapers/home.html. The authors may be contacted at rhanrott@erols.com or gur.ofer@yale.edu. August 1999. (58 pages)

THE RUSSIAN CITY IN TRANSITION:

THE FIRST SIX YEARS IN TEN VOLGA CAPITALS*

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I. INTRODUCTION

In this paper we look at the nature and variety of transition in ten regional capitals situated along the Volga River. Under the old regime cities were at the lowest level of the planning hierarchy, and they played an obedient and virtually uniform role. Now, although federal and regional politics are still predominant, many regional capitals and other large cities have gained some autonomy and started to develop independent municipal policies. Our approach is to first look at differences at the local level in initial conditions and in the pace and pattern of reform. By providing comparative rankings, we then suggest how such differences may have affected socioeconomic outcomes. Thus, our focus is on the role and comparative experience of cities, as microcosms of change.

Information on Russian regions, or "federation subjects", is available with increasing ease. Goskomstat published a two volume statistical document on "Russia's Regions" in 1997, and Bradshaw and Hanson 1998 provides a convenient review of the English-language literature on political, economic and social transition in the Russian regions. No detailed national statistics for regional capitals have appeared, however, since the publication of *Socioeconomic Statistics of Capitals of Republics, Krais and Oblasts of the Russian Federation* (1994). As a result, data at the city level—with the exception of Moscow and St. Petersburg—are scant and difficult to come by, and little research has been undertaken.

For this study, we draw on a variety of Russian and international sources including local statistical bulletins, news articles, and unpublished case studies and other papers by Russian researchers, as well as better known and more accessible published materials. Initial conditions are defined as of 1990, the last year of relative stability in prices and institutions before the 1991/92 political and economic upheavals. The latest comprehensive data are for 1996, permitting an evaluation of the first six years of transition. For those who know Russia, a cautionary word about the reliability of data may not be necessary. For others, we acknowledge such difficulties as problematic price deflators and alternative values for the same variable found in different sources.

Our findings, which we characterize as concluding hypotheses, are that reform is associated with favorable initial conditions and that both reform and favorable initial conditions are associated with relatively successful economic outcomes. The exceptions are typically where access to extra resources enhances outcomes or where weak government undermines success. We note that the association between reforms and outcomes would be even stronger were it not for time lags and the lack of comprehensive indicators other than the average wage to measure economic outcomes. As might be expected, the five Red Belt cities have been more cautious on reform and less successful in economic outcomes than the other cities, but exceptions exist to this generalization. In particular, Saratov and especially Volgograd are more reformist and appear to be influenced by a growth pole led by Kazan and Samara.

Section II below looks at initial conditions in the Volga capitals in 1990, shortly before the break up of the Soviet Union. Available data suggest that in many ways these cities were not very different from the Russian average and not dramatically different from each other. Variations in the importance and structure of industry did exist, however, and could have been expected to affect success during the transition to a market economy. Section III focuses on differences through 1996 in specific economic policies—namely, price controls, fiscal policies, privatization, and business development. In order to place these policies in context, we review in Section IV the nature of political change and the role of local politics in policy formation. Section V presents the available indicators of economic and social outcomes and the implied changes during the first six years of transition. And finally, Section VI explores the relationship between initial conditions, policies and outcomes and offers some general observations about transition, based on the experience of these ten regional capitals. A brief discussion of partial data available for 1997 and 1998 adds a more recent perspective to this evaluation.

II. INITIAL CONDITIONS

The Volga cities included here stretch from northwest of Moscow to the Caspian sea (Figure 1) and span three of the 11 traditional areas of Russia—Tver and Yaroslavl (Central Region); Nizhny Novgorod and Cheboksary (Volga-Vyatka Region); and Kazan, Ulyanovsk, Samara, Saratov, Volgograd, and Astrakhan (Volga Region). The Volga River has been a north-south trade route for many centuries, and there is substantial similarity among the cities. All the Volga cities are old cities with deep historical and cultural roots, several first established in the 11th (Yaroslavl), 12th (Tver) and 13th (Nizhni) centuries. Each one is the capital of its region and has a population of 0.4 to 1.4 million people; typically the capital accounts for about a third of the region's population. Historical access to similar information, technology, and cultural influences suggests that there would be less diversity in the experience of these cities than cities more varied in size or more widely dispersed across the Russian Federation.

Tables 1 and 2 present a variety of information on the Volga cities as of 1989/90, these being years of relative stability and therefore a useful point of departure. Cities are ordered from top to bottom according to their location along the Volga River. Looking first at Table 1, five of the cities are relatively large, around a million population, and five are smaller, close to a half million. City *per capita* incomes are not known, but average monthly wages in the cities were very similar in 1990, and slightly below the Russian average. The highest average wages (Saratov and Tver) are less than 5 percent above the lowest (Samara and Cheboksary), and available data on living standards fail to reveal the existence of any clear hierarchy in the standard of living. [1] For example, the lowest infant mortality is found in the city of Cheboksary, which also has the lowest *per capita* trade in consumer goods and services. Only Samara seems to stand out as unfortunate, with the highest infant mortality and a low *per capita* trade in consumer goods and services. This observed uniformity in the standard of living among the Volga cities must surprise even experienced Soviet "hands".

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[1] Monthly wages at the regional level, which are typically lower than wages in the capital city, have a spread of less than 10 percent, but *per capita* regional income shows a variation of close to 25 percent between Yaroslavl Oblast, with the highest income, and Chuvashia. The higher income variation is explained in part by lower employment rates for the total population in Chuvashia.

Although most Volga cities were major industrial centers with many large firms, the size and structure of industry varied substantially. Industrial employment shares, shown in Table 1, were particularly high in Cheboksary, Kazan, and Ulyanovsk and low in Astrakhan and Tver. Major sub-sectors by city were as follows:

- *Energy, petrochemicals, and chemicals:* Volgograd, Yaroslavl, Samara, Saratov, Kazan.
- *Military manufacturing and research:* Nizhny, Kazan, Samara, Saratov.
- *Machine-building:* Ulyanovsk and Nizhni (cars); Volgograd and Cheboksary (tractors); Saratov and Kazan (planes); Astrakhan and Yaroslavl (ships).
- *Metallurgy:* Volgograd.
- *Consumer goods (textiles, food industry):* Astrakhan, Tver, Cheboksary.

Table 2 gives a more detailed breakdown of the Volga cities' industrial structure, based on the industrial census of Russian enterprises in 1989. The wide differences in size and structure of industry are likely explanations of diverse outcomes, given the many severe shocks suffered by industry during transition. One shock was the 1992 price liberalization, associated with opening the Russian internal market to international trade. It resulted in a large increase in the relative price of energy and other raw materials that in turn raised input costs for heavy 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. On the supply side, competition from imports affected all sectors, but especially light industry, as the domestic variety and quality of textiles, leather and other light industry goods was poor, in part due to obsolete equipment. Using an *ex post* analysis of changes in quantity, price, investment and employment, Ivanov 1998b shows that light industry and machinery/metal-working became the two least competitive sectors in Russia as a whole.

Two other characteristics reveal substantial differences among the cities, but their implications are not clear. One is the share of defense employment in total industrial employment, which was high in Nizhni, Kazan, and Samara. On the one hand, defense industries present a huge task for restructuring; on the other hand, the high level of human capital associated with defense industries would seem to provide an advantage. Nizhni 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 a strong agricultural base. Taking the ratio of agricultural to industrial production in 1995 as an indicator, four cities—namely, Tver, Cheboksary, Saratov, and Astrakhan—are located in regions with a relatively strong agricultural base. Is this 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 hand, agriculture is generally unreformed and cash poor, adding additional pressure on available public revenues. In our initial evaluation, we will assume the advantages and disadvantages of these two characteristics are offsetting.

Finally, some particular advantages should be mentioned. Two regions, namely Kazan and Saratov, have favorable natural resources (primarily oil) at the regional level and might be expected to exploit such resources more aggressively under a market economy.[2] Nizhni, Samara, Yaroslavl, and Tver all have a favorable geographic location at the intersection of important rivers, roads, rail lines and (for Samara) pipelines. Nizhni, for example, was famous in the 19th century for its annual fairs, revived in 1991. As of 1990, however, neither these nor other initial conditions discussed above appear to be associated systematically with indicators of living standards, namely infant mortality and *per capita* availability of consumer goods and services.

What might be the expectations of success based on these initial conditions? Table 3 provides a ranking based on four criteria:

- Low share of industrial employment in the urban labor force (low is under 35 percent; high is over 45 percent).

- Low share of industry in the two least competitive sectors, light industry and machinery/metalworking (low is under 40 percent; high is over 60 percent).

- Low industrial concentration (low is under 25 in any one sub-sector; high is over 45 percent).

- Special advantage from location or natural resources.

Based on these criteria, Cheboksary and Ulyanovsk would be expected to encounter the most severe problems with adjustment during transition. Nizhni and Kazan would be expected to perform significantly better, but worse than the five cities receiving a rank of four. Saratov, with a rank of five, stands out as having an edge on success.

III. ECONOMIC POLICIES

During the early years of transition, cities evolved from a center for purely administrative activities to a locus for incipient policy formation. But the degree of independence varied among cities as well as over time; and by end-1996 it was in fact still difficult to distinguish city policies from region policies, particularly in the republics. Thus our indicators of "city policies" will inevitably reflect regional influence, if not control. Nevertheless, we look here at four policy categories where cities have at least some leeway: pricing, fiscal policy, privatization, and support for business development. For this last category we use indicators of small-scale enterprise development and foreign

[2] Rich gas and oil deposits were discovered in Astrakhan in 1994, but this discovery would not affect the period considered here.

investment. A summary ranking of cities by policy reform is provided and followed by a discussion of the underlying political landscape.

Pricing

During the Soviet era, government subsidies reduced consumer prices substantially below costs in two main categories: food products and services, 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.

The 1992 price liberalization eliminated subsidies from the center for almost all marketed goods, including most food products. Local governments tried to maintain low food prices by a variety of methods, many with adverse budget implications. Meanwhile, although prices for municipal services rose, the rate of subsidization actually increased because of high general inflation and a rise in the relative price of energy. The resulting budgetary pressure forced local governments to gradually give up some controls and increase the extent of cost recovery. Direct pressure from federal and regional governments, the development of black markets, and difficulties in maintaining local autarky also reinforced this trend. By 1997, most but not all price controls for market goods were removed.[3]

Food prices. Methods for controlling food prices have included: restrictions on exports to other regions (Ulyanovsk, Saratov), despite a federal decree that forbade such restrictions; administrative price controls; ceilings on production profits and trade markups (Ulyanovsk, Astrakhan, Yaroslavl); and requirements for enterprises to supply part of their production at lower prices, sometimes as an offset to taxes. With prices below market clearing levels, rationing was necessarily introduced in a number of places.[4] The Volga cities, and corresponding regions, were part of this process, but each region and city implemented its own specific policies in accordance with its ideology, ability and perceived needs.

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[3] The topic of price control on marketed goods, especially food, is covered in many papers, including Berkowitz (1996), Berkowitz and DeJong (1998), and de Masi and Koen (1996).

[4] 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, Nizhni, and Tver. Here the objective is to protect producers, typically public enterprises, rather than consumers.

Prices in Ulyanovsk city were clearly lower than elsewhere, with Volgograd also showing the effects of extensive price controls. Nizhni and Samara had the highest prices, with prices in Saratov, Cheboksary and Kazan falling in-between. At the local level, price subsidies have been typically financed from extra-budgetary funds. Special taxes, including those on new businesses, covered part of the cost. In order to control for over-consumption, Ulyanovsk also developed a very elaborate rationing system that was abolished only in July 1996.

But direct food subsidies have also been partially financed at the regional level. In Ulyanovsk, 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, although such support partially reflects the relative size of the agricultural sector in the region. The largest supporters of agriculture, as indicated by expenditure shares in the regional consolidated budget for 1995-96, were Tatarstan (18 percent) and Ulyanovsk (16 percent), compared to a Russian average of about 16 percent. And Tatarstan had already reduced its state order for grain to 70 percent of production, allowing farmers to sell on the local market, because agriculture was previously absorbing 25 percent of the regional budget. Although providing little or no direct price controls on food, Saratov spent a relatively large amount (13 percent) on agriculture, partly as direct state investment, and also imposed export restrictions to reduce food prices.

Other prices. Of course, food prices are not the only prices subsidized or otherwise controlled. Appendix Table 5 gives prices of basic municipal services as of end 1996 in 8 Volga cities. On average and with the exception of natural gas, Ulyanovsk prices are again at the lower end of the spectrum. Kazan's remaining price controls are financed in part by large subsidies to important state enterprises. Prices appear to be highest on average in Niznhi.

Overall price controls. Baranchuk 1998 provides three alternative rankings of price controls in the Volga cities: the proportion of goods and services under price control; the severity of the price control method; and deviations from the national average of a comprehensive ranking based on direct price subsidies, fixed or maximum prices, rationing, limitations on food industry profitability and price mark-ups (Table 4).[5] All three rankings show that—with the exception of Saratov, where price controls have been reduced—the "Red Belt" regions have the highest price control. The five "Red Belt" regions, defined as favoring the Communist Party candidate Zuganov over Yeltsin in both 1st and 2nd rounds of the 1996 presidential elections, are Astrakhan, Volgograd, Saratov, Ulyanovsk and Cheboksary.

[5] These rankings were originally provided in TACIS 1996 as regional indicators, however the surveys were taken in the capital cities.

These rankings are corroborated by data in Appendix Table 6. The cost of a standard set of 25 basic food items in Ulyanovsk was still the lowest of the Volga capitals in 1996, although by 1997 it was only slightly below costs in Kazan and Cheboksary. The highest costs were in Samara in 1996 and in Samara and Astrakhan in 1997, although their prices were still slightly lower than the Russian average. Berkowitz and DeJong 1998 show that substantial inter-regional price differentials can be explained by supply and transportation costs, but very large differences, such as between Ulyanovsk or Kazan in the middle Volga and Saratov or Astrakhan further south, clearly result from food-price controls.

Appendix Table 6 also shows the cost of the monthly subsistence minimum calculated for the regions starting in 1994. Although varying in its composition among regions, this measure is of interest as it covers a broader category of expenditures than the 25 food items. Both measures show that costs are highest in Samara and lowest in Ulyanovsk. They also show that prices are relatively lower in the cities of Astrakhan and Volgograd than in their surrounding regions and relatively higher in Nizhni than in its surrounding region. This difference is consistent with the city rankings on price controls showing higher price controls in Astrakhan and Volgograd than in Nizhni. In Section IV, the broader basket will be used as an alternative deflator to the regional CPIs for outcomes measured in current rubles.

Fiscal Policy at the Municipal Level

Under the soviet regime, cities had no independent policy authority, but they nevertheless provided consumer goods and services such as food markets, laundries, and theaters. And they had primary responsibility for public services. Even so, some public services, such as education (primarily kindergartens), health, housing, utilities, and even some public transportation and road building fell under the responsibility of large enterprises operating in the cities. In most cases, the enterprises provided these services only to their employees, but sometimes, as in transportation, the enterprises provided services for the entire population. The evolving role of fiscal policy in the Russian city is discussed in more detail in de Melo, Ofer and Yossifov 1999. Here, we focus on a small number of fiscal policy indicators of reform.

Revenue issues. In fact, it is quite difficult to identify useful indicators. On the revenue side, there are three main sources: shared taxes, transfers, and own revenues. None is 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. They are sometimes revised during the course of the year, but less frequently in recent years.. Similarly, city officials have little control over transfers from higher levels of government. It is likely that cities put more effort into collecting taxes—such as income and property taxes—that allot them high shares.

The third source, own revenues, is relatively small and may be maintained off budget. Mitchneck 1994, for example, shows that extra-budgetary funds accounted for an estimated 11 percent of all expenditures by the city of Yaroslavl. The incentives for cities to operate extra-budgetary 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, such funds are financed by fines, revenues from privatization, rental of municipal property, profits from direct economic activity, and carryover from a previous year budget surplus. Zhuravskaya 1998, however, finds that extra-budgetary funds are either very small or non-existent at the local level, partly because there are no stable sources of revenues for such funds. Acknowledging some ambiguity in the meaning of the size of own revenues on budget, we nevertheless use such revenues from property and other taxes as an indicator of municipal tax effort and hence municipal reform.

Expenditure issues. 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 also subsidized housing and utilities to middle-income families. A declining ratio of expenditures on "national economy" to expenditures on health and education has been seen by some as reflecting an important aspect of reform in Russian cities (Zhuravskaya 1998, Halligan 1995), 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 is an important aspect of reform, but the acceptance of financial responsibility for these services by municipalities prior to the transfer was also important, hence the ambiguity.

Another problem, making budgetary expenditures 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; 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.

Indicators of reform. As adequate budgetary data are not available for individual capital cities, we rely on budgetary data for Cities under Regional Jurisdiction (CRJs), supplemented by specialized reports, to detect changes in municipal finances. CRJs are typically cities with more than 25,000 people (see Appendix Table 2 for CRJ population by region). They are strongly affected by the capital cities, which in 1996 accounted on average for 62 percent of the CRJ population, although this varies by region.

CRJ data are used to obtain the two indicators of fiscal reform shown in Table 5. The "tax effort" indicator is calculated as the *per capita* collection of "property tax" plus "other taxes" by CRJs in 1996 as a percent of the annual wage in the capital city.[6] Cities retain 50 percent of the property tax and so have a strong incentive for collection; other tax shares are much lower. And cities retain a hundred percent of "other taxes", which they initiate. Thus high collections of these taxes are likely to indicate a pro-active city administration. Interestingly, the highest tax effort occurs in Saratov with one of the lowest wages and in Kazan with one of the highest wages. The lowest tax effort is in Astrakhan. High taxes can of course discourage business activity, but own revenues do not make a large difference in the overall tax burden. Poor tax design and collection methods are likely to be reflected in the indicators for favorable business environment discussed below.

The "housing subsidy burden" is calculated as the *per capita* housing subsidy in Volga CRJs in 1996 as a percent of the annual wage in the capital city. Unlike "tax effort", which is seen as a reformist policy, a high housing subsidy indicates a lagging effort to reduce undesirable subsidies for mostly middle-class housing and utilities. It can also indicate lagging housing privatization, as privatization reduces the burden. The "housing subsidy burden" indicator is highest for Saratov and lowest for Ulyanovsk and Cheboksary.

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.

Housing privatization. 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 a 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, half the housing stock was private. But privatization rates are actually a better indicator of privatization policy than ownership structure, because of variations in the initial level of private ownership. Table 6 shows that by 1996 the Russian average of 36 percent for housing privatization was surpassed only in Volgograd. It was almost achieved in Nizhni, Astrakhan, and Tver, followed by Saratov, Samara, and Yaroslavl. Cheboksary, and especially Kazan and Ulyanovsk, trail far behind.

Small-scale privatization. Most Volga cities privatized their small-scale enterprises early (1992–93). 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 Nizhni, Volgograd, Samara, Yaroslavl and Tver, international agencies, such as the IFC, the EBRD and the EU, were involved in privatization, and privatization proceeded relatively

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

quickly. In Ulyanovsk, small-scale privatization started later than most Volga cities, with the main wave occurring in 1994–95. And in Cheboksary, only 58 percent of the original municipally owned enterprises were reported as privatized by mid–1997. There are, however, no readily available, comparable statistics for all the Volga cities on small-scale privatization, although cities that privatized early and quickly are likely to score well on the indicator for small enterprise development discussed below.

Support for the Business Sector

City governments are partly responsible for the creation of a friendly and supportive environment for business sector development. Such an environment typically includes a variety of activities that are difficult to measure, much less to rank, including encouragement of banking and other financial services, regulations for registration and licensing of business activities, business information and training, and support for large-scale enterprises, whether or not privatized by federal or regional authorities. Some indicators, such as the tax regime, are inappropriate in that they are largely dictated by federal and regional governments. Here we use the number of small enterprises per 1000 residents and foreign investment as indicators of city support for the local business sector.

Small enterprise development. Since 1991, there has been an explosion of registered businesses all over Russia. Some were new independent businesses, and others were small and medium 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, Yakovlev 1998). According to most statistics, between a half and two thirds of all small businesses are in trade and restaurants, and the rest are divided between consumer services, manufacturing and construction. Most of them are therefore the market network itself.

The regional data on small enterprises per thousand residents is considered an adequate proxy for local government support for small businesses, since most small-scale enterprises are in the cities. Additional data on the total number of enterprises and organizations by region are given in Appendix Table 7. During the last years of the Soviet Union, 1990–91, most Volga regions had about two enterprises per thousand people, resembling almost a "planning norm". Only Nizhni and Samara deviate on the lower end with significantly less enterprises, and Tver on the upper end with significantly more. By 1996 the total number of enterprises was at least five times higher across the board, and particularly high in Samara, Volgograd and Saratov. Samara, and Volgograd regions, together with Yaroslavl, also led in the number of small enterprises. The laggards were Ulyanovsk, Chuvashia, and Tatarstan and also, surprisingly, Tver and Nizhni. As can be seen from the table, some Volga regions have more enterprises than the Russian average, and most other regions are near the average. And yet the Russian average, even the Moscow average, is not considered high by East European standards (Frye and Shleifer 1997).

As with other indicators, the small enterprise indicator must be interpreted with caution. Most Volga regions show a decline in the number of small enterprises during

1996, possibly because of consolidation of registries. In any case, Hanson 1997 points out that the changes between 1990 and 1996 are difficult to interpret, as many of the state shops providing local goods and services were not separate accounting units during the Soviet period. Hanson also notes that house building in the countryside around the cities of Samara and Togliatti and new business and consumer services such as travel agencies and cafes are extensive, but the regional Goskomstat has no information on such developments.

Foreign investment. Foreign investment, particularly in the form of real investment in joint ventures with a local producer, can be an effective vehicle for enterprise restructuring (see city case studies on Samara, Ulyanovsk, Volgograd, and Kazan). In addition to financing, which is scarce and costly in Russia, foreign investors bring with them modern technology, modern management and ready-made export lines. By the end of 1996, Moscow alone had more than half all the joint ventures in Russia and had also received about 70 percent of the cumulative foreign investment, including portfolio investment. While it is true that some Moscow joint ventures benefit, or even take place in, other regions, there is no question that the regions are less attractive to investors.

In the Volga region, foreign investors are attracted by oil, gas, petrochemicals, aerospace and automotive industries. However, actual investment appears to reflect the local business environment as much as the presence of such assets. Nizhni quickly gained attention by attracting foreign investment and international support for enterprise restructuring and early privatizations; but Samara and Tatarstan appear to have matched, if not overtaken, Nizhni in offering a favorable business environment and good public relations. Since January 1995 Tatarstan provides exemption from local profits and property taxes for 3 to 5 years to companies with at least 30 percent foreign equity totaling $1million or more. It also authorizes foreign investors to own land and buildings. President Shamiev is trying to attract domestic as well as foreign funds by floating special investment and oil bonds and selling government equity stakes in industrial companies. In Samara, local government officials welcome foreign businessmen enthusiastically and describe themselves as facilitators rather than controllers of business partners. Astrakhan also has substantial international contacts, but foreign investment remains low.

Available data show that Tatarstan and Nizhni regions received the most foreign investment *per capita* in 1997, followed by Samara (Appendix Table 8). Yaroslavl, Volgograd and Saratov received about half the Russian Federation average, while Astrakhan, Ulyanovsk, Chuvashia and Tver received very little. Nizhni and Tatarstan also show the highest regional output by joint ventures (also Appendix Table 8), followed distantly by Yaroslavl, Saratov and Volgograd. The lowest number of joint ventures and their lowest real outputs are in Chuvashia, Tver, Ulyanovsk and Astrakhan.[7]

[7] Since early 1995, Tver region has provided a five-year exemption from profit, property and land taxes to private investors. Ninety percent of the region's joint ventures are located in the city of Tver, which has participated in a number of foreign supported projects aimed at the transforming the city to be compatible

Available city data for 1995 and 1996 in Table 6 show that typically the capital receives higher foreign investment *per capita* than the region as a whole, although this is not the case for Kazan and Samara where some of the largest enterprises are located elsewhere. Of course, foreign investment can vary substantially from year to year, so we also looked at studies that have ranked the general investment environment in Russian regions. All put Samara, Tatarstan, Nizhni and, more recently Saratov, at the top of the list, followed by Yaroslavl Volgograd and Tver, with Ulyanovsk, Chuvashia and Astrakhan at the bottom.[8] This ranking generally substantiates the use of the foreign investment indicator as a proxy for favorable business environment.

Overall Ranking On Policy Reforms

Table 7 provides a rough ranking of policy reform and also cities, concentrating on indicators for which some comparative data are available. The comprehensive Berkowitz/Baranchuk indicator is used for price liberalization. Tax effort and "housing subsidy containment" (the inverse of the "housing subsidy burden" in Table 5) are used for fiscal policy reform. Housing privatization, number of small-scale enterprises per 1000 residents and foreign investment levels are used as indicators of support for local business development. The rankings in the right-hand column suggest that Yaroslavl and Samara are the most active reformers, followed by Tver, Nizhni, and Volgograd. Kazan and Saratov are in the middle, less reformist than those just mentioned but more reformist than Cheboksary and Astrakhan. Ulyanovsk is at the bottom of the list.

IV. THE UNDERLYING POLITICAL LANDSCAPE[9]

Since independence in late 1991, the political power of Russian regions, and also cities, has increased substantially. Initially local heads of government were appointed, but central legislation provided for democratic elections of governors, mayors, regional parliaments, and city councils. The regions, and among them the republics, led the way with Tatarstan holding presidential elections in June 1991 and Chuvashia holding elections in 1994. For the Volga oblasts, political decentralization gained momentum in December 1995, when Nizhni, Tver, and Yaroslavl joined nine other oblasts for the first gubernatorial elections allowed by Yeltsin. These regions were expected to retain Yeltsin's appointees in office, and they did. The transition to democratically elected leaders was completed in all the regions by early 1997.

As of August 1997, six of the ten surrounding regions of the Volga capitals had signed a bilateral "power-sharing" agreement with the federal government. The first was Tatarstan, and the five others in chronological order are: Chuvashia, Nizhni, Tver,

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with a market economy.

[8] See for example *Expert* 1996 and MFK Renaissance 1998. Volchkova (1997) reports 212 joint ventures in Samara, as well as high involvement of large Western companies (Nestle, GM, Corning), and loans from both the World Bank and EBRD.

[9] This section draws on information from news reports, city case studies, MFK Renaissance (1998b), Zlotnik (1996), and Friedgut and Hahn (1994).

Saratov, and Samara. Typically such agreements cover budgetary relations, state property, regulation of branches of industry such as defense or agro-industry, ownership and use of natural resources. Both political and economic factors lie behind the impetus to conclude them. Tartarstan negotiated the greatest degree of independence and has been able to retain more than 80 percent of the taxes collected in its territory (OECD 1997). "Surplus" regions such as Samara, Nizhni, and Tatarstan that did not depend on budgetary transfers from the center, became even stronger.

Independence of Cities

Before 1996, most mayors were appointed by regional governors, with confirmation by the city council and then by the regional assembly. The most notable exception was Samara, where the first freely contested elections for mayor and city council took place in June 1994. Sysuev, the incumbent, was elected and then reelected in 1996, both times with a substantial majority. His independent political mandate affected the relationship between the city and regional administration, so that Samara under Sysuev was relatively independent. Cities such as Saratov, Ulyanovsk, Yaroslavl, Kazan, and Cheboksary were much less so.

On balance, the independence of cities appears to be increasing. As one indication, surveys in Samara in 1994 and 1996 showed a dramatic increase in the percent of citizens saying city authorities have more influence on local developments than regional or federal authorities (Romanov and Tartakovskaya 1998). The reality is, of course, that elections have given local officials a local power base, with which they can work to resist pressures from the region or the center. The increasing influence of local businessmen is probably a positive development in that politicians are encouraged to be more pragmatic, but in some cities mayors have allied themselves to some factions within the business community, thereby angering others. Councils in cities such as Nizhni, Tver, and Yaroslavl are made up of many small interest groups, making governance more difficult.

Common Characteristics of Local Leaders

Who are these local leaders and what characteristics do they demonstrate? Table 8 provides a list of governors and mayors of the Volga regions and capital cities, with indications of their political orientation. Two common characteristics can be observed. First, many of these leaders are strong, authoritative personalities, adept at public relations and image-making. And this characteristic spans the entire political spectrum. It includes conservatives such as Goryachev in Ulyanovsk and Shabunin in Volgograd. It includes reformers such as Nemtsov in Nizhni, Titov in Samara and Lysitsin in Yaroslavl. And it includes more recently elected populists such as Limanskii in Samara and Sklyarov in Nizhni.

Second, many successful local leaders have avoided association with any political ideology in favor of a more pragmatic approach, including a "hands on" involvement in the local economy. At the city level, Samara's Sysuev campaigned successfully on the basis of his business skills rather than any specific policies or political affiliation. In

Kazan, most of the city council members are directors of enterprises, and polls show that the electorate has become increasingly apolitical. At the regional level, Fyodorov of Chuvashia campaigned as a "rule of law" advocate in a region with strong ethnically based political positions. And Samara region's Titov, a member of Our Home is Russia, is well known for his pragmatism and professional skills.

Implications for Reform

At the regional level, reform may be as much a means to an end as an end in itself. Malyakin 1997 says Volga regions can be classified into two groups. In the first group, the governor forms a "power pyramid", or alliance, with the center and is accepted by the local elite. He is rewarded by the center represented by Yeltsin with virtual autonomy, providing a bias in favor of reform.[10] This occurred in Samara and Nizhni under Nemtsov, although Nemtsov complicated the model by becoming a self-publicist. The two republics, Tatarstan and Chuvashia, also belong to this group. The second group is characterized by weak leadership and thus leads to meddling by the center. Saratov is cited as an example of the second group prior to the appointment in early 1996 of Ayatskov, who brings Saratov into the first group.

The two-group analysis helps to explain the political evolution of some of the "Red Belt" regions. A quick look at Table 7 shows that the five Red Belt cities (Astrakhan, Volgograd, Saratov, Ulyanovsk and Cheboksary) have on average followed the conservative political orientation of the local population and have undertaken far less reform than non-Red Belt cities. But Volgograd under Shabunin and more recently Saratov under Ayatskov have broken out of the traditionalist mold, with more progressive reform profiles similar to those of Nizhni and Kazan. Volgograd gets high marks on reform for small business development and housing privatization. Saratov has been a leader in price liberalization and local resource mobilization. And Saratov region elected a non-communist duma at the end of 1997 and is leading in breakthrough land legislation. It may be deserting the Red Belt in terms of some market reforms, but these reforms are achieved through authoritarian means normally associated with conservative policies. Moreover, the stick of the hard budget constraint in Saratov has not been balanced by the carrot of good government, which needs to create the right institutional setting and service support for businesses. Recently Saratov received the lowest rank of six Volga cities on business environment and municipal services from a small survey of businesses, and it is unlikely that governance was better in 1996.[11]

At the city level, elected mayors begin to differentiate themselves more clearly from the regional leadership starting in 1996. Where differences emerge, the city leadership appears to be somewhat more reform-minded. This is the case, for example, in Ulyanovsk where Marusin won the race for mayor over Ermakov in 1996 partly because he was seen as more independent of the governor. Chekov, the communist mayor of

[10] Still, some attempts of assertive independence, such as Volgograd's attempt to introduce its own taxes, were successfully quashed by the center.

[11] See de Melo, Ofer, and Yossifov (1999).

Volgograd is more reform-oriented than Maksyuta, a communist who in 1996 defeated Shabunin, the previous governor of Volgograd oblast. Shabunin was initially moderate traditional but became increasingly autocratic as the economy deteriorated and orthodox communists came to power. Tver may be seen as intermediary, with Belousov popular but constrained.

The prevalence of pragmatism over ideology can favor market reforms. In some cases, it allows governors and mayors to be sometimes more reform-oriented than the city councils or regional assemblies with which they work. At the city level, Volgograd's Chekov, a communist, is more reform-oriented than the city council, and Ulyanovsk's Marusin is leading the city toward more democracy and more focus on business development. At the regional level, Guzhvin of Astrakhan, a non-communist and pragmatist, works with a communist-dominated regional assembly. But pragmatism does not always work in one direction. Resource-rich Tatarstan can better afford continued subsidies than most of the other regions, a pragmatic consideration. And so Kazan has been only moderately progressive on price liberalization, privatization and containment of housing subsidies.

Democratization

With few exceptions, local administrations still rely on authoritarian power and centralization of operations—the "old ways" of governance. Many elected officials held important local positions under the old regime and were appointed to their positions a few years before the elections took place. Even when new faces were elected, much of the administration consists of former bureaucrats who mostly continue to run things as before. There is little positive correlation between reformist mayors and a democratic mode of governance. Some of the most successful mayors, and governors, have been of the Luzhkov type in the eyes of the people, as well as of foreign investors. Democratization and the pursuit of the "right" policies are still two different matters.

One aspect of authoritarianism is media control. At one extreme, Samara, perhaps the most democratic of the Volga cities, has experienced rapid development of its mass media. It has about a hundred local newspapers and a dozen local magazines, in addition to the national papers, and three local private TV stations and six private radio stations, in addition to national and local-government stations. At the other extreme, only local, primarily government-owned newspapers are read in Volgograd and Ulyanovsk, and these cities have no local privately owned TV and radio stations. The main newspapers in Cheboksary and Astrakhan are also local and government-owned. In Saratov, the most popular papers are the more open and more informative national papers, distinguishing the local population as more independent and cosmopolitan. But Ayatskov has reportedly recently signed an "Agreement on Civic Peace and Social Partnership" restricting freedom of speech. Official statistics and documents are difficult to obtain in Saratov, and also in Nizhni and Volgograd. Of the former closed cities, only Samara seems to have truly opened up.

V. OUTCOMES

Economic and social outcomes for the period 1990–96 are no easier to measure than initial conditions or economic reforms. Two problems are worth mentioning up front. The first problem is that there is no satisfactory indicator of economic growth in the Volga capitals. Estimates of money income and GNP are available only on the regional level, and the city index of industrial production ignores any growth in services. The second problem is that, because of differential inflation, indicators expressed in current rubles must be converted to more comparable values.[12] 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). The last is given in Appendix Table 1 and the other two are given in Appendix Table 6. In what follows, "real" economic values are calculated with the CPI, which is the most broadly based deflator available over the longest period. The CPI currently distinguishes close to 400 goods and services.[13] In measuring the living standard of lower income groups, we use the cost of minimum subsistence as it is broader based than the cost of 25 basic food items.

Economic Outcomes

As was the case in 1990, no data are available at the city level on *per capita* income or GNP, although such measures would be the most comprehensive measures of economic success and living standards. We therefore look again at the average real wage, a reasonably comprehensive measure of economic outcome earlier in the transition. As the market economy develops, however, households benefit increasingly from new sources of income, including business profits, rents and returns on financial assets. We therefore consider other possible indicators of economic outcomes, including the available city-level data on industrial production and employment and overall changes in wages and employment.

Real Economic Wage

Figure 2 and Table 9 show 1996 average monthly wages in 1990 rubles, what we call the "real economic wage" in the Volga capitals. Unlike 1990, when wages were virtually the same (Table 1), these estimates vary significantly, and they differ from the regional wages shown in Appendix Tables 4 and 9. Tver has the highest real economic

[12] Prices of non-traded goods might 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 and Berkowitz and DeJong 1998).

[13] 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 of change starting in mid-1991, no initial price level is provided on which to base this change. Since most prices in 1990-91 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 1990–91was the same as that for the country as a whole.

wage, followed by Kazan, Samara and Volgograd. Ulyanovsk and Saratov have the lowest wages, only 60 percent of those in Tver. Data for 1996 regional real per capita GDP (Appendix Table 3) suggest that capital-city wages are relatively high in Tver and relatively low in Ulyanovsk and Saratov, given the strength of the regional economy.

The wage picture at end–1996 represents a big and significant change from the Soviet period. Not only do wages vary among cities, disparity within cities has increased. Data for Samara, for example, show that the decline in the industrial wage was higher than the decline in the average wage, and substantial differences have developed among other branches of employment. Wages in the financial sector rose to five times the average wage, and wages in education, science, culture and health care dropped to 60 percent of the average.

Industrial Production and Employment

A decline in the absolute level of industrial production is associated with the shock of transition, and the index of industrial production declined in all ten Volga capitals through 1996, the last available data (Appendix Table 11). Not one city showed signs of recovery. As shown in Figure 4, the smallest declines were in Ulyanovsk, Nizhni, and Kazan, in that order. All three cities tried hard to protect their industry and to some extent succeeded during the period under review. The largest declines were in Saratov, Tver, and Cheboksary. Most industry in Tver and Cheboksary was light industry or machinery/metalworking, the sectors shown by Ivanov 1998b to be the least competitive.[14] Although only 34 percent of Saratov's industry was concentrated in these two sectors, the hard budget constraint on industry imposed by Ayatskov and his predecessors was not balanced by any serious institutional reform. Thus, not only did industrial wages and employment decline precipitously, little was done to promote the regulatory framework and market services required for healthy development of new businesses.

Although production and employment both declined during 1990–96, a fact consistent with the expected shift of output in favor of services,[15] employment declined less radically than 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.

Overall Changes in City Wages and Employment

Table 9 summarizes several labor market characteristics in the Volga capitals: changes in city employment and average real wages for 1990–96; and official city unemployment in 1996. In addition, it shows the stock of regional wage arrears at end–1997 as a percent of the wage bill, reflecting pressures to maintain both wages and employment. All these indicators deteriorated everywhere in Russia during 1990–96, but

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[14] Appendix Table 12 shows the empirical analysis of changes in industrial shares for five Volga capitals (Ivanov 1998b).

[15] See Easterly, de Melo, and Ofer (1994).

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.

A stylized view of labor market dynamics in Russia during the 1990s is presented in Figure 3. It shows three types of change, represented by shifts in the relevant curves: a decline in the demand for labor (shift of Ld90 to Ld96); a smaller decline in the supply of labor due mainly to the exit of women and a discouraged-worker response to the decline in demand (shift of vertical Ls90 to Ls96); and a policy-driven counter shift in the demand for labor, as city governments use a variety of measures to avoid unemployment (shift from Ld96 to Ld96'). Assuming the shifts represent average movements, the equilibrium point would move from A0 to A1, which indicates some decline in both wages and employment. Each Volga city is then positioned in Figure 3 according to the data presented in Table 9.

The two extreme cases are Samara and Ulyanovsk. Samara had a relatively moderate decline in wages but the highest recorded decline in employment. Relatively low wage arrears corroborate the perception that employment absorbs the burden of labor market adjustment. Ulyanovsk, on the other hand, strongly protected the level of employment but had to allow real wages to drop quite sharply. As we know, Ulyanovsk then cushioned those lower wages by price controls. Unemployment was kept low, but a relatively high level of wage arrears suggests the artificial nature of some employment.

Tver stands out as having the lowest decline in real wages, only a modest decline in employment, low official unemployment, and low wage arrears. Kazan is not far behind Tver, but has a somewhat larger decline in wages and perhaps a smaller decline in employment. The high level of wage arrears in Tatarstan suggests that employment in Kazan was maintained artificially, however. The other city managing to keep a high level of employment was Volgograd, combining a moderate decline in wages, significant wage arrears, and pressure on enterprises to maintain jobs. Like Samara, Cheboksary and Yaroslavl had large losses in employment, but with smaller declines in wages. In both cases, official unemployment was relatively high and wage arrears significant.

Social Outcomes

Real Social Wage

The average monthly wage divided by the cost of the subsistence minimum is the best available measure to show the living standard of the poor. As seen in Figure 2 and Table 9, the ranking of cities by this measure differs from the ranking according to the real economic wage. In particular, Ulyanovsk, which has the lowest real economic wage, has one of the highest real social wages.[16] And Tver, with the highest real economic

[16] Although Ulyanovsk also has the lowest cost of 25 basic foods, the differential with other cities is less than the differential for the minimum subsistence.

wage, has only a moderately high real social wage. The difference between the two measures is the relatively low cost of the subsistence minimum basket in some cities compared to the regional CPI. Kazan, Nizhni, Ulyanovsk, and Yaroslavl have the highest real social wage, and Saratov has by far the lowest, combining a situation of low economic wages with substantial price liberalization. In fact, Saratov suffers from declining population (low birth rate and very high death rate) and wide income disparities with a large percent of the population receiving less than the subsistence minimum. Yaroslavl, Nizhni and especially Ulyanovsk, have dramatically improved the purchasing power of low income groups by keeping subsistence costs down.

Income Distribution

Increasing inequality in the distribution of income is a well-recognized consequence of transition. It has been observed in both Central and Eastern Europe and in the Newly Independent States of the Former Soviet Union. The statistics available in 1996 suggested that in Russia such inequality was already at OECD levels in the late 1980s and had increased to the (higher) level of middle income countries by 1993.[17] Typically, more inequality reflects increases in unemployment and in wage dispersion; higher income from rent and profits, which are less equally distributed than wages; and growing regional inequalities.

Appendix Table 13 provides evidence of increasing inequality both within and among the Volga cities. Although *per capita* sales of consumer goods have dropped strongly in all cities (with available data) except Kazan, telephones and cars per 1000 residents have increased substantially. This suggests that while the purchasing power of the average citizen is declining, the purchasing power of the top half of households is increasing. The two most extreme examples appear to be Astrakhan, where consumer goods sales dropped 43 percent and cars increased 60 percent, and Tver, where consumer goods sales dropped 39 percent and cars more than doubled. For evidence on diverging incomes between capital cities and their surrounding regions, see de Melo and Ofer 1999.

Education and Health

There are relatively few output indicators in the social sphere available on a comparative basis at the city level. One set of indicators is provided in Appendix Table 14. It includes the level and change in the city population of school age (below the working age of 15) together with the level and change in the number of children in 2nd and 3rd shifts. What is striking is that although the school age population declined between 1990 and 1996 in all cities for which data are available, the number of students in 2nd and 3rd shifts increased.

[17] See Figure 4.1 of World Bank 1996.

VI. INTERACTIONS AMONG INITIAL CONDITIONS, POLICIES AND OUTCOMES AND OTHER OBSERVATIONS

As discussed above, there are no comprehensive indicators of growth at the city level, and employment data have more than one interpretation. Data on most social indicators are partial. We therefore use the real economic wage and the real social wage as indicators of socioeconomic outcomes in the cities, despite their limitations. They are shown in Table 10 along with the summary indicators for initial conditions and policy reform. Given the data available and the methods used, our observations on how they are related should be characterized as hypotheses rather than conclusions.

Initial Conditions and Policies

With one exception, namely Astrakhan, rankings on initial conditions and policy reform are similar for all cities. Initial conditions were particularly poor in Cheboksary and Ulyanovsk and policy reform has been slow in both cities. In Samara, Yaroslavl, 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 and success of economic reforms at the municipal level just as they are at the macro level.[18] It is possible, for example, that relatively poor prospects caused local leaders in Ulyanovsk and Cheboksary to be more cautious on reform.

Initial Conditions, Policies and Outcomes

The close correspondence between initial conditions and reform implies that it is difficult to associate them separately with outcomes. The discussion here will therefore relate economic and social outcomes to initial conditions and reforms together. In doing this, it is possible to distinguish three cases, which in turn suggest some generalizations. Saratov epitomizes the first case, where socioeconomic outcomes are worse than one might expect given initial conditions and policy reforms. Yaroslavl and possibly Volgograd fall into this camp as real economic wages are less favorable than might be expected. Ulyanovsk epitomizes the second case, where social, if not economic, outcomes are better than one might expect. Kazan also falls into this camp, although Kazan's enhanced access to resources provides a fairly clear explanation for its favorable outcomes. The third case includes the other five cities that have performed more or less as expected.

In the first case, Yaraoslavl and Volgograd have high rankings on reform, suggesting that there may be a time lag between reform and recovery. Also, it is likely that in reformist regions, with a more developed private sector, wages contribute less to total household incomes than in the conservative regions. Thus, any positive relationship observed between reforms and outcomes measured only by wages may be understated. The poor performance of Saratov appears to result at least in part from weak leadership and poor governance prior to Ayatskov and a policy favoring agriculture over industry.

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[18] See de Melo, Denizer, Gelb, and Tenev (1997) for evidence at the macro level.

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 is rich in natural resources and has attracted foreign investment. It has maintained relatively stable real wages and employment and good relations with the center. Although total industrial production declined more than in Nizhni and Ulyanovsk, it declined considerably less than elsewhere.

The second case also suggests that delaying reforms may help delay production declines or that some "reforms" may be better than others. Ulyanovsk's efforts to protect consumers by delaying price liberalization for basic foods and municipal services appear to have been successful through 1996. Despite the lowest economic wage, the Ulyanovsk's social wage was one of the highest. Given the limited time horizon of this study, it would appear that higher living standard 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 over consumption.

In the third case, Samara and Tver score relatively well on socioeconomic outcomes as well as on initial conditions and reforms. Cheboksary and Astrakhan score poorly on most indicators, and Nizhni falls in between. This case highlights the fact that Red Belt cities have typically lagged in reforms and have had less successful economic outcomes.

What Matters

What follows are some observations on the hypotheses suggested above:

Resources matter. Kazan 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 1994–96 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 was also the biggest recipient of federal transfers during the first 9 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).

Other cities and regions may have been less successful in attracting transfers from the center, but actions reflect not only the importance of resources but also the importance of political and legal bargaining in obtaining resources. In November 1996, Volgograd mayor Yuri 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 a deal 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 to GAZ (the car factory) has made a significant difference to the local economy in Nizhni.

Weak government matters. This hypothesis is not as obvious as it sounds. At the beginning of transition, some observers thought the market economy and hence growth would flourish best where government was weak or absent, 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. The reality appears to be different, at least in Russia.

Strong leadership at the local level seems to have paid off. Weak leadership has not. This may be partly because 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 in the competition for resources. Uncertain alliances characterized politics at the local level in Saratov and Ulyanovsk prior to 1996; and, as mentioned earlier, city councils in Yaroslavl, Tver, and Nizhni are made up of small interest groups that make governance difficult. Most of these cities (see below on Tver) have performed less well than expected. The most obvious example of weak government is Saratov. The governors prior to Ayatskov, elected at end–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.

Time lags may matter. Yaroslavl, a city with favorable initial conditions and the highest ranking on reform, has only a moderate real economic wage after six years of transition. At the same time, the slowest reformers, namely Ulyanovsk, Cheboksary and Astrakhan have done better than their reform record would indicate *if* reform were positively associated with favorable socioeconomic outcomes. Ulyanovsk was a region where the oblast government tried 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 1994–96.

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, that the successful adaptation of defense industries is rare, the hard budget constraint on Saratov's defense industries may result in large early declines in production but release resources 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 Ulyanovsk would continue in the future even if industry elsewhere picks up. It is too soon to comment definitively on such scenarios.

Red Belt matters, with some exceptions. Red Belt cities all ranked low on the socioeconomic outcomes indicator, whereas non-Red Belt cities ranked high. This is despite the fact that one Red Belt city, Astrakhan, appeared initially to have quite favorable prospects while one non-Red Belt city, Nizhni, did not. These outcomes are likely to be due in part to slower reform in the Red Belt on average. Three of the Red Belt cities—Ulyanovsk, Cheboksary, and Astrakhan—have clearly lagged on reforms. But there is diversity within the Red Belt group. Volgograd was an early reformer, and Saratov has more recently stepped up its reform efforts. Historically, Saratov was a cosmopolitan city and in the late 19th century benefited from substantial foreign investment in industry. Taking into account its favorable natural resources, deserting the Red Belt should not be surprising.

Some non-Red Belt cities may have been slower on reforms than expected. Kazan falls into this category. High income and access to resources allow Tartarstan to pursue a course of multiple objectives, permitting it to become an honorary member of the Red Belt, undertaking "development with a human face". Slightly surprising is the absence of Nizhni from the very top rank on policy reform, as political leaders there projected a strong reformist image during the early days of transition.

Other points:

Growth poles. It may be that Moscow's proximity is an advantage to Tver, providing Tver positive spillover effects from Moscow's size and growth to firms in Tver that now benefit from economies of scale not otherwise possible given its relatively small population. Proximity also creates externalities arising from the impetus for innovation and spread of knowledge, assuming their benefits outweigh any congestion costs. Moreover, four adjacent regions in the middle Volga—Tatarstan, Samara, Saratov, and Volgograd—appear to have formed their own growth pole. They are supporting pro-reform politicians and attracting foreign investment. Part of Samara region's success may be the high urbanization rate and the unusual conglomeration of two large, neighboring cities—Samara and Togliatti. 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 1977, 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.

Growth poles can, of course, have negative, as well as positive, effects, especially in 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 channeled more to Togliatti and Samara has performed less well than might be expected. Togliatti, a city of more that 700,00 people, has a youthful population and experienced a 6 percent plus increase in industrial production in 1996. At this time, the average monthly wage in Togliatti was 50 percent higher than for the region while the wage in Samara was 10 percent below the region's wage.[19]

Natural resources. The energy sector did attract foreign investment in Kazan and Samara, and to a lesser extent in Saratov and Volgograd. But as of end–1996 it was not a determining factor in overall foreign investment, much less general economic

[19] Statistics on Togliatti from "Togliatti in Business," city web page // www.tlt.ru on 11/30/98.

performance. With the exception of Tver, the cities in strong agricultural regions appear to have suffered, possibly from agriculture's competition for scarce resources.

Defense industry. We initially took a neutral position regarding the influence of defense industry on outcomes. Further analysis does not shed much light on this question. Leaving aside Kazan, because of its better overall access to resources, the experiences of Nizhni, Samara and Saratov suggest that these cities have not necessarily benefited from previous high levels of defense industry. On the other hand, they may not have suffered either, since the large size of these cities results in a relatively high level of industrial diversity despite the concentration of defense industry.[20]

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—Ulyanovsk, 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 found in small cities, the same point made for cities with a high level of defense industry.

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

Developments in 1997 and 1998

The time between the end of 1996 and mid-1998 was a period of "virtual stability" and of hopes for resumed growth in Russia. These hopes ended with the August crisis, but there were earlier warnings. During the period before the crisis, FDI increased, but financial capital flows dominated; high interest rates, especially during the second half of the period, discouraged real investment. Barter transactions and the use of other money surrogates increased and arrears proliferated. The following perspective on developments in 1997 and 1998 is based on partial data at both the city and regional levels.

Production. A number of cities experienced for the first time a small increase in industrial production in 1997 (Saratov, Cheboxary, some industries in Yaroslavl). This increase was combined with some decline in unemployment, explained in part by a continued decline in the labor force (Saratov, Yaroslavl).[21] However, a decline in profits

[20] Glaeser et al. (1992) provides evidence for the importance of industrial diversity based on the study of U.S. cities. Industrial diversity promotes growth, as knowledge spills over industry groups and stimulates new ideas and innovations. In other words, competition and inter-industry, rather than intra-industry, knowledge spillovers are important for growth.

[21] Interestingly, the 1997 data on registered unemployment show that the only two regions experiencing an

during recent years was reported by larger enterprises in Yaroslavl, especially in manufacturing and trade. And, in a late–1998 survey of 60 small textile enterprises in six Volga cities, more firms reported losing money than reported making profits (de Melo, Ofer and Yossifov 1999). They also reported a decline over the previous year in labor productivity and employment.

FDI. In 1997 FDI to Russia increased over 1996, but among the Volga regions FDI rose only for Samara (from \$9 to \$18 per capita), which ranked fourth among all Russian regions in FDI. It declined for Tatarstan, Nizhni and Saratov, and these regions plus Volgograd all ranked below Samara. Nizhni almost vanished from the list. In an evaluation of the investment risk in a number of regions Samara came in fifth place, Nizni sixth, Tatarstan eleventh and Saratov twenty-first (Carana Company 1998).

Prices. Goskomstat data for 1997 show that the disparity in the cost of 25 food items has narrowed among the Volga capitals, although the cost is still lowest in Ulyanovsk, Cheboksary and Kazan. The disparity in the cost of minimum subsistence has also narrowed. Saratov was the only city where neither of these costs increased in current rubles, so its relative position on the real social wage has improved. We know, however, that price controls still exist. An October 1998 survey of 60 textile and clothing firms in six of the Volga capitals found that two-fifths of the firms were subject to price controls.[22] Firms in Astrakhan and Samara had the most complaints. Most controls were product-specific, but some firms reported controls on retail margins.

Incomes and wages. Disparity in real incomes clearly increased among the Volga regions, and presumably the capitals, in 1997, with Samara showing a growth of 73 percent in real per capita income and Chuvashia only 19 percent over an 18-month period (Appendix Table 4).[23] Tver had a low-income growth as well as the lowest growth in real economic wage along with Ulyanovsk, suggesting that weak government may be dominating the Moscow growth pole effect. The picture on wages is different. The largest increases in the regional real economic wage in 1997 were in Chuvashia, Astrakhan, and Saratov. Saratov also appears to have experienced some increase in the real wage in and in regional per capita income during 1998, but this was before the crisis. As these regions contained three of the five capital cities with the lowest real economic wage in 1996, wage disparity appears to have moderated. The real economic wage was still quite low in Ulyanovsk and Yaroslavl in 1997, and real wages declined in Yaroslavl in 1998.

Fiscal. 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 upper level government were put in better formal order. In particular, the tax shares and transfers

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increase in registered unemployment are Samara and Tatarstan, the most successful otherwise (Appendix Table 10).

[22] See de Melo, Ofer, and Yossifov (1999) for further details on this survey.

[23] Note that December 1997 wage and income data in Appendix Table 4 will be biased to the extent that end-of-year bonuses are significant and vary among the regions.

accruing to cities were more predictable. All cities for which 1996–98 budgetary information are available managed to increase their share of "own taxes" and thus to offset declines in shared taxes and transfers from upper level governments. Of the three cities for which more complete budgets are available (Nizhni, Saratov and Yaroslavl), the situation in Saratov appeared the worse, with a consistent deficit, of 8, 10 and 5 percent during '96, '97, and '98, respectively. In 1998 budget expenditures in Saratov dropped to 63 percent of the 1996 level and only 43 percent of revenues were in cash.

Reforms. Reforms at the city level seem to have slowed in some critical areas. Small-scale privatization of enterprises was more or less completed, and the number of newly established private enterprises, and small enterprises more generally, declined in some cities. In Saratov there was still a marginal increase in the number of small enterprises in 1997, but the increment was less than in previous years, and the number of joint stock companies actually declined. The reform of the housing sector—including privatization and cost sharing by households—seems to have slowed down. In the 1998 city budgets for Yaroslavl, Nizhni-Novgorod and Saratov, expenditures on housing and utilities were between a third plus to 40 percent of total expenditures and growing over time. Only one region among the ten covered here, Samara, achieved housing cost-sharing of more than 50 percent by 1998, and three more regions—Tver, Chuvashia and Volgograd—achieved shares above 35 percent. Cost sharing in Saratov and Ulyanovsk remained below 18 percent, which is considered very low. Arrears of household payments for housing and utilities averaged about 20 percent of charges, with a much higher figure in Tatarstan (35 percent) and a much lower figure in Samara and Volgograd.[24]

Social. On the bright side, two cities, Saratov and Yaroslavl reported a significant decline in the number of crimes since 1996. However, the lack of economic growth has been aggravated by increasing income inequality even since 1996. In Yaroslavl, real wages are estimated to have declined by 25 percent in the first nine months of 1998 as compared to the first nine months of 1997. Income inequality declined very slightly over the same period but the decile ratio was still over 10 and the Gini coefficient .36 (Yaroslavl City 1998). Measures of income inequality for city of Saratov are not available, but regional data show an increase from 1997 to 1998, with the decile ratio rising from 7 to 10 and the Gini coefficient from .31 to .35.

Concluding Remarks

Several more general observations on Russian transition emerge from this paper. First, all cities have experienced radical changes in their institutions and their economies—changes associated on the one hand with the abolition of central planning and the introduction of freer markets and on the other hand with political decentralization and the introduction of local elections. Second, these changes have led to a wide diversity in economic and social outcomes. To some extent this diversity reflects

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[24] The information on housing is based on Institute for the Urban Economy 1998 and miscellaneous materials provided by the Institute.

differences in the central government's economic relations with regions, and especially with Tatarstan, arising from its lack of resolve and ability to treat them equitably. And to some extent it is the outcome of differing policies at the regional and local levels. As we have seen, most northern cities adopted policies more consistent with the central government's support of free market reforms, and most southern, Red Belt cities pursued more cautious and protective policies.

Third, in almost all cases we observe an increasing use of more pro-active economic policies by city governments. 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. Such differences in central and local government approaches seem to occur elsewhere, even in market economies; so it is perhaps not surprising. Nevertheless, pro-active interventions at the local level are of particular significance given the nature of Russian transition, where decentralization is as much from central government to local government as it is from public to private enterprises. A notable exception in recent years is Saratov, where Ayatskov has supported a hard budget constraint for industry.

Fourth, the jury is still out on the question of what were the right social and industrial policies during the first years of the reform. The possible time lag between policies and outcomes 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 has helped Russia weather an extremely difficult period? Samara appears to be setting a relatively good example with some institutional support for market reforms. But Ulyanovsk and Saratov represent two extremes on the policy front. Whereas Ulyanovsk has clearly lagged on market reforms, Saratov appears to represent a model of liberalization without institutional support. Both extremes have failed, but so far the social consequences of the Saratov model appear to be worse than those of the Ulyanovsk model.

And finally, with the credibility of the federal government in Russia at an all time low, foreign investors have no choice but to rely on the competence and reliability of local leaders, especially mayors and governors. They will be looking for evidence of accountability in the form of the rule of law and transparency in the form of reliable public information. Yet, information at the city level is often not available and not easily accessible. This study tries to demonstrate the potential usefulness of good information. In developed countries, such publicly available statistics would cover municipal employment; planned and actual city budgets and any extra-budgetary funds; municipal services such as public transport, police protection, garbage collection, and fire trucks; social statistics on education, health, and crime; air and water pollution levels; organization and composition of city courts; business statistics on firm ownership, activities, and employees; tourism; and public construction. Good information will attract local researchers to help monitor progress, as a basis for accountability, and to help diagnose problems, as a basis for public policy debate and political decisions.

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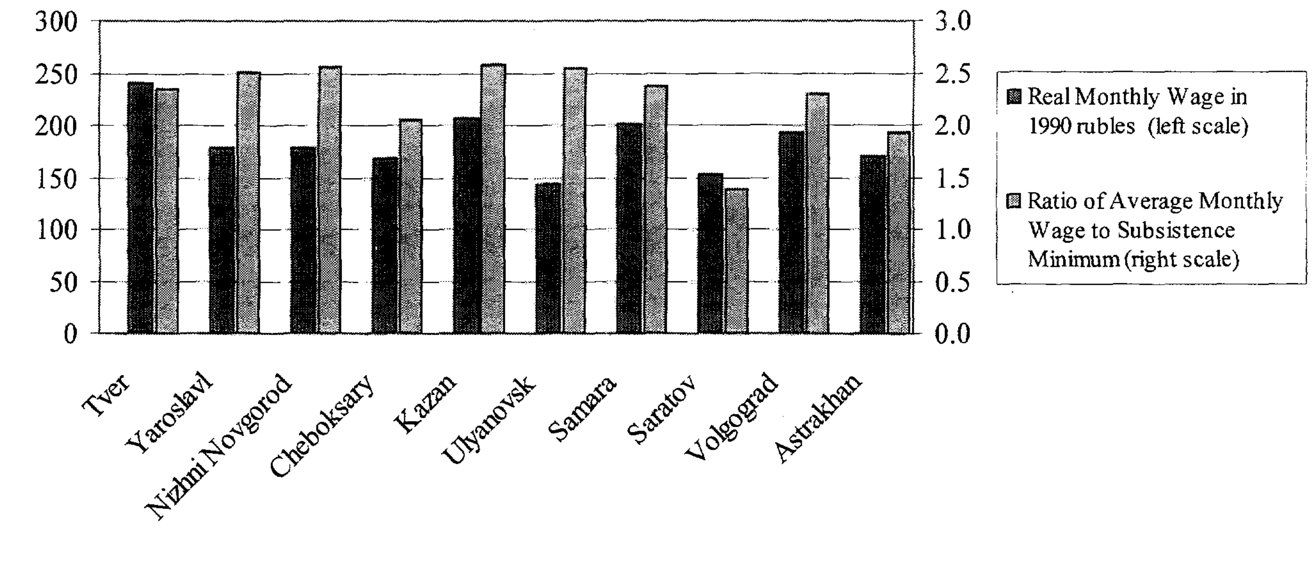
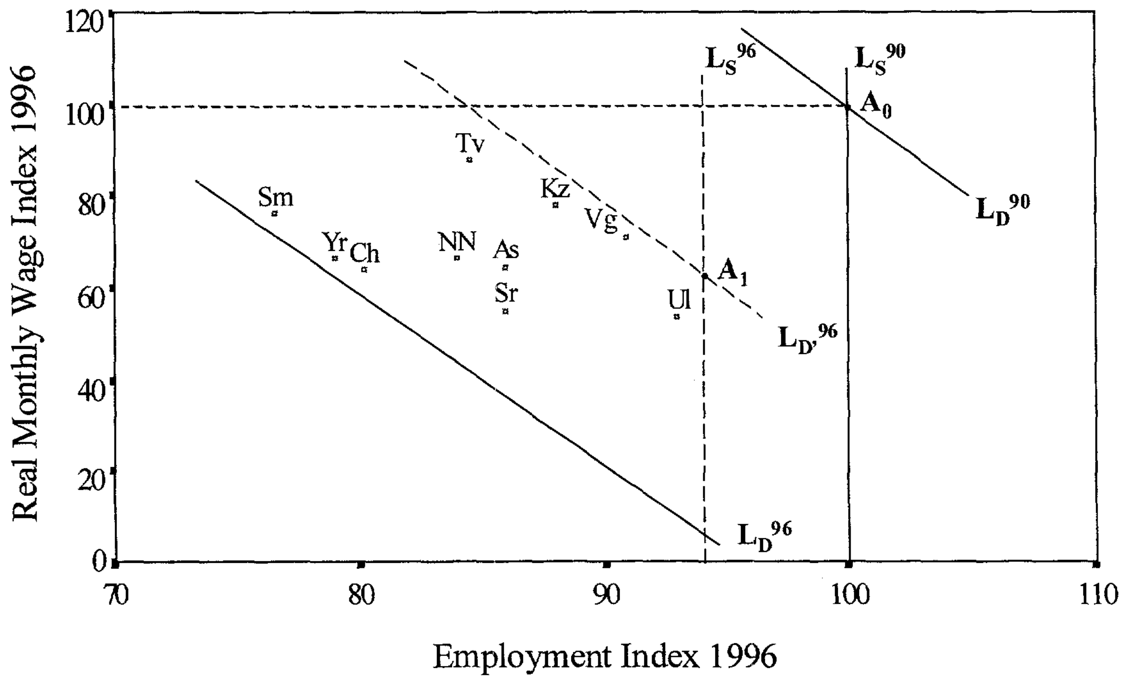
Figure 2: Real Monthly Wages and Ratios of Average Monthly Wage to Subsistence Minimum in Volga Cities in 1996



Source: Appendix Table 4.

Figure 3: Labor Market in Volga Cities, 1990 and 1996
(indexes equal 100 in 1990)



Source: Table 9.

Point A_0: Initial situation in each city (Real Monthly Wage Index and Employment Index equal 100 in 1990)

Stylized changes:

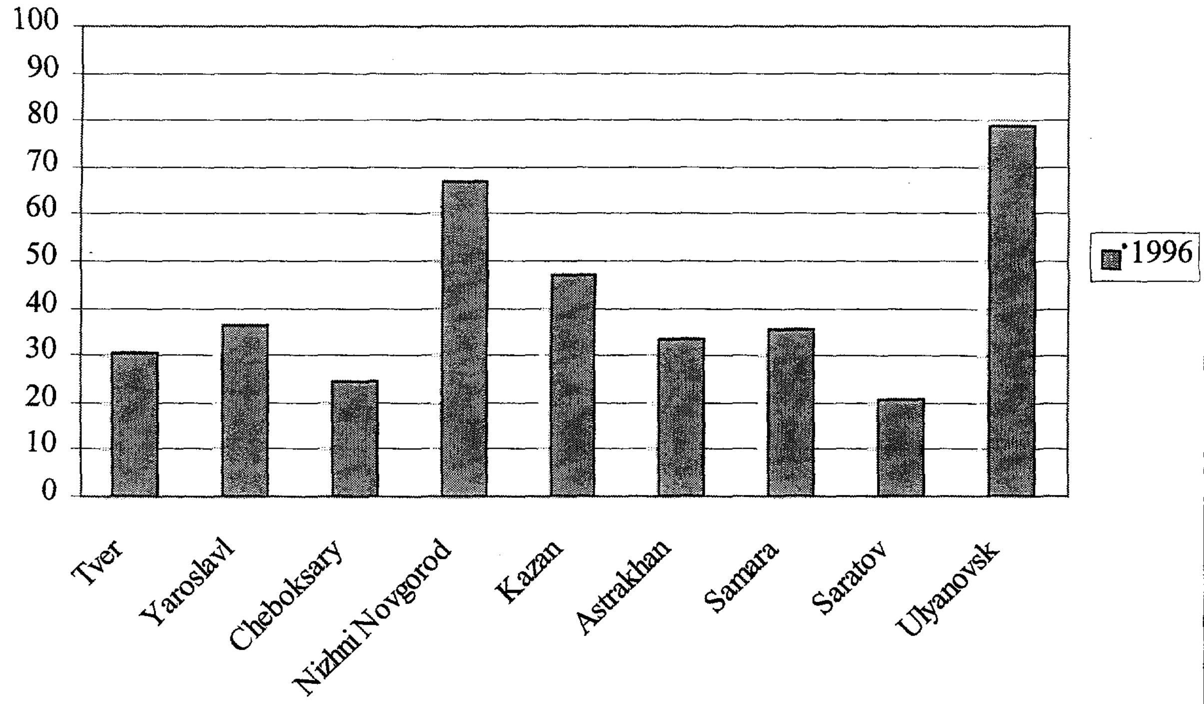
(i) L_S^{96} : Decline in labor supply (women and others leaving the labor force)

(ii) L_D^{96} : Decline in labor demand

(iii) $L_{D'}^{96}$: City governments and enterprises try to keep higher employment artificially

Comment: The shifts in L_S^{96}, L_D^{96}, $L_{D'}^{96}$ would normally differ among the cities. The location of the cities on the diagram assumes these shifts are similar. The rate of unemployment is notionally the difference between L_S^{96} curve and the location of the city on its left as measured by the horizontal axis.

Figure 4: Index of Physical Volume of Industrial Production in Volga Cities (1990=100)



Source: Appendix Table 10.

Table 1: 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/	Favorable City Location (L) or Regional Natural Resources (NR)	Regional Data: Average Monthly Wage	Regional Data: Monthly Per Capita Income b/
Tver	460	275	153	17.7	31	<10	+ (L)	253	192 (A)
Yaroslavl	635	271	149	14.8	44	10-15	+ (L)	264	205
Nizhni Novgorod	1421	271	151	14.9	44	25-35	+ (L)	259	201
Cheboksary c/	429	264	133	13.0	50	<10	...	243	165 (A)
Kazan c/	1103	266	169	18.4	47	25-35	+ (NR)	266	187
Ulyanovsk	637	270	145	20.0	46	10-15	...	260	189
Samara	1260	264	140	23.3	43	25-35	+ (L)	265	200
Saratov	907	275	145	20.3	41	15-25	+ (NR)	255	197 (A)
Volgograd	1003	271	140	15.2	41	<10	...	273	198
Astrakhan	482	265	142	18.1	34	<10	...	251	196 (A)
Memo item									
Russian Federation	148543	-	158	17.4	30	<10	...	297	215

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

a/ Classification based on 1985 data in Gaddy (1996) and author's estimates.

b/ (A) indicates regions with a relatively strong agricultural base.

c/ 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.

Table 2: Shares of Industrial Sectors by Volume of Sales, 1989
(percent)

Industrial Sectors of Capital Cities	Yaroslavl	Nizhni Novgorod	Cheboksary	Kazan	Ulyanovsk	Samara	Saratov	Volgograd	Astrakhan
Chemical and petrochemical	47.7	4.3	0.0	31.6	0.1	15.4	26.9	26.2	6.0
Metallurgy	0.3	2.4	3.6	0.3	0.0	4.9	0.4	25.8	0.0
Machinery and metal-working	25.8	57.7	48.2	20.2	60.5	39.5	27.9	26.4	15.2
Forest products	1.9	2.3	0.9	1.6	3.8	2.3	5.0	3.6	9.7
Construction materials	2.3	2.3	2.0	3.8	7.7	4.4	7.3	4.5	6.8
Light industry	10.4	11.0	32.6	24.2	6.5	5.3	8.0	2.6	28.1
Food industry	9.7	18.6	12.6	13.0	17.4	27.3	23.3	9.8	32.7
Other	2.1	1.4	0.0	5.3	4.1	0.8	1.2	1.2	1.6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Industrial Census 1989 as cited in Ivanov 1998b.

Table 3: Expectations of Success in Volga Cities Based on Initial Conditions

Capital Cities	Low Share of Industrial Employment in Total a/	Low Share of Industry in Two Least Competitive Sectors a/	Less Industrial Specialization a/	Favorable Location or Natural Resources	Total
Tver	2	0 b/	1 b/	1	4
Yaroslavl	1	2	0	1	4
Nizhni Novgorod	1	0	0	1	2
Cheboksary	0	0	0	-	0
Kazan	0	1	1	1	3
Ulyanovsk	0	0	0	-	0
Samara	1	1	1	1	4
Saratov	1	2	1	1	5
Volgograd	1	2	1	-	4
Astrakhan	2	1	1	-	4

Source: Tables 1 and 2.

a/ Low: 2; medium: 1; high: 0. See text for ranges.

b/ Tver is not included in Table 2. These estimates are based on partial information on industrial production in Goskomstat 1994 and Yakovlev 1998.

Table 4: 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

Source: Baranchuk 1998.

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/ The higher the rank, the stricter the controls

Table 5: Fiscal Policy Indicators of Volga Cities, 1996
(percent)

Cities	Tax Effort a/	Housing Subsidy Burden b/
Tver	4.4	5.1
Yaroslavl	3.9	4.7
Nizhni Novgorod	5.5	5.5
Cheboksary	5.0	4.5
Kazan	7.1	5.5
Ulyanovsk	5.0	4.3
Samara	6.6	5.7
Saratov	8.3	7.3
Volgograd	5.0	4.8
Astrakhan	2.5	5.5

Source: Ministry of Finance of the Russian Federation for budget data and Table 9 for wage data.

[a/] Per capita Property Tax and Other Tax revenues in CRJs as percent of the capital city annual wage in 1996.

[b/] Per capita Housing Subsidy in CRJs as percent of the capital city annual wage in 1996.

Table 6: Housing Privatization, Small Business Development and Foreign Investment in Volga Cities

Capital Cities	Privatization of Housing as Percent of the Entire Eligible Stock, 1996	Small Enterprises in Region per Thousand Residents, 1996	Flow of Total Foreign Investment, (USD per Capita), 1995 and 1996
Tver	34	2.7	184
Yaroslavl	25	5.5	51
Nizhni Novgorod	33	3.8	41 a/
Cheboksary	20 b/	3.1	N/A
Kazan	12	4.2	46
Ulyanovsk	12	3.3	1
Samara	27	5.8	30
Saratov	28	3.6	N/A
Volgograd	39	4.9	16
Astrakhan	32	4.4	2

Source: Goskomstat, *Regionyi Rossii*, Vol. 2, 1997, city case studies, city statistical bulletins and authors' calculations.

a/ 1996 data only
b/ 1995 data

Table 7: Policy Reforms in Volga Cities as of 1996

Capital Cities	Price Liberalization	Tax Effort	Housing Subsidy Containment	Housing Privatization	Small Business Development	Foreign Investment	Total	Rank a/
Tver	2	1	1	2	0	2	8	4
Yaroslavl	2	1	2	1	2	2	10	5
Nizhni Novgorod	2	1	1	2	1	2	9	4
Cheboksary	1	1	2	1	0	0 b/	5	2
Kazan	1	2	1	0	1	2	7	3
Ulyanovsk	0	1	2	0	0	0	3	1
Samara	2	2	1	1	2	2	10	5
Saratov	2	2	0	1	1	1 b/	7	3
Volgograd	1	1	2	2	2	1	9	4
Astrakhan	1	0	1	2	1	0	5	2

Source: Tables 4, 5 and 6

High: 2; Medium: 1; Low: 0

a/ Total points are translated into ranks by dividing by 2 and rounding to the lower number.

b/ Assumption based on regional data.

Table 8: Governors and Mayors: Volga Regions and Capital Cities

Region / City / Office	Years	Name	Comment
Tver			
Governor	1995-	Vladimir Platov	Former mayor of a town, well connected with big businesses
	1991-1995	Vladimir Suslov	Appointed by Yeltsin
Mayor	1996	Alexander Belousov	Reformist leader, good administrator, popular, initiates FDI
Yaroslavl			
Governor	1992-	Anatoly Lysitsin	Reformer, appointed' 92, elected' 95 over a communist candidate. Russia Choice Party, good administrator
Mayor	1995-	V. Volonchunas	Political ally of governor
Nizhni Novgorod			
Governor	1996-	Ivan Skylarov	Reformer but models himself after Luzhkov, not Nemtsov
	1991-1996	Boris Nemtsov	Early liberal reformer, became minister and Deputy Prime Minister
Mayor	1995-1996	Ivan Skylarov	Reformer
	1992-1994	Dmitri Bednyakov	Reformer, appointed by Nemtsov
Chuvash/Cheboksary			
President	1996-	Nikolai Fyoderov	Reformer, previously Law Minister of Russia, good Moscow and international contacts
Mayor	1996-	Anatoly Igumnov	Progressive, first elected following a series of short appointments
Tatarstan/Kazan			
President	1996-	Minitmer Shaimiev	Reform-oriented, but in a "human" way, good international contacts
Mayor	1996-	Isakhov	Ally of Shaimiev, good administrator
Samara			
Governor	Elected 1996	Konstantin Titov	Reformer, Our Home is Russia Party, good influence in Moscow, professional administrator
Mayor	1997-	Gregory Laminski	Elected with support of Yabloko and Lebed against a communist
	1991-1997	Oleg Sysuyev	appointed, then twice elected in '94 and '96. Excellent international
Ulyanovsk			
Governor	1991- (el.'96)	Yuri Goryachev	Conservative from Our Home is Russia Party, won election against a communist
Mayor	1996-	Vitalii Marusin	Run and won against Ermakov, considered more independent
	1992-1996	Sergey Ermakov	Dependent on region and Goryachev
Saratov			
Governor	1996-	Dmitri Ayatskhov	Reform-oriented, with hands-on policies, gives priority to agriculture, supported by Yeltsin
	1994-1996	A.N. Malikov	Appointed by Yeltsin, former communist, conservative and not very effective
	1992-1994	Yuri Belyh	Appointed by Yeltsin, former communist, conservative and not very effective
Mayor	1996-	Yuri Akseyenko	Elected after a series of appointed mayors (Kitov, Malikov)
Volgograd			
Governor	1996-	Nikolai Maksyuta	Conservative, defeated Shabunin, governs a communist Duma
	1991-1996	Ivan Shabunin	Still influential even after defeat, authoritative, strong administration
Mayor	1995-	Yuri Chekov	Moderate city council communist, reform-oriented
Astrakhan			
Governor	1991- (el.'96)	Anatoly Guzhvin	Pragmatist, Our Home is Russia Party. Influential in broader Volga region
Mayor	1995-	Alexandrovich Bezrukavnikov	Appointed'95, elected' 96, Our Home is Russia Party, efficient and authoritative.

Source: City case studies and news sources.

Table 9: Capital Cities Real Economic and Social Wages, Employment and Unemployment plus Regional Wage Arrears
(percent changes over 1990-96 or 1996 levels)

Capital Cities	Real Economic Wage (1990 Rubles)	Real Social Wage (ratio to subsistence minimum)	Percent Change in Real Economic Wage	Percent Change in Employment	Official Unemployment Rate	Regional Wage Arrears a/
Tver	241	2.3	-12	-15	2.3	25
Yaroslavl	180	2.5	-34	-21	6.9	32
Nizhni Novgorod	180	2.6	-34	-16	N/A	22
Cheboksary	168	2.0	-36	-20	6.2	37
Kazan	207	2.6	-22	-12	N/A	50
Ulyanovsk	145	2.5	-46	-7	3.2	39
Samara	201	2.4	-24	-23	N/A	12
Saratov	152 b/	1.4 b/	-45 b/	-14 c/	N/A	36
Volgograd	193 d/	2.3 d/	-29 d/	-9 c/	2.0	35
Astrakhan	171	1.9	-36	-14	3.2	12

Source: Goskomstat, *Cities of Russian Federation*, 1995, Goskomstat, *Regionyi Rossii*, Vol. 1 and Vol.2, 1997, Figure 15a from MFK Renaissance 1998b, city case studies and city statistical bulletins.

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/ Nominal wage in Saratov City assumed to be the same as the regional wage, as was the case in 1985-1993.
c/ Changes in city employment in Saratov and Volgograd are assumed to equal regional ones.
d/ Nominal wage in Volgograd City assumed to be 15% above the regional wage, as was the case in 1995.

Table 10: Comparison of Initial Conditions and Policy Reform Ratings with Socioeconomic Outcome in Regional Capitals

Capital Cities	Initial Conditions	Policy Reform	Socioeconomic Outcome, 1996	
			Real Economic Wage a/	Real Social Wage b/
Tver	4	4	2	2
Yaroslavl	4	5	1	2
Nizhni Novgorod	2	4	1	2
Cheboksary	0	2	1	1
Kazan	3	3	2	2
Ulyanovsk	0	1	0	2
Samara	4	5	2	2
Saratov	5	3	0	0
Volgograd	4	4	1	2
Astrakhan	4	2	1	1

Source: Tables 3, 7 and 9.

a/ Real economic wage is the ratio of the monthly nominal wage and the regional consumer price index with base in 1990.

b/ Real social wage is the ratio of the monthly nominal wage and the cost of the subsistence minimum.

Appendix Table 1: Cumulative Growth of Regional Consumer Price Indexes (1990=100)

Regions	91/90 a/	92/90 b/	93/90 b/	94/90 b/	95/90 b/	96/90 c/	97/90 c/
Tver	1.89	21	190	807	2375	2854	3248
Yaroslavl	1.89	23	257	1227	3664	4588	5129
Nizhni Novgorod	1.89	27	265	1097	3034	4029	4396
Chuvashia	1.89	22	219	904	2706	3388	3781
Tatarstan	1.89	22	219	872	2536	3140	3689
Ulyanovsk	1.89	24	265	1010	2972	3819	4698
Samara	1.89	27	287	1151	3387	4145	4664
Saratov	1.89	24	221	874	2469	3202	3692
Volgograd	1.89	26	261	1063	3148	3809	4320
Astrakhan	1.89	23	237	969	3175	3934	4500
Memo Item							
Russian Federation	1.89	27	258	1276	3849	5804	6443
Moscow City	1.89	23	224	1010	3013	3615	4078

Source: Goskomstat, *Regionyi Rossii*, Vol. 2, 1997, Goskomstat, *Sotzialnoe Polozhenie i Uroven Zhizni Naselenia Rossii,* 1997, PlanEcon Report, No. 8-9 and No. 23-24, 1994, Goskomstat, *Tzenyi v Rossii*, 1998 and authors estimates.

a/ Regional CPIs in 1991 are approximated by the annual average CPI for the Russian Federation.
b/ Regional CPIs in 1992-1995 are annual averages estimated from monthly data.
c/ Regional CPIs in 1996 and 1997 are December to December values.

Appendix Table 2: Population of Cities Under Regional Jurisdiction
(thousands, end of year)

Regions	1990	1991 a/	1992 a/	1993 a/	1994 a/	1995	1996 b/	1997 c/
Tver	927	926	925	924	922	921	922	922
Yaroslavl	1053	1050	1048	1045	1043	1040	1038	1036
Nizhni Novgorod	2291	2300	2309	2318	2327	2336	2333	2330
Chuvashia	716	720	724	728	732	736	736	737
Tatarstan	2408	2417	2425	2433	2442	2450	2452	2454
Ulyanovsk	819	827	836	846	855	864	864	864
Samara	2555	2553	2552	2551	2549	2548	2546	2545
Saratov	1761	1761	1762	1762	1762	1762	1751	1740
Volgograd	1593	1597	1601	1605	1609	1613	1614	1615
Astrakhan	563	565	567	569	572	574	575	576

Source: Goskomstat *"Chislenost Naselenia Rossiiskoi Federatzii po Gorodam, Poselkam Gorodskogo Tipa i Rayonam na 1 Ianvaria 1997 g."*, Moskva 1997, Goskomstat *"Chislenost Naselenia Rossiiskoi Federatzii po Gorodam, Poselkam Gorodskogo Tipa i Rayonam na 1 Ianvaria 1996 g."*, Moskva 1996, Goskomstat "Chislenost Naselenia Rossiiskoi Federatzii po Gorodam, Poselkam Gorodskogo Tipa i Rayonam na 1 Ianvaria 1991 g.", Moskva 1991.

a/ Data for 1991-1994 interpolated assuming constant annual growth rate of population between 1990-1995.
b/ Data for1996 interpolated assuming constant annual growth rate of population between 1995-1997.
c/ Beginning of the period value.

Definition of CRJs used:

1. Astrakhan Oblast, Chuvashia Republic, Tatarstan Republic, Volgograd Oblast, Yaroslavl Oblast: Cities above 30 thousand
2. Saratov Oblast, Tver Oblast: Cities above 20 thousand
3. Nizhegorod Oblast: Cities above 50 thousand plus the three largest cities (out of four) with population between 30 and 49.9 thousand (excluded – Gorodetz)
4. Samara Oblast: Cities above 30 thousand plus the largest city (out of two) with population between 20 and 29.9 thousand (excluded - Neftegorsk)
5. Ulyanovsk Oblast: Cities above 30 thousand plus the largest city (out of two) with population between 20 and 29.9 thousand (excluded - Bar'ish)

Appendix Table 3: Regional Demographic and Economic Data

Regions	Population ('000)			Real Per Capita GDP (1990 Rubles)		
	1990	1996	1997	1994	1995	1996
Tver	1676	1644	1633	3582	2963	3039
Yaroslavl	1476	1443	1435	3539	2777	2699
Nizhni Novgorod	3775	3711	3697	3652	3110	3162
Chuvashia	1346	1360	1359	2444	2041	2235
Tatarstan	3679	3767	3774	3708	3967	5186
Ulyanovsk	1430	1491	1483	3056	2407	2596
Samara	3250	3310	3309	4445	4015	4453
Saratov	2708	2728	2723	3328	3020	3610
Volgograd	2632	2703	2701	3000	2306	2737
Astrakhan	1007	1030	1029	2171	1759	1902
Memo Item						
Russian Federation	148543	147502	147105	3228	2862	2570
Moscow City	9003	8639	8629	6143	5531	7402

Source: Goskomstat, *Regionyi Rossii*, Vol. 1 and Vol. 2, 1997, Goskomstat, *Rossiiskii Statisticheskii Ezhegodnik*, 1997 and Goskomstat, 1998.

Appendix Table 4: Real Wages, Real Average Monthly Income and Ratios of Nominal Monthly Income and Wages to Cost of Subsistence Minimum for Volga Regions, 1996 and 1997

Regions	Real Monthly Wage (1990 Rubles)		Average Monthly Wage to Subsistence Minimum		Real Per Capita Monthly Income (1990 Rubles)		Average Monthly Income to Subsistence Minimum	
	1996	1997 a/	1996	1997 a/	1996	1997 b/	1996	1997 b/
Tver	198	257	1.9	2.6	171	210	1.7	2.1
Yaroslavl	141	184	2.0	2.7	136	202	1.9	3.0
Nizhni Novgorod	160	215	2.3	3.0	130	218	1.9	3.1
Chuvashia	130	200	1.6	2.4	117	138	1.4	1.7
Tatarstan	230	300	2.9	3.7	176	257	2.2	3.2
Ulyanovsk	137	177	2.4	3.1	126	182	2.2	3.2
Samara	220	286	2.6	3.7	167	288	2.0	3.7
Saratov	152	227	1.4	2.4	141	206	1.3	2.2
Volgograd	168	231	2.0	2.9	125	198	1.5	2.4
Astrakhan	151	228	1.7	2.8	117	183	1.3	2.2
Memo Item								
Russian Federation	136	186	2.1	2.9	132	186	2.1	2.9

Source: Goskomstat, *Regionyi Rossii*, Vol. 1 and Vol. 2, 1997, Goskomstat, *Sotzialno-Ekonomicheskoe Polozhenie Rossii*, January, 1998.

H: High; M: Medium; L: Low

a/ December, 1997 data. The percentage change over annual data for 1996 is estimated to be the same as for nominal wages plus social transfers, since data for nominal wages alone are no longer available.

b/ December, 1997 data.

Appendix Table 5: Prices and Tariffs on Basic Services Provided by Eight Cities, 1996
(Current Rubles, as of 12/31/96)

Services / Cities	Tver	Yaroslavl	Nizhni Novgorod	Cheboksary	Kazan	Ulyanovsk	Samara	Saratov
City Public Bus (1 Trip)	700	500	1200 *	700	900	500	1000	800
Municipal Housing (Rubles/Sq. Meter)	471	260	543	77	990	25	754 *	45
Telephone (Monthly)	18000 *	N/A	18000 *	N/A	N/A	12500	14000	14000
Electricity (per 100 Kilowatt/Hour)	6000	12000	12000	14000 *	12000	7200	12500	9000
Water Supply and Sewerage (Monthly per Person)	1375	N/A	3496	N/A	N/A	1740	5175 *	2934
Hot Water Supply (Monthly per Person)	3741	N/A	5064	N/A	N/A	1800	7530 *	3185
Natural Gas (Monthly per Person)	1200	855	1350	900	1000	1500 *	640	891
Central Heating (Monthly per Person per Sq. Meter)	343	662 *	480	480	300	150	351	305
Primary Health Care (per Doctor's Visit)	30000 *	N/A	19865	20500	19704	8367	5660	1800

Source: City case studies and city statistical bulletins.

*Highest price for this service.

Appendix Table 6: Cost a Set of 25 Food Items and the Subsistence Minimum
(thousand current rubles)

Capital Cities	Cost of a Set of 25 Basic Food Items in Capital City, End of Year a/						Monthly Minimum Subsistence, Region b/			
	1992 c/	1993	1994	1995	1996	1997	1994	1995	1996	1997 d/
Tver	4	21	82	174	186	203	77	222	294	327
Yaroslavl	4	23	85	176	201	219	98	255	329	349
Nizhni Novgorod	4	23	94	184	201	206	76	216	282	312
Cheboksary	3	19	70	156	179	184	68	197	279	316
Kazan	3	19	70	149	166	188	60	192	251	300
Ulyanovsk	2	13	51	127	147	183	51	154	217	264
Samara	4	30	91	213	216	226	79	257	351	359
Saratov	4	23	89	187	205	205	84	242	350	349
Volgograd	4	23	85	182	196	214	79	237	322	350
Astrakhan	3	24	76	176	200	226	77	244	347	367
Memo Item										
Russian Federation	N/A	26	91	198	220	233	87	264	369	415

Source: Goskomstat, *Regionyi Rossii*, Vol.2, 1997, Goskomstat, *Tzenyi v Rossii*, 1998 and Goskomstat, *Sotzialno-Ekonomicheskoe Polozhenie Rossii*, January, 1998.

a/ The set of 25 food items includes foods from 11 aggregate groups: bread products, potatoes, vegetables, fruits, meat products, fish products, eggs, milk products, sugar and candies, oil and margarin, salt and pepper.

b/ Annual average data. The subsistence minimum includes expenditures on minimum quantities of certain food items, expenditures on non-food goods and services and payments of taxes and other required payments. The shares of the above mentioned expenditures in the subsistence minimum are determined by their corresponding shares in the expenditures of the households in the lowest 10% of the income distribution (see Goskomstat, *Sotzialnaia Sfera Rossii*, 1996, p.48).

c/ Cost of a set of 19 food items.

d/ December, 1997 data.

Appendix Table 7: Enterprises and Small Enterprises per Thousand Residents of Regions

Regions	Total Number of Enterprises and Organizations per Thousand Residents								Number of Small Enterprises per Thousand Residents			
	1990	1991	1992	1993	1994	1995	1996	1997	1994	1995	1996	1997 a/
Tver	2.9	2.9	3.4	5.8	12.1	13.5	14.5	15.8	3.8	3.6	2.7	2.3
Yaroslavl	2.1	2.2	3.5	7.9	12.3	13.5	14.4	15.5	6.0	5.7	5.5	5.7
Nizhni Novgorod	1.7	1.7	1.9	3.8	7.3	10.4	11.2	12.3	3.1	3.0	3.8	4.0
Chuvashia	2.0	2.0	3.8	7.4	8.9	9.6	10.4	10.7	3.5	3.8	3.1	3.1
Tatarstan	1.9	1.9	2.1	5.0	8.5	9.4	10.4	11.8	4.5	4.8	4.2	4.2
Ulyanovsk	2.0	2.0	3.7	5.2	8.1	10.0	10.7	11.2	3.6	3.1	3.3	3.1
Samara	1.4	1.5	2.4	4.8	11.6	13.7	15.2	17.0	5.7	5.2	5.8	5.8
Saratov	2.1	2.1	3.4	8.6	13.1	14.8	15.7	16.3	5.3	4.5	3.6	3.6
Volgograd	2.0	2.0	2.5	5.7	13.7	15.7	16.8	18.1	6.7	6.9	4.9	4.8
Astrakhan	2.1	2.1	3.5	6.7	11.5	12.8	13.3	13.9	5.8	4.9	4.4	3.2
Memo Item												
Russian Federation b/	N/A	N/A	N/A	7.2	11.5	13.0	14.1	15.1	5.0	4.7	4.2	4.2
Moscow City and Oblast	N/A	N/A	N/A	19.8	25.8	31.3	37.0	42.8	12.9	13.4	14.0	13.5

Source: Goskomstat, *Regionyi Rossii*, Vol. 2, 1997, Goskomstat, *Sotzialno-Ekonomicheskoe Polozhenie Rossii*, January, 1998 and authors' calculations.

a/ As of October 1, 1997.
b/ Excluding St. Petersburg City and Oblast and Moscow City and Oblast.

Appendix Table 8: Main Characteristics of Active Joint Ventures and Foreign Investment in Volga Regions

Regions	Active Joint Ventures						Flow of Total Foreign Investment, (USD per Capita)	
	Total Number		Number of Employees ('000)		Real Volume of Production (Mln. 1990 Rubles)			
	1995	1996	1995	1996	1995	1996	1995-96 a/	1997
Tver	43	40	0.9	0.9	17	27	52	4
Yaroslavl	85	91	1.4	13.3	33	167	0.3 b/	16
Nizhni Novgorod	115	140	7.0	7.6	420	252	31 c/	39
Chuvashia	56	59	0.8	0.6	12	18	1 b/	0.03
Tatarstan	125	139	6.6	7.3	323	241	61	185
Ulyanovsk	30	22	0.4	1.7	4	78	0.2	2
Samara	122	122	4.5	6.3	102	119	54	26
Saratov	82	82	4.0	4.8	171	141	10	9
Volgograd	157	152	3.8	4.6	89	138	16	10
Astrakhan	60	84	1.2	1.2	9	13	1	0.2
Memo Item								
Russian Federation d/	6272	6303	223	283	6926	6156	N/A	26
Moscow City	6634	8067	90	146	2683	7945	N/A	820

Source: Goskomstat, *Regionyi Rossii,* Vol. 2, 1997, Goskomstat, *Sotzialno-Ekonomicheskoe Polozhenie Rossii,* January 1998 and authors' calculations.

a/ Calculated with 1996 regional population data.
b/ 1995 data only.
c/ 1996 data is for the capital city of the region only.
d/ Excluding Moscow City and St. Petersburg City.

Appendix Table 9: Changes in Average Real Monthly Wage, Employment and Real per Capita Income in Volga Regions, 1990 – 1996

(percent)

Regions	Average Real Monthly Wage	Employment a/	Real Per Capita Income
Tver	-22	-16	-11
Yaroslavl	-47	-14	-34
Nizhni Novgorod	-38	-9	-35
Chuvashia	-46	-11	-29
Tatarstan	-13	-11	-6
Ulyanovsk	-47	-12	-33
Samara	-17	-8	-17
Saratov	-41	-14	-29
Volgograd	-38	-9	-37
Astrakhan	-40	-14	-40
Memo Item			
Russian Federation	-55	-12	-39

Source: Goskomstat, *Regionyi Rossii*, Vol. 1, 1997, Goskomstat "Rossiiskii Statisticheskii Ezhegodnik 1997".

a/ Regional data is for the period 1990-1995.

Appendix Table 10: Unemployment in Regions

Region	Unemployment Rate a/	Number of Registered Unemployed (000's)		
	1995	1995	1996	1997 b/
Tver	8.0	14	20	10
Yaroslavl	11.5	61	46	19
Nizhni Novgorod	7.8	54	57	47
Chuvashia	9.6	48	44	24
Tatarstan	6.4	26	37	40
Ulyanovsk	7.8	23	21	15
Samara	7.3	33	58	64
Saratov	9.6	46	46	25
Volgograd	10.3	18	26	15
Astrakhan	13.1	23	24	17
Memo Item				
Russian Federation	8.8	2327	2506	1999

Source: Goskomstat, *Regionyi Rossii,* Vol. 1 and Vol. 2, 1997, Goskomstat, *Sotzialno-Ekonomicheskoe Polozhenie Rossii,* January, 1998.

a/ Registered and non-registered unemployed as percent of the economically active population.
b/ As of the end of December, 1997.

Appendix Table 11: Changes in City Industrial Output and Employment, 1990 - 1996

Capital Cities	Physical Volume of Industrial Production (1990=100)							Share of Workers in Industry in Total Employment (%)	
	1990	1991	1992	1993	1994	1995	1996	1990	1996
Tver	100	100	80	73	50	40	30	31	26
Yaroslavl	100	97	79	68	51	42	36	44	N/A
Nizhni Novgorod	100	102	101	105	72	70	67	44	35
Cheboksary	100	101	77	66	38	30	25	50	38 a/
Kazan	100	101	83	71	52	50	47	47	30 a/
Ulyanovsk	100	111	107	113	102	84	79	46	39 a/
Samara	100	98	96	79	58	51	36	43	33 a/
Saratov	100	103	88	85	46	30	21	41	N/A
Volgograd	100	N/A	N/A	N/A	N/A	N/A	N/A	41	35 a/
Astrakhan	100	103	98	81	60	47	33	34	25

Source: Goskomstat, *Cities of Russian Federation*, 1995, city case studies and city statistical bulletins.

a/ 1995 data.

Appendix Table 12: Changes in Industry Shares Measured in Current Prices, 1990-1996
(percentage points)

Industrial Sectors	Yaroslavl	Nizhni Novgorod	Kazan	Samara	Astrakhan	Russia
Fuel and energy complex	6.4	14.3	-4.8	29.6	14.3	27.1
Chemical and petrochemical	2.4	0.1	12.6	-2.0	0.1	-0.6
Metallurgy	-0.5	-2.4	-0.1	-0.2	-2.4	1.8
Machinery and metal working	5.5	30.5	9.0	-10.2	30.5	-11.1
Forest products	-5.0	-13.7	-1.8	-2.7	-13.7	-1.6
Construction	1.0	-1.9	1.7	-2.4	-1.9	0.8
Light industry	-12.8	-15.2	-11.6	-4.8	-15.2	-9.1
Food industry	2.0	-8.0	-7.7	-2.9	-8.0	-2.9
Other	1.2	-3.8	2.7	-4.4	-3.8	-4.3

Source: Calculations from 1990-96 enterprise database, as cited in Ivanov 1998b.

Appendix Table 13: Changes in Telephones and Automobiles Possession and Retail Trade, 1990 - 1996

Capital Cities	Telephones per 1000 Residents			Automobiles per 1000 Residents			Percent Change in Real Per Capita Retail Trade in Consumer Goods and Services
	1990	1996	Percent Change	1990	1996	Percent Change	
Tver	80	111	39	54	112	107	-39
Yaroslavl	155	219 a/	41	47	87	86	N/A
Nizhni Novgorod	196	237	21	45	88	96	-71
Cheboksary	164	N/A	N/A	24	N/A	N/A	-35
Kazan	118	N/A	N/A	42	78 a/	85	6
Ulyanovsk	103	134 a/	30	53	87 a/	64	-35 a/
Samara	156	202 a/	29	68	116 a/	71	-24 a/
Saratov	123	151	23	67	118	76	N/A
Volgograd	138	200	45	67	89	33	-42
Astrakhan	116	165 a/	42	55	88	60	-68 a/

Source: Goskomstat, *Cities of Russian Federation*, 1995, city case studies and city statistical bulletins.

a/ 1995 data.

Appendix Table 14: School Age Population and Pupils in 2nd and 3rd Shifts, 1990 and 1996

Capital Cities	School Age Population as Percent of the Total			Pupils in 2nd and 3rd Shifts as Percent of the Total		
	1990	1996	Percent Change	1990	1996	Percent Change
Tver	19.6	17.8	-9	33.0	35.0	6
Yaroslavl	20.5	17.7	-14	24.9	29.8 a/	20
Nizhni Novgorod	N/A	N/A	N/A	27.1	N/A	N/A
Cheboksary	25.9	23.9 a/	-8	21.2	28.2 a/	33
Kazan	N/A	20.7 a/	N/A	22.2	31.4	41
Ulyanovsk	24.8	23.5 a/	-5	27.8 b/	32.9 a/	18
Samara	20.7 b/	18.0	-13	32.9	37.2 a/	13
Saratov	19.8	18.3	-8	31.9	34.7	9
Volgograd	19.7	19.1	-3	26.3	32.1	22
Astrakhan	N/A	N/A	N/A	36.5	39.9	9

Source: Goskomstat, *Cities of Russian Federation*, 1995, city case studies and city statistical bulletins.

a/ 1995 data.
b/ 1992 data.

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