TITLE: PILFERERS OR PALADINS? RUSSIA'S MANAGERS IN TRANSITION

AUTHOR: GARY KRUEGER, Macalester College
SUSAN J. LINZ, Michigan State University

THE NATIONAL COUNCIL
FOR SOVIET AND EAST EUROPEAN RESEARCH

TITLE VIII PROGRAM

1755 Massachusetts Avenue, N.W.
Washington, D.C. 20036
PROJECT INFORMATION:

CONTRACTOR: Macalester College

PRINCIPAL INVESTIGATOR: Gary Krueger

COUNCIL CONTRACT NUMBER: 811-10

DATE: February 28, 1997

COPYRIGHT INFORMATION

Individual researchers retain the copyright on their work products derived from research funded by contract with the National Council for Soviet and East European Research. However, the Council and the United States Government have the right to duplicate and disseminate, in written and electronic form, this Report submitted to the Council under this Contract, as follows: Such dissemination may be made by the Council solely (a) for its own internal use, and (b) to the United States Government (1) for its own internal use; (2) for further dissemination to domestic, international and foreign governments, entities and individuals to serve official United States Government purposes; and (3) for dissemination in accordance with the Freedom of Information Act or other law or policy of the United States Government granting the public rights of access to documents held by the United States Government. Neither the Council, nor the United States Government, nor any recipient of this Report by reason of such dissemination, may use this Report for commercial sale.

---

1 The work leading to this report was supported in part by contract funds provided by the National Council for Soviet and East European Research, made available by the U. S. Department of State under Title VIII (the Soviet-Eastern European Research and Training Act of 1983, as amended). The analysis and interpretations contained in the report are those of the author(s).
CONTENTS

Abstract ................................................................. 1
Introduction ............................................................ 2
Methodology ............................................................ 4
Pilferers versus Paladins .............................................. 7
Empirical Results ...................................................... 12
Conclusions ........................................................... 20
References .............................................................. 22
Tables ................................................................. 25
The success of economic reform in Russia will ultimately depend upon the activities of firms which must overcome many obstacles in the current unstable economic environment. Moreover, while there are numerous opportunities for businesses to develop, those opportunities have been hampered by a punitive tax system as well as a growing and perhaps corrupt bureaucracy. Firm managers influence a firm’s survival by setting forth production and employment strategies. The success or failure of managers in the economic reform process depends in part on their ability to adapt to the new economic environment. The means by which they attempt to adapt may follow one of two paths: the “good” managers, or paladins, who put existing assets into alternative productive use, and the “bad” managers, or pilferers, who engage in asset stripping or other activities purely for personal gain. Thus far, both “good” and “bad” managers have been winners in the transition process. This paper examines whether or not differential rewards are emerging to separate good from bad managers and provide incentive for “good” governance of Russian firms and thus the success of Russia’s economic reform.

On the basis of 159 in-depth interviews over the past three years with top-level managers in four regions the authors conclude that:
(1) However unequal the initial distribution of wealth may have been during the early phase of the transition, a significant fraction of managers are making the best use of the resources at their disposal. These managers are pro-actively restructuring the operations of their firms, adding employment and paying above average wages, raising "all boats." Directors who fail to take advantage of these opportunities are increasingly being replaced by coalitions of younger middle managers, outsiders and workers. In this sense Russia’s economy is establishing, however slowly and imperfectly, an incentive regime that is rewarding good managers and punishing bad ones.
(2) For managers in many branches of heavy industry pro-active restructuring remains elusive. Long term survival for many firms in these industries is doubtful.
(3) The sustainability of the robust economic situation in Moscow, with correspondingly differential rewards for managers in the capitol is also uncertain. Several managers indicated in 1995 and 1996 that the Moscow market had become saturated, and one firm based in Moscow was seeking to expand into other regions of the country. If this is a widespread sentiment, we would expect some leveling in income and price differentials between Moscow and the regions in the next several years.
I. Introduction


An additional player influencing the success of economic reform, the newly-created private firm, while not confronted with the daunting restructuring element, must still overcome numerous obstacles imposed by the unstable economic environment that is characteristic of Russia’s transition.

Whether firm managers as a group are winners or losers in the economic reform process will be evaluated from the traditional perspective; that is, how do managers perform with respect to income, wealth, power, prestige and job security? However, a key distinction must be made between short-run and long-run winners. In the short-run, asset stripping may be the preferred managerial strategy, but unless the manager is a very good overseer of his/her portfolio, these gains are likely to be ephemeral (Aghion, Blanchard and Burgess 1994). Moreover, asset stripping is likely to define a manager in only one or two dimensions of success -- income and wealth -- while security and prestige are likely to suffer. Second, we find it useful to distinguish between managers and firms. While winner implies survival, manager and firm survival are not one and the same. The difference stems, in part, from the relative mobility and/or adaptability of firms and managers.

Firm survival will require the adoption of production and employment strategies appropriate to the realities of the Russian transition economy. To date, Russia’s transition economy has not provided fertile ground for firms to establish strong roots or to secure a stable foundation for operations. In many respects, at the initiation of transition in 1992, the ground was barren and the climate unsuited to firm survival. Russia lacked the economic institutions necessary to introduce a market-oriented economy. Even now, Russia struggles to establish a fair and impartial legal structure.
(especially as it relates to property rights, contract law and bankruptcy law), and to create a viable commercial banking structure, wholesale distribution network, and communications network. Perhaps most importantly, Russia must create a system of corporate governance that will punish “bad” managers, those who engage in asset stripping or other activities purely for personal gain, the pilferers, and reward “good” managers, those who put existing assets into alternative productive uses, the paladins.

The sellers’ market environment, with its persistent and pervasive shortages of nearly all goods and services, characterized the Russian economy at the beginning of transition and created virtually infinite opportunities for lucrative businesses to develop. Yet, any given firm’s potential for capitalizing on those opportunities has been hampered by a punitive tax system, as well as a growing, and perhaps corrupt bureaucracy. The growth in bureaucracy illustrated in Table 1 (p.25) fails to capture inevitable delays and financial payments associated with regional and local authorities vying for ownership rights, or the arbitrary enforcement by the tax inspectorate of the frequently changing tax policy. Anecdotal evidence is unanimous in descriptions of obstacles imposed by corrupt bureaucrats.

Equally important to firm survival is the popular perception of appropriate and inappropriate business activities. The experience of cooperatives in the Soviet economy during perestroika begins to tell the tale of popular opposition to what are considered to be standard operating procedures for businesses in market economies (Jones and Moskoff 1991). Until quite recently, in the Russian transition economy, firms that fulfilled middlemen activities or otherwise operated in ways that would be considered appropriate and efficient in a market economy were labeled as mafiya in the Russian press (Millar 1996). While a detailed analysis of the impact of criminal elements (mafiya or government officials) on the operation of Russian firms far exceeds the scope of this paper, it is important to note that the impact is not insignificant in terms of firm survival (Handelman 1995, Leitzel et al 1995, Lee 1995, Shelley 1994, Waller 1995).

5 In 1995, firms reported making the following tax and mandatory contributions (regarding the tax base to which the rates apply vary: some are based on sales revenues, some on capital value, some on the wage fund, and in some instances it remained unclear what base the rate applied): VAT 20% (in Moscow a special tax of 1.5 to 3% is added to standard VAT), property tax 1%, profits tax 35%, withholding tax 12%, excess wage tax 35% (this was dropped in 1996), transport tax 1%, pension fund contributions 29%, fund for employment contributions 2%, fund for obligatory medical insurance 3.6%, fund for social protection 5.4%, tax for housing maintenance 1.5%, tax for road maintenance 2%, education tax 1%, local community goals tax 1%, waste tax 10%, and a flat rate transport owners tax. Managers described facing a tax burden of more than 80% of their sales revenues.

6 In an effort to minimize the incentive of tax inspectors to take bribes, their salary has been set at 4-5 times the average wage based on the rationale that they will not “need” to take bribes because they received such a good wage. However, this wage setting policy did not remove the opportunity to take bribes. The attractiveness of this job was illustrated in 1993 in St. Petersburg by the more than thousand individuals who applied for a single position in the tax inspectorate office.
Whether managers become winners or losers in the Russian reform process depends in part on the initial conditions of their firms and in part on their ability to adapt to the new economic environment. Gregory (1989, 1990, 1991) argues that those in a position to control resources or property will be able to extract rents and thus emerge, at least in the short run, as winners. Winners can therefore include both pilferers and paladins.

This paper starts from the premise that Russian managers, both good and bad, have in the main been winners in the transition process so far. Do differential rewards now exist to separate good from bad managers, and thus provide incentive for “good” governance of Russian firms? We examine whether or not such an incentive is emerging in Russia’s transition economy using case studies based on in-depth interviews with firm managers. The question of winners and losers among managers is central to the question of governance and also to the future of Russia’s economic reform. Key to our analysis is the supposition that whether managers will be winners or losers in the long run involves an assessment of survival potential.

Survival potential is viewed as dependent upon macroeconomic conditions, firm characteristics and management characteristics (Aghion and Stern 1994, de Melo and Ofer 1994, Krueger 1995, Linz 1996). We use the latter two in an effort to evaluate the extent to which enterprise managers as a group will be sustainable winners, where winners is defined in terms of above-average income, wealth, power, prestige and job security. Our analysis focuses on the following five hypotheses: (1) managers are more likely than workers to be winners; (2) managers located in Moscow are more likely than those in the provinces to be winners; (3) managers in companies that received high priority in the Soviet economy are no more likely to be winners than managers who worked in (former) low priority sectors; (4) managers of state-owned enterprises are less likely to be winners than managers of privatized or private firms; and finally (5) managers who received western-style training are more likely to be winners than those who did not.

II. Methodology

We use survey data to evaluate managers as winners or losers in Russian economic reform. The project design involved in-depth interviews with top-level managers in four regions: Moscow, Rostov, Volgograd and Novosibirsk. The objective was to elicit information on how decisions are

---

7Firms with export options were in the best position to become winners. Using fictitious prices for imports and exports, managers in the Ukraine were able to deposit in foreign banks more than $15 billion (U.S.) between 1992 and 1995 (Nacionalna 1996).

8The cities where the firms were located included: Moscow, Tver, Nizhny Novgorod, Rostov, Taganrog, Volgograd, Volzhsky and Novosibirsk. Despite the relative distance involved, and the fact that Nizhny Novgorod typically is not included in Moscow region, we do so in our analysis for two reasons. First, sample size is relatively small for Nizhny Novgorod. Second, Nizhny Novgorod was targeted as a leader in the reform process and thus should “perform” as well as Moscow. Where differences appear, they are noted in the text.
made at the firm level during the transition process. In particular, the project focused on production and employment strategies that firms adopted to survive.

A total of 159 interviews were conducted over the past three years. Interviews took 1-2 hours to complete and frequently involved 2-3 top-level managers. Each year we conducted several follow-up interviews with managers of firms from the previous year(s). Altogether, 123 firms participated in the survey project.

In each region, a local coordinator assisted in contacting firms and scheduling interviews. The coordinator was instructed to include both heavy and light industry firms in the target group, as well as small and large firms (in workforce size). In all cases, potential participants were guaranteed confidentiality and anonymity. This stipulation was made again by the interviewers (authors) at the beginning and end of each interview.

While the response rate to the question regarding willingness to participate in the project was greater than 70%, those firms identified as possible participants in the survey were not randomly selected from a known population. First, the population of firms in Russia is constantly in flux. We obtained all 18 volumes of a 1992 directory of civilian manufacturing firms and several volumes of a 1995 directory. While covering only a fraction of the total population of firms in all sectors of the Russian economy, these listings provided some insights into the characteristics of the firms from which we drew a portion of our sample.

A second non-random selection aspect of our sample was that most firms willing to participate in the project were currently in operation and not facing a severe financial situation at the time the interview was conducted. Thus the sample is biased in favor of “successful” firms.

Third, newly-created private firms, more so than former state-owned (privatized, leased) firms, viewed participation as a “no gain” proposition since payments to participants were not possible. Consequently, managers of private companies were more likely to respond negatively at the initial contact. A relatively high response rate of private firms in 1996 is a direct result of working with a local coordinator who was the head of the Russian equivalent of a small business development association in that region. Such organizations did not exist in previous years.

What legitimately can be claimed from results based on 123 case studies? Since the sample was not randomly drawn from a well-defined population of firms, it is impossible to claim that the results obtained from the participating firms can be generalized to all firms in Russia, or even to those in

---

9 Follow-up interviews with the manager of the company did not necessarily involve the same person. This was especially true in privatized firms -- managers who headed the company during and immediately after privatization had been replaced by 1995 and 1996. The practice of installing a new, younger manager occurred most frequently in companies where employees had sold shares to outsiders; that is, where employee ownership had fallen to less than 30%, for example.

10 In part this stems from the Russian economic environment. For example, given the existing tax system in 1994/95, private firms found it profitable to create a new company after one year in order that the new company might buy the existing assets/property at “fire sale” prices and avoid paying the property tax.
the four regions. It is possible, however, to assign confidence intervals around particular results. In particular, our analysis focuses on whether these managers as a group achieved and sustained above-average income, wealth, power, prestige, and job security, and/or whether there is significant variation by geographic location, industry or sector, ownership structure, or type of managerial training received.

Sample Description

Given the limitations of anonymity and confidentiality, perhaps the most informative way of describing our sample is to focus broadly on the workplace and management characteristics relevant to our analysis of managers as winners or losers in Russian economic reform.

The number of Moscow firms is sufficiently large to test for the capitol city effect posited by Ellman (1994) and Nuti (1994). Of 159 interviews conducted, 112 were at former state-owned enterprises, now privatized or leased, and 16 at firms still owned by the state at the time the interview was conducted. A total of 31 interviews were conducted at newly-created private firms. Given the relative distribution of firm types, it is not possible to statistically evaluate differences across all ownership structures. In this instance, we rely on the “preponderance of evidence” as a signal of the relative strength or weakness of our results.

We have sufficient numbers of firms in the small, medium, and large workforce size categories to make possible a comparison of findings on this dimension. That is, about one-third (n = 41) of the interviews were conducted at firms that employed fewer than 200 people at the time the interview took place. Not surprisingly, the majority of private firms fall into this workforce size category. About one-third (n = 53) were conducted at firms employing between 200 and 1000 workers. The balance of interviews were conducted at firms considered to be large (or extra large) by Soviet standards. None of the large (extra large) firms was state-owned at the time the interview took place.

Similarly, the distribution of firms by industry and sector make it possible to test for significant variation in our results between heavy and light industry, as well as between industry and services. A total of 64 interviews were conducted at firms that are categorized as heavy industry, 35 interviews were conducted at light industry firms, and 29 at firms in the food and food processing industry. Service sector activities included: publishing, retail sales, laundry, delivery, R&D, and legal and financial consulting, among others.

The vast majority of the top-level managers who participated in this project (with the exception of the chief bookkeepers) are male, with more than 15 years of schooling. The mean age of the managers of private firms was less than that of managers of privatized and state-owned firms. Yet, in the majority of cases, managers in privatized and state-owned firms had been recently installed. These data suggest a relatively recent turnover of top-level managers in firms existing at the
beginning of the transition process. Less than half of the managers had participated in a western-style management training program. Of those who had, only 10% had been abroad for the training.

**Hypothesis Testing**

Firm-level data collected from the 159 interviews conducted between 1994 and 1996 are used here to evaluate whether managers as a group received above-average income, wealth, power, prestige, or job security. Given these data, however, we are obliged to use a number of strategies to “test” our hypotheses about within-group differences. In all instances we apply the “preponderance of evidence” test; that is, the degree of unanimity in response patterns as a means of evaluating the validity or robustness of a particular result. Second, where sample size permits, we use regression analysis or analysis of variance to assess the significance of differences in response patterns by geographic location, industry or sector, ownership structure, and training experience.

To facilitate our analysis of managers as winners or losers in the Russian economic reform process, we first explain the rationale underlying the five hypotheses.

### III. Pilferers versus Paladins: Hypotheses Explained

The centerpiece of perestroika, “The Law on State Enterprises” (1987), initiated the dismantling of central planning by conferring significant discretionary power on managerial, as opposed to ministerial, personnel. Policies adopted over the course of perestroika augmented managers’ control over “their” enterprises. Managers gradually assumed many of the rights associated with private property ownership -- the right to residual income, and the right to alter, although not dispose of, property. In addition, citizens were granted the legal right to form cooperatives. With profitability guiding their decision making, cooperatives operated essentially as private businesses. In many instances, managers of state-owned enterprises used rents from “their” company to form producers cooperatives, which acted as vehicles for transferring public assets into private hands. Subsequently, and somewhat unexpectedly, managers emerged in the early phase of the transition process (1992-1994) as one of the most powerful political lobbies in the country. Alsund (1995, p. 300) argues that "managers viewed the transition as an opportunity to enrich themselves and did so by causing all kinds of distortions in the regulatory framework."

In contrast, workers as a class, with the exception of the coal miners union, have been unable to extract significant rent from the system. Workers are emerging in Russia’s economic reform politically and economically much weaker than managers (Connors 1996). Evidence of this comparative weakness shows up most strikingly in industrial wages. Adjusted for inflation, industrial

---

13See Aslund (1995 and 1996) for an excellent description of rent seeking in Russia’s transition.
wages fell dramatically in the first two years of the transition process, and remain low in many branches of industry even today.\textsuperscript{14} Further evidence of the comparative weakness of workers relative to managers as winners in Russia's economic reform involves the numbers of each elected or appointed to local and national policy-making organizations. Prime Minister Victor Chernomydrin, former director of Gazprom, and Vladimir Potanin, former director of Uneximbank, now deputy prime minister in charge of the economy, are two prime examples. Boris Berezovsky, recently reported to be the most influential businessman in Russia (\emph{Moscow Tribune}, 22 November 1996), and now appointed as the new deputy secretary of the Security Council, represents another case in point. At the grassroots level, the number of seats in the Duma held by managers (former managers) elected in 1993 increased as a result of the December 1995 election.\textsuperscript{15} Likewise, managers fared well in the 1996 election of governors (Colton 1996, Nichols 1996, Woodruff 1996, Zlotnik 1996).

Similar results in the policy making sphere are not evident for workers, even though Russian workers did get 5% of the popular “votes” in public opinion polls conducted in mid-1995 (Tesche 1995). Only now are organizational and institutional structures emerging which may permit workers to consolidate their power (Baglione 1996, Clark 1996, Senick-Goldstein 1996). Based on the literature, we would expect to find strong support using firm-level data that managers, both good and bad, will fare better during the transition than workers. Thus, our first hypothesis is that \textit{managers are more likely than workers to be winners.}

Students of the economic transformation in Central and Eastern Europe, as well as the former Soviet Union, have noted that development in transition economies tends to proceed from the capitol and move outward to the provinces (Ellman 1994, Nuti 1994). Nowhere among the transition economies is this more true than in Russia. The vast majority of foreign investment is channeled through Moscow. In part, this is because Moscow leads all regions in the number of factories and research institutes in “hi-tech” areas, sectors where foreign investment is (after energy, precious metals, and raw materials) most likely. Hanson (1996) puts Moscow as the primary commercial hub

\textsuperscript{14}Average wages for industrial workers rose by slightly over half of the price increase in 1992; for industrial managers, the average increase of salaries was nearly two-thirds (Goskomstat 1995, p. 55). Each year thereafter, average reported wage increases for industrial workers remained well below that of managers (p. 55). More importantly, however, wages frequently were not paid to workers in 1993 and 1994. Indeed, a recent article in \emph{Wall Street Journal} (6 November 1996, p. A1) reports strikes in Russia in November 1996 for back pay (unpaid wages). Thus workers faced in essence a double inflation tax whenever wage payments were delayed: the first “tax” in the sense the wages did not keep up with inflation, the second “tax” in the sense that delayed wage payments were not augmented. Overall, average wages reported for industry during the transition period are far below those wages reported for employees in construction, transportation, credit and finance, and energy (p. 49). Only in science has the situation of relative wage decline been worse than in industry.

\textsuperscript{15}A similar phenomenon is observed in the Ukraine. Of the 450 deputies in the Rada, some 200 held the position of enterprise director in 1994. After the law passed in 1994 prohibiting deputies from holding full-time outside jobs, the number of directors fell to less than 5% of the deputies in the Rada.
in Russia, leading the country in foreign currency exchanges and foreign exchange market turnover.\footnote{Using 1993 data, Hanson’s (1996) estimates suggest hard currency earnings in Moscow to be a major explanatory variable in the city’s high per capita income.}

By any measure, Moscow maintains its Soviet legacy as the financial, political, commercial and transportation center of the country.\footnote{Only in 1993, for example, did Moscow time no longer dictate real time in Aeroflot schedules in Novosibirsk (a 4-hour time difference) and other outlying areas in Russia.} Consequently, former state-owned and newly-created private firms in the capitol have better access to credit, skilled labor, and business support services, as well as better access to political favor (Nuti 1994). As access to capital and foreign markets strongly (positively) influence a firm’s viability, we would expect that managers of firms in Moscow will fare better than their counterparts in the regions. Thus, our second hypothesis is that \textit{managers located in Moscow are more likely than those in the provinces to be winners}. This hypothesis applies primarily to “good” managers who seek to restructure their firms. For “bad” managers who are likely to be living off of previously appropriated assets, the capitol may not be so hospitable, as prices (including bribes) are significantly higher, and thus purchasing power significantly reduced (Goskomstat 1996, pp 216-221).

Somewhat paradoxically, among firms existing at the beginning of the transition process, it is those that received higher priority under the Soviet centrally planned economy that have tended to fare the most poorly in Russia’s economic reform.\footnote{The following serves to illustrate our point. An electronics company located in the Ukraine produced an assortment of output that included televisions. Its televisions were delivered (sold) in the Ukraine, in Russia, as well as in several Eastern European countries (as “second” TV, in these latter countries). This company was well-off in the Soviet economy: paying above average wages and salaries and providing employees with numerous social benefits. In the inflationary environment of the initial transition period, this company improved its financial position. People bought consumer durables (televisions), formerly \textit{deficitny}, as a hedge against inflation. In 1992, the company founded a bank. The firm’s situation began to deteriorate with the loss of CMEA sales, but domestic sales offset declining CMEA sales in 1992. The deterioration worsened as foreign products entered the market. Consumers preferred foreign-made (higher quality) televisions, especially given the similarity in prices between domestic and foreign televisions. In 1994, the firm lost Russian sales in response to an punitive excise tax imposed by Ukrainian policy makers. Since that time, the company works at most 3 days per week, frequently shutting down operations altogether.} Excluding defense, in the Soviet economy, high priority tended to be given to firms in the energy, metals, machinery, and chemical industries (Amann and Cooper 1982, Thornton 1986). First on the list to receive raw materials, investment goods and other inputs, these firms also tended to be large in terms of workforce size in comparison with firms in other industries. As seen in Table 2 (p.26), the positive correlation between priority designation and workforce size in the Soviet economy holds for all regions. Regression results based on these 1992 firm-level data indicate that industry explains about half of the variation in mean workforce size.\footnote{Dummy variables were created for each industry, with machine building designated as the comparison industry. Log of workforce size was used at the dependent variable. Sample size equaled 21,543 firms. For detailed regression results on the regions included in this study, see Linz (1996, Appendix A).} For Moscow, the industry effect is smaller, explaining less than 20\% of the
variation in workforce size. However, when the data are pooled and a region dummy is created (0 if the firm is located in Moscow, and 1 otherwise), the coefficient on the region dummy indicates that mean workforce size is significantly higher in Moscow when industry is held constant. Combined with the literature (see, for example, Berliner 1988, Granick 1961, Kotkin 1991), these data support the proposition that a Soviet manager’s prestige incorporated industry, workforce size and location elements.

In the Russian transition economy, only within the energy branch have existing firms managed to keep their heads above water. Most of their counterparts in metallurgy, machinery and chemicals are drowning under the weight of severely reduced demand and sales. Given the capital renovation required to give these firms a competitive edge, even drastic employment reductions and/or lower wages may not be sufficient to keep these firms afloat (Krueger 1995, Gaddy 1996, Linz 1996, Slay 1996). As the size of a manager’s "empire" declines, and the prosperity of his or her "subjects" diminishes, there is a negative effect on income, power, status/prestige, and perhaps job security. Consequently our third hypothesis is that managers in companies that received high priority in the Soviet economy are not more likely to be winners than managers who worked in (former) low priority sectors. In short, we expect it less likely that managers in heavy industry, as a group, will be sustainable winners. Their prospects improve, however, if they are located in Moscow.

Privatization of state-owned enterprises and the entry of newly-created private firms represent a cornerstone to the transition from plan to market. In Russia, privatization proceeded rapidly: within two years, more than three-quarters of the targeted state-owned enterprises completed the ownership transfer process. While numerous studies predict efficiency gains to result from privatization (Galal et al 1992, Hammond 1992, Megginson et al 1994, Ott and Hartley 1991), studies conducted early in the transition process in former socialist centrally planned economies find little relationship between ownership and restructuring (Pinto et al 1993, for example). That is, ownership status -- state or privatized -- was not a significant explanatory variable with respect to the experience of enterprise restructuring. More recent studies (Blasi 1996, Estrin et al 1996, and Krueger 1995) find that ownership does “explain” production, employment, and distribution strategies adopted by Russian firms: privatized and privately-owned firms were more likely to be able to articulate what would be considered long-term survival strategies. Indeed, Estrin et al

---

20Only for ferrous/non-ferrous metallurgy and fuels is the mean workforce size significantly lower.

21As reported by The Economist (26 October 1996, pp. 94-97), Gazprom’s offering of 373 million shares was oversubscribed five-fold, with foreign investors paying four times the price at which Gazprom’s shares were being traded domestically at the time. In fact, Lukoil and United Energy Systems (an electricity supplier), in combination with Gazprom, form the three major issuers of foreign debt in Russian industry.

22Of the 51 firms surveyed by Linz in 1995, less than one-quarter were willing or able to articulate a production or financial strategy for maintaining or enhancing market share (Linz 1996).
(1996) conclude that the process of privatization "is the most significant way that firms have been developing a long-run strategy for the marketplace ... and is virtually a necessary and sufficient condition for long-run strategic thinking" (p.151).

Neither privatization nor strategic thinking are sufficient conditions for survival, however. Privatized firms with overhead costs exceeding 50% of total production costs may reflect a significant share of Russian firms. Analysis of the cost structure of ten privatized firms in defense-related production and heavy industry in the first quarter of 1995 yielded the results presented in Table 3 (p.27). Additional figures provided by these firms paint an even dimmer picture of long-term survival prospects. These data reinforce the notion that managers of firms (outside of Moscow) in industries formerly accorded high priority are less likely to be winners. The point here is simply that ownership change alone may be insufficient for most firms, but to the extent that a new set of incentives emerge, managers of privatized firms are more likely to explore options for improving firm performance.

Pro-active restructuring, that is, the introduction of new products, quality improvements, or other efforts to expand into new markets, is more likely to occur in privatized than in state-owned firms. Pro-active restructuring is likely to translate into improved enterprise operation and performance, which in turn enhances the status and wealth of managers. Based on the literature, we predict that firm-level data will document a positive relationship between private ownership and restructuring. Thus, we expect that managers of state-owned firms are less likely to be winners, in a relative sense, than managers of privatized or private firms. For state-owned firms where privatization is imminent, and managerial tenure uncertain, we would also expect asset stripping to occur. Even with inflation more or less stabilized, the chaotic economic environment provides strong incentive for those who can to establish a "nest egg." Asset stripping, while enhancing managerial income and wealth, may not necessarily satisfy the other dimensions by which we measure winners: power, prestige, and job security.

The literature is unanimous with respect to the proposition that former state-owned firms in Russia must restructure in order to survive in the post-transition economy. A significant barrier to restructuring, and hence firm survival, is the stock of human capital of (former) Soviet managers. Soviet managers, the Red Executives described by Granick (1961), succeeded on the basis of their engineering and production knowledge, as well as their ability to finesse ministers and suppliers to obtain defitsimyi inputs. Red executives did not need to take into account consumer preferences, nor to solve financial or marketing problems. Red executives did not prepare strategic plans for establishing or extending market share in the domestic or global economy. These skills were of little value in the Soviet centrally planned system. With the decentralization occurring during perestroika, and more dramatically during the early phase of Russia's transition process, the incentive emerged to acquire managerial skills appropriate to a market-oriented economy. Many managers were able to
obtain training in western business schools (2 weeks to 2 months in Germany, the U.K, the U.S. and other countries), or in equivalent institutions established in Russia. We hypothesize that managers exercising the option of participating in a western-style (market-oriented) training program are more likely to be winners than those who do not.

Winners in Russia's economic reform are those who achieve and maintain above-average income, wealth, power, prestige and job security. The literature suggests that managers as a group, in comparison to workers, are likely to be winners. In fact, both good and bad managers have been winners in the short run. Not all managers are likely to be long-run winners, however. In the long run, we expect only the paladins to emerge as winners, contingent, of course, on the establishment of a conventional corporate governance system. We use firm-level surveys to evaluate whether the foundation for such a governance system is currently in place. Firm-level data provide us with an opportunity to test, albeit roughly, the five hypotheses specified above.

Empirical Results

Are managers winners or losers in Russian economic reform?

*Hypothesis 1: managers are more likely than workers to be winners.*

We were able to collect comparable wage data for workers and managers in about half of the participating firms; that is, we asked managers to report the average monthly wage and the average management salary at their company. It is likely that the discrepancy between the responses and reality was greater for reported management salaries than for workers' wages, although under-reporting might occur with respect to both, given the excess wage tax policy in place at the time the interviews were conducted. The gap in reported wages and salaries averaged about 65%, and varied somewhat by industry and ownership structure, as well as over time. That is, in 1994 the wage-salary gap averaged 50%. It should be noted that this group of firms included few privately-owned companies; firms where we would expect the gap to be highest. In 1995, for the firms reporting both sets of numbers, the wage-salary gap ranged from 25-30% in agricultural machinery and other heavy industry plants to a five-fold gap in privately-owned companies. Excluding the five outliers, those firms with a four- to five-fold wage-salary gap, the gap averaged about 55%. As expected, in firms where the product price was "controlled" either directly, or by the fact that the majority of sales were to state organizations (medical equipment, for example), the wage-salary gap was smallest. Similarly, in firms that had been closed for several months during the year in which the interview took place, the wage-salary gap was smallest. Among the privatized firms, the wage-salary gap was high (45-75%) in firms producing for consumers. Two privatized firms in heavy industry, a tractor components plant and a steel pipes plant, also reported a wage-salary gap exceeding 70%. In 1996, the average wage-salary gap exceeded 75%. We note that in both 1995 and 1996, about one-third of the firms responding to both wage and salary questions were privately owned. As measured by
income, these results indicate that managers as a group would be categorized as winners. To the extent that wealth is highly correlated to income, it is likely that managers would be categorized as winners by this measure, also.

As measured by prestige or power, managers as a group in comparison to workers would be categorized as winners. Nothing in the interviews, nor in the Russian press, indicates a decline in the relative prestige associated with the occupation of enterprise manager. However, managers of private firms were more likely to attach an element of risk to their occupation than managers of privatized or state-owned firms. To the extent that power is measured by the ability to affect a particular outcome, managers as a group would be better positioned than workers. This is evident in managers’ descriptions of policy-setting; even in privatized firms where employees were shareholders, managers attributed little, if any, power to employees in affecting production or employment outcomes. Moreover, managerial power in influencing local economic outcomes by establishing surrogate industrial currencies in lieu of the ruble is described in some detail by Woodruff (1996).

In terms of the last measure, job security, managers as a group may not fare much better than workers. In the majority of privatized firms participating in this project, the current manager had recently been installed. In privatized firms where employee ownership fell below 30% (from the 51% + of the shares that they had obtained during the privatization process), this situation was the norm.

Hypothesis 2: Managers in Moscow more likely than those in the provinces to be winners.

Our data reveal a clear capital city effect on income, and on select measures of power and prestige. That is, we asked managers about average monthly wages paid to workers. Managers of firms that paid relatively high wages were located in Moscow. We asked about current production and employment levels relative to those of 1990. In Moscow, in comparison to the other regions included in this study, the percentage decrease in both production and employment that was reported by managers was less. In short, as seen in Table 4 (p.28), managers in Moscow were more likely to avoid implementing wage, production or employment reductions. There is, no doubt, a significant amount of multicollinearity embedded in these results.23 A comparison of 1992 and 1995 firm-level data (BusinessMap 1993 1995), however, also captures the same trend: Moscow firms are more likely to maintain, on average, a larger workforce. Whether this means all reported workers are actually on the job and regularly receiving a wage is another matter entirely.

23 A greater diversity of ownership structures was put in place in Moscow much earlier than in the rest of the country (Linz 1996, Appendix A). Thus the incentive to acquire western-style training and/or to lease or otherwise use public assets to establish a significant market share prior to the transition process would give Moscow firms/managers a competitive edge during the transition. In such a situation, these firms would be better positioned to avoid dramatic changes in production or employment, and better positioned to pay higher wages.
Moscow is reported to have among the highest office rental rates in the world. Leasing, therefore, represents an attractive option for Moscow firms, and is particularly valuable for non-competitive or financially-distressed firms in the capitol city. Renting out space is more lucrative in Moscow, where the demand by both domestic and foreign firms is high, than in the provinces where the overall demand is much less. Leasing has the potential to generate a substantial cashflow. In 1995, one Moscow respondent reported financing a significant fraction of the company's (relatively high) wages from the (even higher) rents they charged for space in their facilities; exorbitant rents had become commonplace in central Moscow as early as 1993.

We do not claim that a Moscow address is sufficient to ensure success; managers in Moscow are not guaranteed winners. The unique situation in Moscow presents difficulties for financially-distressed firms. Such differences in economic circumstances emerged from the interviews with managers. For example, one manager lamented that due to Moscow's robust labor market, he was less flexible in scheduling production, and frequent shut downs induced his best workers to leave:

"Our competitor (in Volgograd) is more flexible. They can switch production more rapidly than us and pay a much lower, two times lower wage, without fear of the social costs of extensive layoffs. In Moscow, if we lay off workers, we cannot rehire them in 2-3 months because these workers can find other jobs (must find other jobs in order to live). In the Volgograd plant, workers who are laid off have few other opportunities."

Two other managers lamented the fact that superior job opportunities in Moscow had led to the erosion in the quality of their labor force. One manager from a small firm that had faced a 90 percent decline in output during the transition stated: "We are dying in the workplace, (which is now) mostly women. The average age of our workers is high. Young people are not coming here to apply for work; (we face) no opportunity for growth." The second manager is from a much larger firm which had witnessed a rather significant employment decline: workforce size fell from 11,000 employees in 1990 to 3,300 employees by the summer of 1996. The manager cited voluntary separations due to low wages as the primary reason why workers were leaving.

The transition process appears accelerated in the capitol city: non-competitive firms appear to decline more rapidly than their counterparts elsewhere, while up-and-coming firms pull ahead of the competition much faster than elsewhere. Moscow firms have more opportunities to take advantage of better access to reliable financing and face a more extensive market, albeit with more discriminating consumers. Hence the process of sorting out winners and losers among managers is more evident in Moscow. Managers in these rising firms have seen their empires grow in size and stature and have led the way to the ranks of the nouveau riche. Managers of declining firms have seen severe declines in employment and relative standards of living of their workers.

Hypothesis 3: Managers in companies that received high priority in the Soviet economy are no more likely to be winners than managers who worked in (former) low priority industries.
Our hypothesis that managers in industries accorded high priority in the former Soviet Union are no more likely to be categorized as winners than their low-priority counterparts is based on the premise that managerial status will be strongly influenced by firm performance. We expect to find differences across priority industries correlated to the technological level of the industry. That is, managers of firms in metallurgy where the technology level is relatively low, and thus the gap with world standards is less, are likely to be better off than managers of firms in electronics-related industry (televisions, computers, communications equipment and so forth). In the latter case, many of these firms are in the (former) military-industrial complex and have elected to expand their production of civilian consumer goods. In electronics-related industries, world-practice technology is higher than that available domestically, so firms in these “hi-tech” industries are unlikely to sustain their market share in the presence of foreign competition.24

To evaluate relative firm performance by industry, we use three measures: average wages paid to all workers (measured in current dollars), percent change in employment (from 1990) and percent change in output (from 1990). Firms that pay higher average wages, and which have witnessed smaller employment and output declines, are more likely to be long-run survivors and hence emerge from the transition as “winners.” The results of our empirical analysis are presented in Table 5 (p.29).

Table 5 (panel A) is based on reported average monthly wages paid to workers in the firms surveyed in 1994, 1995 and 1996. Ruble wages were converted into current dollars using the IMF (CD-rom) ruble/dollar exchange rate from the second quarter of each year, the period in which most interviews took place. Firms were grouped by industry, and an industry mean wage calculated. Evident in panel A is the increase in average wages, as well as the increasing inequality across industries over time. Regression analysis shows that in 1994, average wages were not significantly higher in any industry represented by the firms in our sample than in the former high priority sector, machine building and metal working (MBMW). That is, the Soviet legacy of according high priority to MBMW appears to have carried over until 1994 in terms of wages. This would affect managerial income, wealth, prestige and power; thus managers in these industries initially would be classified as winners in the Russian economic reform process. By 1995, however, we find that firms in chemicals/petrochemicals (also accorded high priority in the Soviet economy) were paying significantly higher wages than in MBMW, and significantly higher wages than most other industries represented by our sample as well. The wage differences increase by 1996, both in terms of

24The Elex company is a good example of this phenomenon. Elex, located in Alexandrov, just outside of Moscow, was the first large Russian company to be privatized. It terminated production of television sets and VCRs within one year. When Linz met with top-level managers in 1992, the director described the impossibility of competing with foreign products, wishing for a return to the technology blockade by the U.S. and other countries.
magnitude and in terms of number of industries paying higher wages (e.g., food processing and metallurgy). We note that multicollinearity, to some extent, is affecting these results: a large fraction of our food industry observations come from Moscow and Tver (Moscow region), as are three of the five firms from the chemical/petrochemical industry. The fact that average wages in light industry and services are not significantly lower than MBMW speaks volumes about the growing status of managers in these sectors.

In Table 5, panel B, the percentage change in employment is reported by industry for the firms participating in this study. Managers were asked about workforce size in 1990, and workforce size at the time the interview was conducted. Thus in each year the numbers compare to 1990, not to the previous year. As is evident in panel B, in terms of workforce downsizing, there is significant variation over time and across industries or sectors of the Russian economy. For many firms in our sample, 1995 represents a watershed year. The biggest reductions in workforce size had occurred by mid-1995: the mean for 1995 is a nearly 30% reduction in workforce size in comparison to 1990; the mean for 1996 is less than 10% reduction in workforce size in comparison to 1990. Comparatively speaking, these firms had stabilized or increased their workforce by 1996. The two exceptions to this are MBMW, where employment was still declining in 1996, and firms in the food industry, where employment has grown continuously for all three years.

We follow a similar procedure for calculating percentage change in output: managers were asked about current production levels in comparison to the 1990 level. Overall, fewer managers responded concretely to this question than to the employment/workforce size questions. As seen in Table 5, panel C, although the sample size is relatively small, output fell by 20-40% in most industries in 1994; by 1995, the percentage change (reduction) in output in comparison to 1990 was 40-60%. Firms in the food industry and consumer durables provide exceptions to this trend, and by 1996, these results are statistically significant. That is, while other industries are following the general trend mapped out by MBMW, firms in the food and consumer durables industry are doing significantly better.

In sum, we found the largest declines in output in MBMW and in chemicals/petrochemicals (on average), and the largest declines in employment in MBMW, consumer durables and services, followed closely by light industry. Overall, Table 5 suggests consistent differences in potential survival rates between firms in MBMW and those in the food industry. This result is robust by all measures of survivability: average wages, changes in employment, and changes in output. Firms in the chemical/petrochemical branches seem to have fared better than their counterparts elsewhere, but have nevertheless faced severe output declines. In terms of managerial fortunes, the stunning reversal in the fates of managers in MBMW and the once-lowly food processing branches is remarkable.

A concrete illustration of the differences in managerial situations comes from the experiences associated with a bakery and a machine tool company. The director of one of the bakeries in our
sample had been removed from the party hierarchy for some transgression in the 1970s. Appointed as the director of the smallest bakery in the city, this individual fell to one of the lowest rungs on the ladder of success. The transition process brought about a reversal of monumental proportions. The bakery began paying among the very highest wages in the city, having increased overall employment by 5 times between 1990 and 1996. The company had almost no drop in total output; in fact, the company improved product quality and extended the assortment from black bread to a variety of breads and pastries. The company also introduced a new packaging process based on imported plastic materials. Wages paid by this bakery were sufficiently high that the manager not only was obligated to pay the excess wage tax (something of which the manager was proud), but which also attracted the attention of the local administration who wrote a letter suggesting that “perhaps the bakery might benefit from the managerial expertise of one or two of the best people from the local government.”

In contrast, we offer interview evidence gathered from the management of one of the largest machine-tool manufacturers in the former Soviet Union. At the time the interview was conducted, this firm had experienced a 50% decline in output and an 80% decline in employment as compared to 1990. The company paid wages that were half that of the bakery. Moreover, wages generally were paid late and financed through bank loans. These wages differences are more remarkable when one notes that the vast majority of the employees in the bakery were young women; in the latter case they were older men. By 1995, the machine-tool firm was forced to vacate its managerial headquarters. All managerial and other staff were obliged to work at the production site.

Certainly in terms of status and prestige, based on the interviews we conducted, managerial personnel in the food industry appear to be winners relative to their counterparts in most branches of heavy industry. Our data also suggest that managers in the food processing branch have emerged as winners in terms of income. If these managers have obtained a significant ownership share of their company, and if this industry is indeed peppered with viable concerns, managers in this sphere will achieve long-run economic security, as well.

**Hypothesis 4: Managers of state-owned enterprises are less likely to be winners than managers of privatized (former state-owned) or private firms.**

Of the 159 interviews conducted, 102 were at privatized firms, 31 were at newly-created private firms, 16 were at state-owned firms, and 10 at firms that would be categorized as leased or other. Our objective here is to utilize these data in order to determine whether ownership structure influences the potential of managers to be winners in Russian economic reform.

---

25Firms in this category include: (I) those that were leased at time of interview, (ii) those at the time of the interview currently involved in the privatization process, and (iii) those that had begun “privatization” during perestroika by forming a workers’ collective and leasing the facilities.
In order to determine whether ownership structure influences firm survival, and thus a manager's ability to emerge from the transition process as a winner, we used regression analysis to relate changes in employment, changes in output, and current wages paid to employees (measured in dollars) to ownership type: state-owned, privatized, private, and leased/other. Our regressions revealed no strong relationships between ownership type and survival potential, where survival potential is positively correlated with expanding (or minimally contracting) output, low change in employment level, and high average wages. There was a tendency for leased firms (those "privatized" before 1992) to pay higher wages and to have increased employment, especially in 1995 and 1996, but these results were not statistically robust. Moreover, certain ownership types tended to correlate with specific industries\textsuperscript{26} and performance outcomes. For example, our privatized firms paid relatively low wages and had decreased employment substantially; however, this ownership category also correlated with firms in the poorly performing MBMW and light industry sectors. This simultaneity attenuates any survival effects that may result purely from differences in ownership.

Statistical analysis aside, interview evidence does tell an interesting tale about a particular type of firm: one that was leased prior to the initiation of economic reform, and then created a closed joint stock company prior to the privatization program implemented by Anatoly Chubais. The firms in our sample that were leased prior to the transition and later privatized tend to pay higher wages than most other firms in our sample. Moreover, many of these firms increased employment vis a vis the state-owned, newly-created or privatized firms in the sample. These differences are statistically weak and it should be noted that no significant differences were found relating ownership type to changes in output from 1990. The result that leased firms appear to be outperforming other types of ownership structures is at odds with most assessments of the leasing experiment and of governance structures in which insiders, especially nomenklatura, dominate privatization to the exclusion of other interest groups (Frydman et. al 1993, Brada 1996).

Upon reflection, there are several reasons why leased firms would do relatively well during the transition. Under the terms of the original experiment, leases were intended to be based on a competitive bidding process. However according to Frydman et. al (1994), no competitions were ever held and all leases were granted to insiders under the name of "work collectives." Eighty percent of the leasing agreements that were established contained redemption provisions which allowed leaseholders to purchase the leased equipment/property during, or at the end of, the lease.\textsuperscript{27}

\textsuperscript{26}Covariance analysis of ownership and industry generated correlation coefficients of .10 and .20 respectively for the ownership category leased/other and the industries of consumer durables and food. State-owned firms most likely in construction/transportation (correlation coefficient = .20) and chemicals/petrochemicals (correlation coefficient = .19). Privatized firms most likely in machine building or in light industry (correlation coefficients = .20 and .19, respectively). Private most likely in services (correlation coefficient = .50) or other industry (correlation coefficient = .20).

\textsuperscript{27}Leasing of state-owned enterprises began in the early 1990s under decrees passed in 1989. Leasing became quite common, accounting for 13% of industrial output by February 1992 (Frydman et. al 1993, p. 22).
Undoubtedly, self-selection took place, and managers of competitive firms would desire to participate in the experiment, while managers of non-competitive firms would opt out. Leaseholders were able to purchase their firms at rock bottom (1990 capital valuation) prices, in comparison to capital value prices which were later adjusted for inflation.

By essentially initiating the privatization process two to four years ahead of their peers, managers of leased firms would have had significant first-mover advantages. In the wide-open market of Russia's transition, these advantages would have been substantial. Moreover, the absence of bankruptcy laws and the continuance of state subsidies in the early phase of the transition not only provided a safety net, but also may have provided access to capital for those managers willing to restructure their operations. In such an environment, there was indeed little, if any, downside risk. As the transition progressed and subsidies were terminated, the economic and business environment imposed higher risks. Advantages confronting the leased-then-privatized firms were not available to most enterprises privatized under the Chubais program after 1992. Managers of leased enterprises appear to have had the best of all possible worlds: access to political and supplier networks; access that their newly-created counterparts lacked. These managers had a jump start on the transition process that their state-owned counterparts were denied.

Hypothesis 5: Managers who received western-style training are more likely to be winners than those who did not.

About half of the managers were asked specifically if they had received any additional or specialized training in the past five years related to successfully performing the management functions at their company. Not unexpectedly, all managers expressed concern regarding the difficulty of successfully performing the job. Quite lengthy were the discussions of the punitive tax system, the numerous inspections by local and other officials, inter-enterprise arrears, lack of payment from state organizations, impossibly high interest rates, unstable political conditions, and so forth. All agreed that they would need additional and on-going training to survive in such a world.

Regarding the correlation between training and above-average income, wealth, power, prestige and job security, there appears a significant amount of multicollinearity. That is, those managers who received training outside of Russia (less than 10% of those responding to the question) were affiliated with privately-owned firms that could finance such a trip. Most managers who received additional and/or specialized training within Russia, either traveled to Moscow, or participated in locally-provided sessions, funded and instructed in part by western organizations. Because the company paid the expense, these managers also are linked to financially viable firms. However, even though these data cannot be used to support the causality between western-style training and "winning," neither can they be used to support the reverse -- that is, managers without western-style training will be losers in Russia's economic reform. Quite the contrary, several managers who had
not received specialized training were in charge of firms that were performing rather well. Similarly, other managers able to articulate the kind of financial, production, and employment strategy that one would expect to be associated with western-style training, had not, in fact, received any such training. The fact that their firm was performing rather poorly at the time, a metallurgy firm, for example, had more to do with the nature of market conditions.

What we had hoped to capture with the question was the propensity of the manager to successfully adapt to changing economic conditions. What we discovered was that this was only one of many signals of managerial adaptability. Used alone, it identifies managers of relatively rich firms, who may be using the experience to acquire additional training/experience/contacts, or who may be using the experience simply to acquire goods unavailable locally or take a break from the day-to-day operations of the company.

Conclusions

Although our data are insufficient to unambiguously assess whether managers will emerge as long-run winners, our results suggest that, relative to other segments of society, they are winners in Russia’s transition. A significant fraction of these managers have built their position through illegitimate means; stripping assets from state-owned or worker-owned establishments. Moreover, many managers engaged in the less criminal, but perhaps more profitable, activity of writing the regulations and influencing the distribution of assets during privatization, seizing sizable fractions of their firms for themselves.28

However unequal the initial distribution of wealth may have been during the early phase of the transition, a significant fraction of managers are making the best use of the resources at their disposal. These managers are pro-actively restructuring the operations of their firms, adding employment and paying above average wages, raising "all boats." Directors who fail to take advantage of these opportunities are increasingly being replaced by coalitions of younger middle managers, outsiders and workers.29 In this sense Russia’s economy is establishing, however slowly and imperfectly, an incentive regime that is rewarding good managers and punishing bad ones. Pro-active restructuring remains elusive, however, for managers in many branches of heavy industry. Long term survival for many firms in these industries is doubtful. Managers in these sectors have, without doubt, suffered losses in prestige and security during the transition, whether or not they will eventually become impoverished remains to be seen.

28One manager interviewed in 1996 explained the common practice of delayed wage payments was the result of managers using their power to literally starve workers out of their holdings of company stock in order to gain controlling interest.
29Blasi et al (1997, p. 203) reports that one third of firms in the Russian National Survey had replaced their director by 1996.
The sustainability of the robust economic situation in Moscow, with correspondingly
differential rewards for managers in the capitol is also uncertain. Several managers indicated in 1995
and 1996 that the Moscow market had become saturated and was “no longer interesting for us.” This
firm which was based in Moscow was seeking to expand into other regions of the country and had
recently set up operations in Nizhny Novgorod and St. Petersburg. If this is a widespread sentiment,
we would expect the capitol city effect to diminish in the next several years, leading to some leveling
in income and price differentials between Moscow and the regions.
References


Amann, Ronald and Julian Cooper (eds.), Industrial Innovation in the Soviet Union (New Haven: Yale University Press, 1982).


Baglione, Lisa “The Challenge of Creating Representative Unions: The Case of the Mining and Metallurgy Trade Union of Russia,” paper presented at AAASS meetings (Boston, 14-17 November 1996)


Buck, Trevor et. al


Clark, Carol Lorraine, “The Development of Post-Communist Labor Institutions in Russia,” paper presented at AAASS meetings (Boston, 14-17 November 1996)


Colton, Timothy “Voters’ Behavior in the Two Arenas,” paper presented at AAASS meetings (Boston, 14-17 November 1996)


Estrin et. al 1994


Goskomstat, *Russia in Figures* (Moscow, 1995).

Goskomstat, *Osnovnyie pokazeteli po statistike truda* (Moscow, 1995).

Goskomstat, *Trud i zanyatost’ v Rossii* (Moscow, 1995).


Granick, David


Zlotnik, Marc. “Russia’s Gubernatorial Elections,” paper presented at AAASS meetings (Boston, 1-17 Nov. 1996.)
Table 1: Employment in the Russian Bureaucracy
(Thousands)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing &amp; communal services</td>
<td>2,848</td>
<td>3,054</td>
<td>3,217</td>
<td>3,159</td>
<td>2,988</td>
<td>2,982</td>
<td>3,020</td>
</tr>
<tr>
<td>Public health, social security &amp; physical culture</td>
<td>3,526</td>
<td>3,747</td>
<td>4,238</td>
<td>4,305</td>
<td>4,227</td>
<td>4,243</td>
<td>4,394</td>
</tr>
<tr>
<td>Government offices</td>
<td>1,335</td>
<td>1,412</td>
<td>1,806</td>
<td>1,722</td>
<td>1,519</td>
<td>1,649</td>
<td>1,659</td>
</tr>
<tr>
<td>Finance, credit &amp; insurance</td>
<td>384</td>
<td>397</td>
<td>402</td>
<td>439</td>
<td>494</td>
<td>581</td>
<td>745</td>
</tr>
<tr>
<td>Other administration</td>
<td>806</td>
<td>902</td>
<td>1637</td>
<td>1501</td>
<td>1831</td>
<td>1317</td>
<td>1279</td>
</tr>
</tbody>
</table>

| Bureaucracy employees                |      |      |      |      |      |      |      |
| % total workforce                    | 12.1 | 12.7 | 15.0 | 15.1 | 15.3 | 15.2 | 16.2 |

| Industry employees                   |      |      |      |      |      |      |      |
| % total workforce                    | 32.5 | 32.2 | 30.3 | 30.4 | 29.6 | 29.4 | 27.1 |

Table 2: Mean Workforce Size by Industry  
(December 1992)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Far East</th>
<th>Power</th>
<th>48.10</th>
<th>17.11</th>
<th>10.54</th>
<th>48.36</th>
<th>1.5</th>
<th>23.22</th>
<th>45.10</th>
<th>10.60</th>
<th>61.12</th>
<th>10.16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E. Siberia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W. Siberia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N. Caucasus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Volga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black Earth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Volga Vyatka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northwestern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculated from firm-level data provided in Business Map 93: Russia, vol. 1-18 (Moscow: Business Information Agency, 1993).
Table 3: Structure of Overhead Costs, 10 Privatized Firms  
(percent, 1st quarter 1995)

<table>
<thead>
<tr>
<th>Firm Type</th>
<th>Overhead cost as % total production cost</th>
<th>Management salary payments</th>
<th>Auxiliary materials</th>
<th>Social insurance</th>
<th>Taxes/debt payments</th>
<th>Capital repair</th>
<th>Depreciation</th>
<th>Other payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics/radar/other</td>
<td>41.41</td>
<td>10.58</td>
<td>4.10</td>
<td>4.12</td>
<td>9.92</td>
<td>0.58</td>
<td>4.65</td>
<td>7.46</td>
</tr>
<tr>
<td>Electronics/radar/other</td>
<td>79.96</td>
<td>25.62</td>
<td>2.69</td>
<td>10.00</td>
<td>24.63</td>
<td>--</td>
<td>12.35</td>
<td>4.67</td>
</tr>
<tr>
<td>Aviation</td>
<td>40.29</td>
<td>12.28</td>
<td>0.62</td>
<td>4.79</td>
<td>1.55</td>
<td>8.60</td>
<td>9.92</td>
<td>2.60</td>
</tr>
<tr>
<td>Aviation</td>
<td>86.95</td>
<td>13.09</td>
<td>1.57</td>
<td>10.40</td>
<td>14.94</td>
<td>11.75</td>
<td>11.78</td>
<td>13.77</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>21.25</td>
<td>5.22</td>
<td>3.67</td>
<td>2.02</td>
<td>2.46</td>
<td>1.78</td>
<td>3.09</td>
<td>3.01</td>
</tr>
<tr>
<td>Machine building</td>
<td>31.75</td>
<td>5.99</td>
<td>1.24</td>
<td>2.36</td>
<td>14.73</td>
<td>0.67</td>
<td>5.72</td>
<td>1.64</td>
</tr>
<tr>
<td>Machine building</td>
<td>47.74</td>
<td>6.08</td>
<td>0.05</td>
<td>2.03</td>
<td>23.24</td>
<td>--</td>
<td>5.53</td>
<td>10.81</td>
</tr>
<tr>
<td>Machine building</td>
<td>70.95</td>
<td>22.56</td>
<td>0.01</td>
<td>9.95</td>
<td>0.06</td>
<td>--</td>
<td>21.86</td>
<td>10.51</td>
</tr>
<tr>
<td>Agricultural machinery</td>
<td>71.35</td>
<td>14.71</td>
<td>2.39</td>
<td>5.79</td>
<td>28.48</td>
<td>--</td>
<td>18.12</td>
<td>1.85</td>
</tr>
<tr>
<td>Paint/chemicals</td>
<td>33.12</td>
<td>10.05</td>
<td>0.60</td>
<td>3.92</td>
<td>10.26</td>
<td>1.54</td>
<td>6.06</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Source: Select data from consulting/training project in Russia, May 1995.
Table 4: Capital City Effect

<table>
<thead>
<tr>
<th>Location</th>
<th>Dollar Wages</th>
<th>% Change Output Since 1990</th>
<th>% Change in Employment Since 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>159.16</td>
<td>13.17</td>
<td>4.69</td>
</tr>
<tr>
<td>Tver</td>
<td>-48.07*</td>
<td>-25.65</td>
<td>10.38</td>
</tr>
<tr>
<td>Nizhny Novgorod</td>
<td>-77.41*</td>
<td>-35.94</td>
<td>-16.64</td>
</tr>
<tr>
<td>Rostov Taganrog</td>
<td>-66.44*</td>
<td>-37.17</td>
<td>-43.44</td>
</tr>
<tr>
<td>Volgograd</td>
<td>-46.05*</td>
<td>-17.17</td>
<td>-39.26</td>
</tr>
<tr>
<td>Mean of Sample</td>
<td>118.18</td>
<td>-9.24</td>
<td>-10.26</td>
</tr>
<tr>
<td>Sample Size</td>
<td>143</td>
<td>85</td>
<td>118</td>
</tr>
</tbody>
</table>

* Statistically different from Moscow at 5% level or less.
### Table 5: Industry Effect

#### A. Average Employee Waves (Current Dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Building</td>
<td>88.62</td>
<td>92.45</td>
<td>122.10</td>
</tr>
<tr>
<td>Const./Transportation</td>
<td>112.25</td>
<td>65.11</td>
<td>152.94</td>
</tr>
<tr>
<td>Chemical/Petrochem</td>
<td>133.34</td>
<td>168.40*</td>
<td>274.51*</td>
</tr>
<tr>
<td>Metals/Metallurgy</td>
<td>n.a.</td>
<td>99.43</td>
<td>166.67</td>
</tr>
<tr>
<td>Food Industry</td>
<td>121.00</td>
<td>111.93</td>
<td>220.91*</td>
</tr>
<tr>
<td>Light Industry</td>
<td>80.00</td>
<td>63.99</td>
<td>117.65</td>
</tr>
<tr>
<td>Consumer Durables</td>
<td>82.00</td>
<td>86.74</td>
<td>90.59</td>
</tr>
<tr>
<td>Other Industry</td>
<td>n.a.</td>
<td>90.91</td>
<td>98.04</td>
</tr>
<tr>
<td>Services</td>
<td>n.a.</td>
<td>125.00</td>
<td>111.52</td>
</tr>
<tr>
<td>Mean of Sample</td>
<td>101.36</td>
<td>101.34</td>
<td>147.93</td>
</tr>
<tr>
<td>Sample Size</td>
<td>22</td>
<td>71</td>
<td>49</td>
</tr>
</tbody>
</table>

#### B. Employment (% change from 1990)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Building</td>
<td>-.22.04</td>
<td>-.33.56</td>
<td>-49.45</td>
</tr>
<tr>
<td>Const./Transportation</td>
<td>-.31.03</td>
<td>-.64.00</td>
<td>18.75</td>
</tr>
<tr>
<td>Chemical/Petrochem</td>
<td>-10.00</td>
<td>-18.52</td>
<td>-11.28</td>
</tr>
<tr>
<td>Metals/Metallurgy</td>
<td>-10.00</td>
<td>-21.50</td>
<td>-25.00</td>
</tr>
<tr>
<td>Food Industry</td>
<td>53.61*</td>
<td>9.81*</td>
<td>188.02*</td>
</tr>
<tr>
<td>Light Industry</td>
<td>-16.16</td>
<td>-47.72</td>
<td>-35.45</td>
</tr>
<tr>
<td>Consumer Durables</td>
<td>-32.15</td>
<td>-53.33</td>
<td>-69.01</td>
</tr>
<tr>
<td>Other Industry</td>
<td>n.a.</td>
<td>-39.75</td>
<td>n.a.</td>
</tr>
<tr>
<td>Services</td>
<td>n.a.</td>
<td>-45.33</td>
<td>-39.33</td>
</tr>
<tr>
<td>Mean of Sample</td>
<td>-6.89</td>
<td>-29.52</td>
<td>9.03</td>
</tr>
<tr>
<td>Sample Size</td>
<td>27</td>
<td>48</td>
<td>42</td>
</tr>
</tbody>
</table>

#### C. Output (% change from 1990)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Building</td>
<td>-40.56</td>
<td>-48.24</td>
<td>-64.00</td>
</tr>
<tr>
<td>Const./Transportation</td>
<td>-25.50</td>
<td>-60.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Chemical/Petrochem</td>
<td>-34.04</td>
<td>-55.00</td>
<td>-62.33</td>
</tr>
<tr>
<td>Metals/Metallurgy</td>
<td>n.a.</td>
<td>n.a.</td>
<td>-31.25</td>
</tr>
<tr>
<td>Food Industry</td>
<td>4.68</td>
<td>27.86</td>
<td>53.25*</td>
</tr>
<tr>
<td>Light Industry</td>
<td>-24.00</td>
<td>-45.75</td>
<td>-25.42</td>
</tr>
<tr>
<td>Consumer Durables</td>
<td>12.50</td>
<td>56.67</td>
<td>70.50*</td>
</tr>
<tr>
<td>Other Industry</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Services</td>
<td>n.a.</td>
<td>n.a.</td>
<td>50.00</td>
</tr>
<tr>
<td>Mean of Sample</td>
<td>-17.16</td>
<td>-10.42</td>
<td>-3.26</td>
</tr>
<tr>
<td>Sample Size</td>
<td>24</td>
<td>22</td>
<td>38</td>
</tr>
</tbody>
</table>

* Statistically different from MBMW at 5% level or less.

* Calculated using IMF ruble-dollar exchange rate for second quarter of given year.