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*Red Executives:
Are They Winners or Losers
in Russia's Economic Reforms?*

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Red Executives: Are They Winners or Losers in Russia's Economic Reform?

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Abstract

Based on panel data collected from more than 2,000 firms in Moscow, Rostov, Volgograd and Novosibirsk between 1992 and 1995, red executives are evaluated in terms of their ability to maintain or expand production and/or employment, as well as their ability to maintain their position. With respect to production and employment, red executives more often than not are losers. With respect to job security, red executives are winners. Whether red executives are winners or losers does not depend significantly on ownership structure or location. It does vary significantly by industry and firm size.

Key Words: Russia's managers, transition, restructuring, job security

JEL Classification: L1, M2, P42,

Red Executives: Are They Winners or Losers in Russia's Economic Reform?

Managers of Soviet state-owned enterprises, red executives (Granick 1961), trained as engineers and appointed by the political apparatus to fulfill the directives of central authorities, had little call for preparing or implementing strategic business plans. Only in the informal sector did a Soviet manager's entrepreneurial talents emerge (Berliner 1989). Managers of firms in Russia's transition economy, however, are unlikely to survive without these skills. The Soviet legacy of obsolete capital, poor quality production, inappropriate production assortment, and over-full employment put most Russian firms, perhaps with the exception of energy and raw materials, at a competitive disadvantage in both domestic and global markets. Enterprise restructuring, viewed as a key ingredient to firm survival (Ernst et. al 1996, Estrin et. al 1995, Blasi et. al 1997), involves a combination of production, employment and financial elements. Such a combination typically is thought to be beyond the capability of red executives to develop or adopt (Aslund 1995, Commander et al 1996, Mroczkowski et al 1996, Winiiecki 1993). Will red executives therefore be losers in Russia's economic reform?

Previous studies indicate that enterprise managers, as a group, are likely to be winners, especially in comparison to workers (Gregory 1991, Aslund 1995, Connor 1996, Linz and Krueger 1996). In the Linz and Krueger (1996) study, winners are those who receive above-average income, wealth, power, prestige or security. Utilizing survey data collected from 159 in-depth interviews with top-level managers in Moscow, Tver, Rostov, Taganrog, Volgograd, Nizhny Novgorod, and Novosibirsk between 1994 and 1996, Linz and Krueger (1996) find that managers in the whole have been winners thus far in Russia's economic reform with respect to income, wealth, power and prestige. With respect to job security, managers in their sample did not fare so well. Variation in their results by region and industry tends to be robust. Significant variation by ownership structure or firm size is less easy to discern.

Here the focus is on Russia's red executives, managers of former state-owned enterprises. Included in this group are managers who in 1992 held the top-level position in a state-owned firm, a cooperative, collective, joint venture, leased firm, or a joint stock company. Excluded from this group are managers of newly-created private firms (*de novo* firms). As a subset of enterprise managers, red executives are important because they are in charge of firms that account for more than 60% of the workforce (Goskomstat 1995 p. 50), and perhaps more than 90% of the manufacturing activity that currently takes place in Russia.

Two measures are used here to categorize red executives as winners or losers: power/prestige, and job security. The proxy for power/prestige is whether the manager was able to maintain or expand production and/or workforce size between 1992 and 1995. Faced with declining demand and supply disruptions, output in most industrial sectors of the Russian economy fell significantly between 1992 and 1995. This paper utilizes firm-level data to evaluate whether all industries were equally affected, and whether all firms within a particular industry were equally hard hit. One way to measure this involves a comparison of production volume in both 1992 and 1995. The valuation can be done using adjusted ruble or dollar values. However, valuation difficulties make the production measures rather suspect, given Russia's unconventional accounting techniques and the prolonged near-hyperinflationary environment. Employment figures represent a second way to gauge a firm's performance. Although valuation difficulties are not inherent in the workforce size figures reported by each firm, there remains a difficulty associated with the number of people reported as employed by the company versus the number of people actually working at the company.¹ The proxy for job security is whether the manager was able to maintain his/her position between 1992 and 1995.

The data to evaluate managerial performance on these two measures was obtained from two listings of civilian manufacturing firms published by the Business Information Agency (BIA), a private company in Moscow which had access to Goskomstat data. For comparison purposes (see Linz and Krueger 1996), this study focuses on Moscow, Rostov, Volgograd and Novosibirsk.²

The paper is divided into four parts. First, the hypotheses and methodology used to evaluate red executives as winners or losers in Russia's economic reform are described. Second, a description of the sample of firms included in this study is provided. Third, the hypotheses are tested using firm-level data collected in 1992 and 1995. The results suggest that reductions in production volume vary significantly by industry, and across firms within a given industry when region, firm size, and ownership structure are taken into account. Similarly, employment change varies significantly by industry, and by region. In the construction/construction materials industry, for example, employment expanded by over 14% in these four regions, while in the printing industry, employment fell by more

¹ Anecdotal evidence abounds describing the number of workers on the books versus the number on the shop floor -- some accounts put the discrepancy at 30-50% of a firm's workforce. My own observations suggest that the upper bound figure may be the norm (Linz 1994 1995).

² The data used here were collected from firms located in Moscow, but not Moscow region (so Tver is not included): Rostov region (thus Taganrog is included): Volgograd region. and Novosibirsk region.

than 35% between 1992 and 1995. With respect to workforce downsizing, firms in Volgograd and Novosibirsk were harder hit than firms in Moscow and Rostov. The results also suggest that with respect to job security, between 1992 and 1995, red executives were big winners; more than three-quarters of the managers in 1992 held their same position in 1995. In the final section, policy implications of the results are discussed, as well as areas for further research.

Hypotheses and Methodology

To establish testable hypotheses about red executives as winners or losers in Russia's economic reform, this paper starts from the premise that a manager's power/prestige is a function of firm size. Red executives in the Soviet economy scored high in rankings of occupational prestige/power (Millar 1987). The relative ranking of red executives varied by industry, and thus by firm size,³ and was highly correlated to proximity to defense-related production. In Russia's transition economy, despite the association in the popular press of red executives with *mafija*, prestige and power rankings did not diminish. Indeed, in the political sphere, red executives established a formidable presence, not only shaping economic and other business-related legislation, but also dictating the extent and pace of its implementation (Aslund 1995 1996, Linz and Krueger 1996).

Here, power/prestige will be measured by whether managers are able to maintain or expand production and/or employment. Clearly, a manager's ability to achieve either one is partly a function of the market conditions that the firm faces. Market conditions in Russia are influenced in large part by the industry in which the firm is located, and in part by the firm's access to global markets. For example, firms in energy, raw materials or the extracting industries which have a high export potential, are better positioned to avoid adverse domestic conditions.⁴ Similarly, firms in Moscow, St. Petersburg and Vladivostok, cities with well-established links to foreign financial and product markets, are better positioned than those located in the provinces. Firms engaged in defense-related production have, since 1989, faced a severe reduction in demand. Managers in the defense industry, especially those located in the provinces, are unlikely to be able to internally finance the conversion to civilian production. Central funding for conversion to date has been inadequate. Thus, it is unlikely that managers of these firms will be able to

³ Firms in the machine building, power, fuel, metallurgy and chemicals industries in the Soviet economy tended to employ more people, on average, than firms in the food, printing, construction/construction materials and wood/paper industries. The former also tended to be linked closely to defense production.

⁴ Domestic energy sales reflect a different situation. According to a recent report by the IMF, more than half of Russia's manufacturing firms and a large percentage of residential units fail to pay fully for actual energy used (*IMF Survey*, 27 January 1997, pp. 10-12).

maintain pre-transition levels of production or employment.

A manager's ability to achieve stability or expansion in production and employment also is determined by a number of firm-specific characteristics: age of capital stock, debt-to-asset ratio, export experience, and the like. Firms in machine building, where the lack of numerically controlled machine tools attests to the overall technological level of the industry, represent a case where age of capital stock makes it unlikely that managers will be able to maintain or expand production or employment. Firms in the electronics industry (televisions, radios, VCRs, computers and communications equipment) discovered early on that, while their capital stock was relatively new, it was still inadequate to enable them to compete in terms of quality with the foreign-made goods that quickly flooded shop shelves once "strategic" trade restrictions were removed.

Finally, a manager's ability to maintain or expand production and/or employment will depend in part on ownership structure. State-owned firms, or firms producing for state-owned buyers, even those with a monopoly position with respect to the supply of a product or service, may find maintaining or expanding production or employment to be impossible, given Russia's ongoing financial crisis. Yet, with respect to ownership structure, the employment results may be ambiguous. That is, both state-owned firms and employee-owned firms (closed joint stock companies, and open joint stock companies in which employees hold the majority of shares) are likely to be committed to maintaining employment levels despite declining production volume. However, to maintain employment levels may require below-average wages, or infrequently paid wages. In such a situation, workers may search for alternative employment; thus workforce size would fall.

Four hypotheses form the core of this analysis of the prestige power of red executives in the Russian transition economy: (a) *winners are more likely to be found in Moscow than in the provinces*; (b) *winners are less likely to be found in state-owned enterprises*; (c) *winners are less likely to be found in large or extra-large firms (firms employing > 1,000 workers, and firms employing > 10,000 workers, respectively)*; and (d) *winners are less likely to be found in firms closely linked to defense production*.

Regression analysis is used to test the power/prestige hypotheses. In the first specification, percentage change in production volume between 1992 and 1995 is the dependent variable, and industry, region, workforce size and ownership structure are the independent variables.⁵ The 1992 production volume data are adjusted to 1995 values

⁵ Firms are listed within a region (Moscow, Rostov, Volgograd, Novosibirsk) by industry. For this analysis, firms are categorized as state-owned or non-state-owned. Firm size is defined by the privatization

using the annual industrial price index reported by Goskomstat (1996). As a check on these results, dollar values also are utilized. That is, the dollar value of the 1992 production volume for each firm is calculated using the December 1992 Moscow black market ruble-dollar exchange rate. Given the extensive exchange rate controls in place at the time, the black market rate (460 rubles per \$1) was thought to be more representative of ruble value than the official exchange rate used for business transactions (Krupp and Linz 1996). The dollar value of the 1995 volume of production was calculated using the June 1995 exchange rate of 5000 rubles to \$1.

In the second specification, percentage change in workforce size between 1992 and 1995 is the dependent variable, and industry, region, workforce size and ownership structure are the independent variables.

Whether red executives are winners or losers in Russia's economic reform also will be evaluated from the perspective of job security. The basic premise here is that *winners are those who maintain their position between 1992 and 1995*. The fraction of managers that maintained their position is calculated for the entire set of firms, with a test for significant variation by industry, region, workforce size, and ownership structure.

Sample Description

The Business Information Agency (Moscow) put together an 18-volume listing of more than 21,000 civilian manufacturing firms in Russia based on data obtained from Goskomstat in December 1992. A similar listing was prepared based on data obtained in June 1995. This paper utilizes the BIA firm-level data for Moscow, Rostov, Volgograd and Novosibirsk. Table 1 provides a breakdown of the number of firms by industry in each of these regions in 1992 and 1995. For comparative purposes, total employment and mean workforce size by industry also are provided for both years.

Several characteristics stand out with regard to the firms included in Table 1. First, while possibly an artifact of the data collection process, the total number of firms in these four regions increased between 1992 and 1995, from 2,751 to 3,128 (see Table 1). This increase in the total number of firms appears despite the fact that information is missing in 1995 for the power industry in Moscow and Rostov, and the machine building industry in Novosibirsk. In fact, in three-quarters of the remaining cases where data are available by industry and region, firm numbers rose between 1992 and 1995. However, total employment reported by firms in these four regions fell by 8.4%; from 25.9 million in 1992 to 23.7 million in 1995. Not unexpectedly, in more than two-to-one cases, mean workforce size also

program: small, medium, large, and extra large (Frydman et. al 1993).

fell over this period.

Second, as seen in Table 1, in the fuel, ferrous/nonferrous metallurgy, and wood/paper industries, both the number of firms and mean workforce size increased. In Moscow and Rostov, this dual phenomenon also occurred in the construction/construction materials industry. An increase in both the number of firms and in mean workforce size tends to suggest that these are growth industries in these particular regions.

Third, firms in the food, printing, chemical and light industries appear to have experienced the most consistent reductions in workforce size. Several factors may be contributing to this result. Greater competition, especially by foreign firms, may be forcing firms in these industries to reduce costs by releasing surplus workers. Alternatively, lower wages may be forcing workers in these industries to seek alternative employment. To the extent that these were "pink collar" industries, that is, dominated by female employees in the Soviet economy, workforce size may be shrinking as women elect to withdraw from the labor force.⁶

Table 2 describes the distribution of firms in these four regions by workforce size, using the workforce size definitions specified by the Russian privatization program (Frydman et. al 1993). In all four regions, the percentage of small firms (firms employing fewer than 200 workers) rose by a significant amount; nearly 10% in Moscow, Rostov and Novosibirsk. The percentage of firms in the medium and large workforce size categories fell. Both outcomes are consistent with the pervasive workforce downsizing evident in Table 1.

Table 3 groups the firms in these four regions by ownership structure for both years. Overall, the percentage of state-owned firms fell dramatically between 1992 and 1995: in Moscow, from 74% to 24%; in Rostov, from 93% to 30%; in Volgograd, from 88% to 32%; and in Novosibirsk, from 69% to 27%. According to these data, in 1995, state-owned firms were most likely found in the printing industry, followed by the power, fuel, and ferrous/nonferrous metallurgy industries. Industries with the lowest concentration of state-owned firms include: food, chemicals, construction/construction materials, and light industry.

From these two BIA listings, it was possible to match individual firms by registration number and address.

⁶ Under the Soviet system, "parasite laws" (Gregory and Stuart 1990) obliged nearly all able-bodied adults to work full-time for the state. Consequently, Soviet female labor force participation rates were among the highest in the world; in excess of 80%. New labor codes adopted in 1992 permitted more choice by firms and households in the employment decision. Unemployment compensation benefits provided modest financial support for those women who elected to withdraw from the workforce, if they were willing to register at an unemployment office (Marnie 1993).

Altogether, 2,016 firms in these four regions are listed in both data sets.⁷ Of these, in 1,727 cases, a single firm in 1992 was matched with a single firm in 1995. In 289 cases, a single firm in 1992 was matched with multiple firms in 1995; that is, more than one company had been established during the privatization process from the 1992 "parent" company.⁸ This analysis includes only those firms for which a single firm in 1992 could be matched with a single firm in 1995. For this group of firms, the requisite data were available in 1,593 cases. In about 10% of these cases, however, the industry code changed. In some instances, a logical explanation may underly the industry change: firms switching from tractor components production to wheelchair production, for example. That is, the main assortment changes in such a way as to require industry reclassification. In other instances, it may simply be a change or inconsistency in the coding: in Rostov alone, eighteen firms coded in the power industry in 1992 were listed in the fuel industry in 1995. In Volgograd, three firms in the power industry in 1992 were listed in the machine building industry in 1995. A similar situation also occurred for a firm in Moscow, and the reverse for a firm in Novosibirsk. In some instances, it would appear to be a mistake: in Moscow, one firm was listed in the power industry in 1992 and the food industry in 1995.

To simplify this analysis, as well as the interpretation of the results, only those firms appearing in both listings in the same industry are included in the panel. That is, a total of 1,420 firms are included in the panel data set, of which 1,365 report employment figures. As seen in Table 4a, more than 80% of these firms were state-owned in 1992. At that time, the construction/construction materials industry had the lowest percentage of state-owned firms. By 1995, less than 30% of the firms in this panel were state-owned. The highest concentration of state ownership in 1995 is found in the printing industry; the lowest in the food processing industry. The distribution of firms in the

⁷ More than half of the firms that show up in the 1992 listing but not in the 1995 listing are in machine building, in large part accounted for by the absence of these machine building firms reported for Novosibirsk. More interesting are the firms that are included in the 1995 listing, but not in the 1992 listing -- a total of 625 firms in these four regions combined. It may be that some firms designated as primarily engaged in defense-related production in 1992 and thus not included in a listing of civilian manufacturing firms had converted to civilian production by 1995. Regarding the distribution of 1995 firms not listed in 1992: 20% are in machine building, and thus could easily have previously been engaged primarily in defense production; 15% are in ferrous/nonferrous metallurgy and the remainder are rather equally distributed across the construction/construction materials, food, light, wood/paper and printing industries. Interestingly enough, nearly one-quarter of those firms reported in 1995 but not in 1992 are state-owned -- yet another bit of evidence to suggest that at least these companies were involved primarily defense-related production in 1992. Nearly three-quarters of the firms listed in 1992 but not 1995 -- perhaps because they were shutdown -- were state-owned.

⁸ In 3 cases, more than one firm was associated with a single registration number in 1992, but only a single firm was associated with these same three registration numbers in 1995. These 3 cases have been dropped from this analysis.

panel data set by workforce size is reported in Table 4b. While the share of small firms rises by 4 percentage points, overall, the number of firms in each category remains remarkably stable.

Table 5 focuses on those firms in the panel for which employment data are available. More than one-third (35%) of the firms that form the basis for this analysis are in the food industry. Light industry and machine building each account for another 15% of the total number of civilian manufacturing firms in the panel in these four regions.⁹ Construction/construction materials and printing follow as a distant third, accounting for 8% and 7% of the firms in the panel, respectively. For this set of firms, mean workforce size fell in all industries except power, where mean workforce size remained constant, and construction/construction materials, which expanded employment by 14% between 1992 and 1995. Firms in the food industry and in the wood/paper industry experienced the lowest percentage employment reduction: -6% and -7%, respectively. The largest decrease in employment (-36%) occurred in the printing industry. The regional differences in mean workforce size evident in Table 1 -- significant reductions in Volgograd and Novosibirsk, significant increases in Moscow and Rostov -- do not appear for firms in the panel. However, regional differences in total employment are apparent: Volgograd and Moscow experienced a greater reduction in total employment than Novosibirsk or Rostov.

Red Executives as Winners or Losers?

To evaluate the general proposition that red executives are winners in Russia's economic reform, the focus first is on the power/prestige measures. Regarding red executives' ability to maintain or expand production, these firm-level data indicate that in Moscow, Rostov, Volgograd and Novosibirsk, nearly all managers are losers. That is, the percentage change in production volume between 1992 and 1995, PCTVOL, is negative for more than three-quarters of the firms when production volume is calculated in adjusted ruble values.¹⁰ If the unit of analysis is industry, and mean percentage change in production volume is the basis for comparison, winners tend to be concentrated in the power, fuel, and ferrous/nonferrous metallurgy industries, although sample size make these results somewhat suspect. For firms in this panel, the least hardest hit were located in the chemicals and construction/construction materials industries, followed by printing, food and wood/paper. The hardest hit were firms

⁹ None of the firms in the panel in the power industry are located in Moscow or Rostov, because these data were not provided by the Business Information Agency for 1995. Similarly, none of the firms in the panel in machine building are located in Novosibirsk.

¹⁰ The industrial price index calculated from Goskomstat (1996) was 171.66.

in light industry. In terms of overall production volume, firms in Moscow fared better than those in Rostov, but not better than firms in Volgograd.¹¹

Table 6a reports the distribution of firms in the panel that maintained or expanded production volume between 1992 and 1995. In each of the four regions, the first column identifies the number of firms in which, by definition, red executives are winners. The second column is the total number of firms in the panel in the industry. The third column is the percent of winners by industry. As seen in column three for each region, there is no significant difference in the proportion of winners by region. There is, however, significant variation by industry. For example, in construction/construction materials red executives do significantly better than average with respect to production volume. Red executives in machine building in Moscow and Rostov performed above average with respect to production. As seen in Table 6a, red executives in light industry are significantly fewer than one-in-ten.

When production volume is calculated in US dollar equivalents, using the December 1992 Moscow black market ruble-dollar exchange rate and the June 1995 ruble-dollar exchange rate, nearly all managers emerge as losers. All firms in light industry experienced dramatic production declines. Firms in the wood/paper, printing, and food industries fared better than those in machine building. Perhaps it is small consolation, however, to lose a leg below the knee as opposed to above the knee.

When PCTVOL is regressed on industry, region, firm size, and ownership structure, three results stand out. First, ownership status in 1995 is not significant in explaining the percentage change in production volume between 1992 and 1995. Second, the coefficients on firm size are positive and significant. Third, only for firms in Rostov is there significant variation from Moscow; that is, percentage reduction in production volume in Rostov was significantly greater than the percentage reduction in Moscow. Using construction materials as the basis for comparison, firms in the power and fuel industries did significantly better. It is hard to reject the result that firms in light industry did significantly worse. All other industries fared about the same as the construction/construction materials industry.¹²

¹¹ Missing production volume data for firms in Novosibirsk reduce sample size to under 25, thus the results for Novosibirsk are not considered reliable. For Moscow, sample size is 329; for Rostov, 332; for Volgograd, 286.

¹² When the dollar value production volume variable is used, the result that firms in Rostov are significantly worse off than elsewhere remains significant. Also significant is the positive coefficient on firms in the power industry (that is, percentage change in production volume was significantly greater for firms in the power industry than for firms in construction construction materials). Finally, in this specification, the percentage reduction in production volume between 1992 and 1995 was significantly greater for medium-sized firms, in

Regarding red executives' ability to maintain or expand employment between 1992 and 1995, these firm-level data indicate that in Moscow, Rostov, Volgograd, and Novosibirsk, managers more often than not are losers. That is, the percentage change in workforce size between 1992 and 1995, PCTEMPLY, was calculated for each firm. The handful of cases where a reporting error appears evident: employment rose from 6,000 to 20,000 people, for example, were dropped. Using industry as the unit of analysis, in more than half of the cases, mean workforce size reductions by industry were below 15%. That is, for the firms in the panel, the percent change in employment between 1992 and 1995 for firms in the power industry was 1%; in fuel, -2.4%; in food, -4.1%; in chemicals, -6.6%; in construction, -12.0%; in ferrous/nonferrous metallurgy, -12.7%; and in wood/paper, -13.3%. The remaining industries experienced mean workforce size reductions between 20% and 26%. At the firm-level, where workforce size reductions exceeded 50%, in the vast majority of cases, the 1992 level of employment was less than 2,000 workers.

Table 6b reports the distribution of firms in the panel that maintained or expanded employment between 1992 and 1995. Overall, the fraction of red executives who emerge as winners with respect to employment nearly doubles that associated with production volume. Red executives tend to appear more frequently as winners in the construction/construction materials and food industries than in other industries. Red executives in light industry fared the worst in most regions. In Moscow, only in the food industry were the number of winners significantly above the regional average. Unlike the results presented in Table 6a, where red executives in machine building did rather well with respect to production, in terms of employment, machine building fared significantly worse than average. In terms of regions, in Rostov and Novosibirsk, there are proportionately more winners than in Moscow.

With respect to regional differences in workforce size reductions, Volgograd ranks highest in terms of percentage reduction in workforce size: -17% (307 firms reporting); followed by Moscow, -15% (436 firms reporting); Novosibirsk, -9.8% (196 firms reporting); and Rostov, -8.7% (426 firms reporting).

When PCTEMPLY is regressed on industry, region, firm size and ownership structure, several results are noteworthy. First, ownership structure is not significant. Second, not unexpectedly, the coefficient on region is significant for Rostov (at .002%) and Novosibirsk (at .10%). Third, the firm size coefficients are all significant and indicate that, in comparison to small firms (firms employing < 200 workers), the smallest percentage change in

comparison with small firms.

employment occurred among the extra-large firms (firms employing > 10,000 workers). In absolute terms, of course, this could account for a rather large number of people. In rank order, the extra large firms are followed by the medium-sized firms (employing 201-1000 workers) and the large firms (firms employing > 1000 workers) in terms of percentage reduction in workforce size. Regression results point to no significant differences across industries in percentage reduction in workforce size.

To complete the analysis, the responsiveness of employment to changes in production volume, RESPONSE, was calculated for each region and industry. Only in Volgograd was the employment elasticity positive (.15); that is, the percentage change in employment and production both move in the same direction, in this case negative. The magnitude reflects a relatively low response to reduced production in the form of workforce downsizing. For Moscow, the employment elasticity was -.50; for Rostov, -.18. The negative values reflect a situation where, for the region, employment is declining but overall production is not. The fact that this figure is bigger for Moscow than for Rostov may suggest that overstaffing in Moscow firms was greater in 1992 than in Rostov, and thus red executives in Moscow were obliged to release workers as financial conditions deteriorated. Alternatively, it may reflect better employment opportunities in Moscow; that is, workers choosing to leave the company for higher wages elsewhere (in *de novo* firms, perhaps).

By industry, the employment elasticity was positive in construction/construction materials (.22), chemicals (.17), and wood/paper (.14). The responsiveness of employment to production changes was -.58 in the food industry, and -.55 in printing. Regression results indicate that neither industry, nor region, nor firm size, nor ownership structure are significant in explaining the variation in the responsiveness of employment to changes in production.

These firm-level data suggest that, in terms of power/prestige as measured by the ability to maintain or expand production or employment, red executives as a group have not been winners in Russia's economic reform. In particular, the hypothesis that *winners are more likely to be found in Moscow than in the provinces* is rejected. In terms of production volume, firms in Moscow fared better than those in Rostov, but not better than firms in Volgograd. Nor did red executives in Moscow maintain or expand employment better than their counterparts in Novosibirsk or Rostov. In fact, red executives in Moscow may have found it harder than their counterparts elsewhere to hold on to skilled workers, given the relatively greater employment options in the capitol city.

Regarding the hypothesis that *winners are less likely to be found in state-owned firms*, these data indicate that ownership structure is not significant in explaining either the percentage change in production or the percentage

change in employment between 1992 and 1995. Consequently, ownership is not significant with respect to variation in the responsiveness of employment to production changes. Thus, on the basis of these data, the hypothesis is rejected.

Does firm size affect whether or not a red executive is a winner with respect to the power/prestige variables used here? Large and extra-large firms experienced the least reduction in employment on a percentage basis. Moreover, large and extra-large firms were most likely to be in the group of firms where the percentage production declines were the smallest. Thus, these data tend not to support the hypothesis that *winners are less likely to be found in large or extra-large firms*. It may be the case that large/extra-large firms are better able to change assortment or to utilize existing materials in such a way as to survive. Anecdotal evidence indicates the firms with the wherewithal have, for example, added car repair services and taxi/delivery services to their range of activities, or turned cantinas into night clubs. Other firms have found a booming business in providing security devices for newly-constructed homes and *de novo* businesses.¹³

These data tend not to support the hypothesis that *winners are less likely to be found in firms closely linked to defense production*, if machine building is used as a proxy for the defense industry. Overall, firms in machine building, in this panel, fared no worse with respect to production or employment changes than firms in the construction/construction materials industry. In terms of relative distribution of winners, red executives in machine building did better with respect to production volume than employment levels.

Are red executives winners with respect to job security? The answer is overwhelmingly, yes. For 1,714 firms in the panel, the manager's name was listed in both 1992 and 1995. With the exception of Novosibirsk, in more than 80% of the firms, the manager maintained his/her position during this period. That is, in Moscow, 82% of the firms (n=587) reported the same manager's name in both years. In Rostov, in 396 of 489 firms reporting, the manager's name was the same. In Volgograd, 84% of the 332 firms reported the same manager. In Novosibirsk, the comparable figure is 77% (of 306 firms reporting). Indeed, there appear to be no significant differences in the variable mean, CHGMGR (where CHGMGR =1 if manager is different, and 0 if manager is same), by industry, region or ownership structure. Probit regression results indicate that the probability the manager will be different in

¹³ Expanding the diversity of assortment in response to financial incentives is not unique to Russian firms. More than a decade ago, a Soviet manager who worked in an agricultural machinery plant described making chandeliers for *na levo* sales.

1995 in comparison with 1992 is not influenced in any significant way by industry, region, firm size or ownership structure.

How do these results compare with results based in in-depth interviews with top-level managers in these four regions? It should be noted that the Linz and Krueger (1996) study included *de novo* firms, while this study does not. Two differences stand out. These data do not support the capitol city effect found by Linz and Krueger (1996), nor do they support the high managerial turnover documented by Linz and Krueger. With regard to the latter, Linz and Krueger found turnover rates higher at the end of 1995 and in 1996 than in 1994 and earlier. Thus the timeframe is not strictly comparable. This study, like Linz and Krueger, finds significant variation by industry, but no significant impact of ownership structure.

Conclusions and Policy Implications

The firm-level data used in this study indicate that in Moscow, Rostov, Volgograd and Novosibirsk, more than one-half, and in many cases, more than three-quarters of all red executives are losers with respect to power/prestige, when power/prestige is measured by the ability to maintain or expand pre-transition production and/or employment levels. Winners tend to be concentrated in power, fuel, ferrous/nonferrous metallurgy, chemicals and construction/construction materials. Winners tend not to be concentrated in Moscow. Whether red executives are winners does not appear to be determined by ownership structure. Red executives do tend to emerge as winners in terms of percentage change in output or workforce size if they are employed in large or extra-large firms. However, this may be a scale effect. When measured by job security, nearly all managers in this panel of 2,000 firms were winners. That is, more than 80% of the red executives held their same position between 1992 and 1995.

Overall, these results bode well for the potential success of Russia's transition to a market economy. These data clearly indicate that, even in sectors dominated by the Soviet legacy, pervasive restructuring is occurring. In machine building, for example, employment reductions between 1992 and 1995 across regions were such that fewer than one-in-five red executives emerged as winners. It may not be a pro-active restructuring effort spearheaded by the manager. To achieve such a result would necessarily require an extensive executive development/training program. However, despite their relative power/prestige in Soviet and Russian society, red executives have not been able to keep things the way they were.

One area not addressed in this project involves the role of foreign financing. While the magnitude to date has been rather small, an analysis of its impact on production, employment and managerial turnover would be

important in determining the relative cost and benefit of pursuing strategies to attract additional foreign financing in the future.

What is to be done? Reality in Russia appears to be the maintenance of the status quo. Consequently, a two-pronged attack may be warranted if the goal is, in fact, to improve overall business operation and performance. First, introduce both broad-based and in-depth training programs for red executives that focus on areas not emphasized in the Soviet economy: marketing, human resource management, cost accounting, strategic financial planning, and the like. My own observations in the past three years of conducting in-depth interviews with Russian managers suggest that the mechanics of preparing a realistic business plan is an area of training that is the most needed and appreciated. Since there is little indication that red executives are vacating their positions, identifying ways to improve their performance in the transition and post-transition economy would be an appropriate policy option to pursue. Tax credits for training program fees might be one way to implement such a policy.

Second, creating a stable economic environment so that ongoing business relationships can be established is a theme that is repeated by all managers I have interviewed, and all articles that address business survival in Russia's transition economy. Rather than wait until the political, social, economic, financial and legal structures are in place to create a stable economic environment, it may be prudent to consider targeting select firms, industries or regions for strategic assistance. If the political realities of designating the "targets" can be overcome, perhaps some of the more successful policies adopted in China may be modified for use in Russia.

**Table 2: Distribution of Civilian Manufacturing Firms by Workforce Size
(December 1992, June 1995)**

Number of Employees	Moscow			
	1992		1995	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
< 200 people	302	28.0	347	37.7
200 - 1000	523	48.6	406	44.1
1001 - 10,000	244	22.7	153	16.6
> 10,000	8	0.7	15	1.6
Total	1077		921	

Number of Employees	Rostov			
	1992		1995	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
< 200 people	251	41.4	472	49.5
200 - 1000	252	41.6	349	36.6
1001 - 10,000	94	15.5	117	12.3
> 10,000	9	1.5	16	1.7
Total	606		954	

Number of Employees	Volgograd			
	1992		1995	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
< 200 people	200	47.4	233	50.5
200 - 1000	155	36.7	169	36.7
1001 - 10,000	61	14.4	55	11.9
> 10,000	6	1.4	4	0.9
Total	422		461	

Number of Employees	Novosibirsk			
	1992		1995	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
< 200 people	201	51.8	290	62.6
200 - 1000	138	35.6	124	26.8
1001 - 10,000	47	12.1	49	10.6
> 10,000	2	0.5	0	0
Total	388		463	

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

Table 1 (cont'd)

Industry	Volgograd					
	1992			1995		
	<i>Number of Firms⁺</i>	<i>Total Employment</i>	<i>Mean Workforce Size*</i>	<i>Number of Firms⁺</i>	<i>Total Employment</i>	<i>Mean Workforce Size*</i>
Power	18	18,363	1020	13	16,590	1276
Fuel	7	10,769	1538	15	7,618	508
Ferrous/Nonferrous						
Metallurgy	7	32,890	4698	14	40,234	2873
Machine Building	83	116,494	1456	101	105,736	1101
Chemical	18	12,116	2617	26	44,752	1721
Forestry/Wood/Paper	51	11,594	227	65	16,042	250
Bldg/Const. Materials	47	27,181	591	41	21,014	512
Light Industry	27	30,767	1139	32	22,736	710
Food Industry	140	34,152	244	138	30,606	221
Printing	20	2,632	132	22	1,806	129
Miscellaneous	9	7,028	781	8	5,305	663
Total	427	303,968	801	475	312,439	677

Industry	Novosibirsk					
	1992			1995		
	<i>Number of Firms⁺</i>	<i>Total Employment</i>	<i>Mean Workforce Size*</i>	<i>Number of Firms⁺</i>	<i>Total Employment</i>	<i>Mean Workforce Size*</i>
Power	2	10,802	5401	9	7,375	1053
Fuel	4	2,048	512	5	2,676	669
Ferrous/Nonferrous						
Metallurgy	7	8,653	1236	199	88,610	770
Machine Building	88	83,824	1002	0	--	n.a.
Chemical	12	12,028	1093	29	18,464	1086
Forestry/Wood/Paper	48	209,160	299	104	23,432	289
Bldg/Const. Materials	39	22,290	576	59	18,826	459
Light Industry	31	16,418	529	55	18,389	417
Food Industry	126	29,406	238	187	21,499	181
Printing	12	1,619	135	29	3,330	133
Miscellaneous	27	35,841	1271	20	12,010	1201
Total	396	432,089	602	646	215,061	463

* Mean workforce size based upon those firms reporting employment.

⁺ This figure includes all firms listed; not all firms report employment.

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

Table 3 (cont'd)

Industry	Volgograd					
	1992			1995		
	State-Owned	Other ^a	Percent State-Owned	State-Owned	Other ^a	Percent State-Owned
Power	18	0	100	2	11	15
Fuel	7	0	100	9	6	60
Ferrous/Nonferrous						
Metallurgy	7	0	100	2	12	14
Machine Building	82	2	98	29	67	30
Chemical	18	1	94	3	22	12
Forestry/Wood/Paper	51	3	94	44	20	69
Bldg/Const. Materials	47	11	77	4	37	10
Light Industry	27	2	93	5	27	16
Food Industry	140	31	78	32	106	23
Printing	20	0	100	13	0	100
Miscellaneous	9	1	89	4	4	50
Total ^b	426	51	88	147	312	32

Industry	Novosibirsk					
	1992			1995		
	State-Owned	Other ^a	Percent State-Owned	State-Owned	Other ^a	Percent State-Owned
Power	2	0	100	5	4	56
Fuel	3	1	75	3	2	60
Ferrous/Nonferrous						
Metallurgy	6	1	86	51	48	26
Machine Building	63	25	72	0	0	--
Chemical	10	2	83	5	24	17
Forestry/Wood/Paper	43	5	90	45	56	44
Bldg/Const. Materials	29	10	74	11	48	19
Light Industry	15	16	48	17	36	32
Food Industry	77	49	61	9	126	7
Printing	12	0	100	18	11	62
Miscellaneous	15	12	56	8	12	40
Total ^b	255	121	69	172	367	27

^a Other includes: open joint stock, closed joint stock, leased, collective, joint venture and other.

^b Not all firms in listing report ownership structure.

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

**Table 3: Distribution of Civilian Manufacturing Firms by Ownership Structure
(December 1992, June 1995)**

Industry	Moscow					
	1992			1995		
	State-Owned	Other ^a	Percent State-Owned	State-Owned	Other ^a	Percent State-Owned
Power	18	1	95	0	0	--
Fuel	5	0	100	5	7	42
Ferrous/Nonferrous						
Metallurgy	18	3	86	16	32	33
Machine Building	408	96	81	4	170	2
Chemical	42	21	67	38	84	31
Forestry/Wood/Paper	32	12	73	27	83	24
Bldg/Const. Materials	42	34	55	30	68	27
Light Industry	102	49	68	25	152	14
Food Industry	92	15	86	29	93	24
Printing	72	8	90	72	70	51
Miscellaneous	84	74	53	0	0	--
Total ^b	915	313	74	246	759	24

Industry	Rostov					
	1992			1995		
	State-Owned	Other ^a	Percent State-Owned	State-Owned	Other ^a	Percent State-Owned
Power	18	0	100	0	0	--
Fuel	52	1	98	4	69	5
Ferrous/Nonferrous						
Metallurgy	4	0	100	15	25	37
Machine Building	118	8	94	76	147	34
Chemical	15	1	94	12	32	27
Forestry/Wood/Paper	36	1	97	50	45	53
Bldg/Const. Materials	73	16	82	25	100	20
Light Industry	50	6	89	43	66	39
Food Industry	175	6	97	47	173	21
Printing	21	0	100	6	23	21
Miscellaneous	28	5	85	16	17	48
Total ^b	545	44	93	294	697	30

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

Table 5: Mean Workforce Size by Industry: Panel Data^a
(December 1992, June 1995)

Industry	<i>Number of Firms</i>	<i>Percent of Total</i>	<i>Mean Workforce Size 1992</i>	<i>Mean Workforce Size 1995</i>
Power	9	0.7	1559	1559
Fuel	52	3.8	1758	1559
Ferrous/Nonferrous Metallurgy	10	0.7	710	639
Machine Building	205	15.0	2362	1903
Chemical	58	4.2	1262	1112
Forestry/Wood/Paper	138	10.1	275	255
Bldg/Const. Materials	114	8.4	432	495
Light Industry	198	14.5	911	812
Food Industry	478	35.0	330	309
Printing	99	7.2	342	219
Miscellaneous	4	0.3	301	235
Total	1365		823	714

^a Subregions of Moscow, Volgograd, Novosibirsk and Rostov. Includes those firms in which industry is the same in 1992 and 1995.

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

Table 4a: Distribution of Firms by Ownership Structure: Panel Data^a
(December 1992, June 1995)

Industry	1992			1995		
	State-Owned	Other ^b	Percent State-Owned	State-Owned	Other ^a	Percent State-Owned
Power	9	0	100	2	7	22
Fuel	53	1	98	13	41	24
Ferrous/Nonferrous						
Metallurgy	12	0	100	4	8	33
Machine Building	187	33	85	44	176	20
Chemical	47	14	77	19	42	31
Forestry/Wood/Paper	129	11	92	87	53	62
Bldg/Const. Materials	83	39	68	29	93	24
Light Industry	152	56	73	46	162	22
Food Industry	408	96	81	98	394	20
Printing	90	6	94	61	35	64
Miscellaneous	5	1	83	4	2	67
Total ^c	1163	257	82	407	1013	29

Table 4b: Distribution of Firms by Workforce Size: Panel Data^a
(December 1992, June 1995)

Number of Employees	1992		1995	
	Frequency	Percent	Frequency	Percent
< 200 people	593	43.4	648	47.5
200 - 1000	543	39.8	526	38.5
1001 - 10,000	212	15.5	179	13.1
> 10,000	17	1.3	12	0.9
Total	1365		1365	

^a Includes firms in Moscow, Rostov, Volgograd and Novosibirsk where industry is the same from 1992 to 1995.

^b Other includes cooperatives, collectives, joint venture, joint stock, leased and other.

^c Not all firms report ownership.

Source: Calculated from firm-level data provided in *Business Map 93* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1993) and in *Business Map 95* vols. 3, 8, 10, 15 (Moscow: Business Information Agency, 1995).

**Table 6b: Distribution of "Winners" by Industry and Region:
Percentage Change in Employment**

Industry	Moscow			Rostov		
	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>
Power	--	--	--	--	--	--
Fuel	0	1	0	3	42	7
Ferrous/Nonferrous						
Metallurgy	0	5	0	--	--	--
Machine Building	15	74	20	11	80	14
Chemical	9	36	25	3	8	36
Forestry/Wood/Paper	6	29	21	7	27	26
Bldg/Const. Materials	11	37	30	12	36	33
Light Industry	22	108	20	12	46	26
Food Industry	44	87	50	70	166	42
Printing	8	59	14	4	17	24
Miscellaneous	--	--	--	0	4	0
Total	115	436	26	224	563	29

Industry	Volgograd			Novosibirsk		
	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>
Power	5	8	62	1	1	100
Fuel	2	5	40	2	4	50
Ferrous/Nonferrous						
Metallurgy	1	2	50	2	3	67
Machine Building	4	51	8	--	--	--
Chemical	1	13	8	0	1	0
Forestry/Wood/Paper	11	42	26	11	40	28
Bldg/Const. Materials	6	24	25	5	17	29
Light Industry	1	22	4	7	22	32
Food Industry	33	128	26	28	97	29
Printing	4	12	33	0	11	0
Miscellaneous	--	--	--	--	--	--
Total	68	307	22	56	196	29

**Table 6a: Distribution of "Winners" by Industry and Region:
Percentage Change in Production**

Industry	Moscow			Rostov		
	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>
Power	--	--	--	--	--	--
Fuel	1	1	100	0	1	0
Ferrous/Nonferrous Metallurgy	1	3	33	--	--	--
Machine Building	10	51	20	11	70	16
Chemical	5	28	7	2	7	28
Forestry/Wood/Paper	3	24	12	1	15	7
Bldg/Const. Materials	7	30	23	5	33	15
Light Industry	5	90	6	0	42	0
Food Industry	8	64	12	8	148	5
Printing	4	38	10	2	13	15
Miscellaneous	--	--	--	1	3	33
Total	44	329	13	30	332	9

Industry	Volgograd			Novosibirsk		
	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>	<i>Number of winners</i>	<i>Total number firms</i>	<i>percent</i>
Power	7	7	100	--	--	--
Fuel	4	5	80	--	--	--
Ferrous/Nonferrous Metallurgy	1	2	50	--	--	--
Machine Building	4	47	8	--	--	--
Chemical	4	12	33	0	1	0
Forestry/Wood/Paper	1	41	2	0	3	0
Bldg/Const. Materials	3	25	12	--	--	--
Light Industry	1	20	5	2	2	100
Food Industry	7	118	6	0	0	0
Printing	0	9	0	--	--	--
Miscellaneous	--	--	--	0	1	
Total	32	286	11	2	7	28

Mroczkowski, Tomasz et. al, "Private Sector Development in Poland: Cases from Service Industries," in R. Culpan and B. Kumar (eds.), *Transformation Management in Post Communist Countries* (Westport CN: Quorum Books, 1995), pp. 199-216..

Winiecki, Jan, *Post-Soviet-Type Economies in Transition* (Aldershot: Avebury 1993).

References

- Aslund, Anders, *How Russia Became a Market Economy* (Washington DC: Brookings, 1995).
- Aslund, Anders, "Rentoorientirovannoe povedenie v Rossiiskoy perekhodnoe ekonomike," *Voprosy ekonomiki* no 8 (1996), pp. 99-108.
- Berliner, Joseph S., *Soviet Industry: From Stalin to Gorbachev* (Ithaca NY: Cornell University Press, 1989).
- Blasi, Joseph, Maya Kroumova and Douglas Kruse, *Kremlin Capitalism: Privatizing the Russian Economy* (Ithaca: Cornell University Press, 1997)
- Commander, Simon et. al (eds.) *Enterprise Restructuring and Economic Policy in Russia* (Washington DC: World Bank, 1996).
- Connors, Walter, "Winners and Losers? Workers in Russia's Economic Revolution," paper presented at AAASS meetings (Boston, 14-17 November 1996).
- Ernst, Maurice, Michael Alexeev and Paul Marer, *Transforming the Core: Restructuring Industrial Enterprises in Russia and Central Europe* (Boulder: Westview Press, 1996).
- Estrin, Saul et. al 1995, "Shocks and Adjustment by Firms in Transition: A Comparative Study," *Journal of Comparative Economics*, vol 21, no 2 (October 1995), pp. 131-153.
- Frydman, Roman et. al, *The Privatization Process in Russia, Ukraine and the Baltic States* (New York: Central European University Press, 1993).
- Goskomstat, *Russia in Figures* (Moscow, 1995).
- Goskomstat, *Tsenyi v Rossii* (Moscow, 1996)
- Granick, David, *The Red Executive: A Study of Organization Man in Russian Industry* (Garden City, NJ: Anchor Books, 1961).
- Gregory, Paul, "The Impact of Perestroika on the Soviet Planned Economy: Results of a Survey of Moscow Economic Officials," *Soviet Studies* vol 43, no 5 (1991), pp. 859-873.
- Gregory, Paul and Robert Stuart, *Soviet Economic Structure and Performance* (New York: Harper Collins, 1990).
- Krupp, Corinne and Susan J. Linz, "Shock Therapy and the Market for Foreign Exchange in Russia: Whither Currency Convertibility?" Michigan State University, Economics Department (May 1996).
- Linz, Susan J., "Production and Employment in Privatized Firms in Russia," *Comparative Economic Studies* vol 36, no 3 (Fall 1994), pp. 104-113.
- Linz, Susan J. "Russian Labor Market in Transition," *Economic Development and Cultural Change*, vol 43, no 4 (July 1995), pp. 161-185
- Linz, Susan J. and Gary Krueger, "Russia's Managers in Transition: Pilferers or Paladins?" *Post-Soviet Geography and Economics*, vol 37, n0 7 (September 1996), pp. 397-425.
- Millar, James R. (ed), *Politics, Work and Daily Life in the USSR* (New York: Cambridge University Press, 1989).