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Russian Enterprises' Adaptation to New Business Realities

The process of social transformation in Russia has had a plethora of significant effects upon production. It has provoked an economic recession of unprecedented proportions. It is also increasingly evident that any attempt to achieve long-term political stability in Russia should be based on economic stability or, at the very least, on successful adoption of new rules of economic behavior by the country's principal industrial producers.

Until now, the general situation in Russian industries gave no pretexts for optimism. The official statistical sources suggest that, after rising over the third quarter of 1995, seasonally adjusted real industrial production during the last three months of 1995 fell by 3 percent compared with the previous quarter. In January–February 1996, industrial production was at 93 percent of the previous year. We should remember, however, that the average real production level in 1994 was

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only 59 percent of the 1991 level (*Russian Economic Trends*, March 1996). The recession is especially severe for consumer goods whose output decline in 1995 was 12 percent. The production of many types of commodities---tape recorders, video recorders, sewing machines, footwear, knitwear---almost ceased altogether in 1995. In those industries, the level of production consisted of less than one-sixth of the 1991 level. However, the economic results of 1995 showed that, despite the overall fall in industrial output by around 9 percent, about 5,000 industrial companies (among 70,000) were able in 1995 to expand their output over the 1994 level.

Research purposes

We have tried to find the "pairs" or "triplets" of successful and struggling companies in the same lines of business and, by comparing them, to reveal the internal mechanisms of the Russian enterprises' adaptation. Specifically, the goals of this study are:

1. To define the specific meaning of the adaptation process in transitional economies, with particular attention to the unique features of Russian business environment; and
2. To clarify the character of interaction between institutional factors and models of economic behavior of Russian privatized enterprises.

Adaptation of enterprises in transitional economies is a complex phenomenon that may be viewed on two dimensions:

- *Adaptaton of enterprises, in the narrow economic sense of production systems, to the radical changes in the external conditions affecting their functioning*. This includes coping with the opening up of domestic markets to foreign competition, accommodating inflation, chaotic tax legislation, and other uncertainties of transitional economies, and achieving stable performance, that is, financial stability, profitability, and efficiency of operations.
- *Adaptation of enterprises, in the broad socioeconomic sense of development of networks of legal, economic, and social transactions, in order to fit in to a new system of economic organization.* This includes such steps as privatization, the emergence

of markets for corporate control, and operating within harder budget constraints.

We believe, on the basis of the following assumptions, that these two dimensions of the adaptation process are closely interrelated. First, adaptation of enterprises as production systems to the radical changes in external conditions depends mainly on the creativity of their managers in capturing the floating market conditions, and on their readiness to operate in a highly turbulent environment. This type of adaptation should manifest itself in increased productive efficiency and in stabilizing the financial position of a company.

Second, good performance should facilitate adoption of a firm into the new system of economic organization. For example, the good company's performance may make it attractive on the market for corporate control, that will speed up the modification of an enterprise's objective functions toward the single criterion of profit maximization. Agency theory (Fama and Jensen, 1983; Jensen and Meckling, 1979) argues that the control structure of the firm is part of the firm's production function, together with its technology and productive resources. This implies that different control arrangements may, in turn, result in different production possibilities sets, and, therefore, in different production-efficiency dynamics. In this paper, we try to prove the vitality of these assumptions, using a survey of thirteen recently privatized Russian industrial companies.

Methods

Research design

This study uses both qualitative and quantitative methods to generate insights into the organizational development and reengineering of business in Russian companies. The qualitative approach has been employed to reveal several of the more obscure, unique, and enigmatic aspects of Russian corporate life. The qualitative approach was also used in the basic formulation and classification of such complex phenomena as adaptation strategies. This approach is consistent with the general function of qualitative research as a means "to seek answers to questions that stress how social experience is created and given meaning" (Denzin and Lincoln, 1994, p. 4). Quantitative methods were used mainly to assess the performance of companies and to appraise the

managers' opinion about various aspects of the corporate environment, business strategies, and decision-making patterns as a means of verifying, and hence expanding, the results of the qualitative analysis.

Instruments

Three sources of information were used:

1. Interviews with top managers of thirteen industrial firms and observations of companies' activities;
2. Records of business activities of the observed firms and an evaluation of their performance;
3. A survey of managers' attitudes and perceptions using a specially developed questionnaire.

The interviews with company presidents, chief accountants, chief engineers, and personnel officers were conducted in an informal setting. The principal leading questions raised during the interviews concerned the current economic situation of the company; the goals of its top managers; the implemented marketing, human-resource and organizational strategies; and relationships with outside shareholders, business partners, and local authorities. As a result of the interviews and personal observations of companies' activities, a set of empirical indexes with the following main variables was created:

1. Share of export in sales—EXP;
2. Level of social orientation in corporate policy—SOC;
3. Intensity of contacts between the company and the local administration—LOC;
4. Degree of company involvement in informal business transactions—MAF;
5. Company's share in the relevant market—MARK.

These indicators created the construct of a "snapshot" of companies used in the performance analysis.

It was not easy to find the criteria for superior performance during an ongoing industrial recession. Standard measures of prosperity such as profitability of sales or valuation of company stock are not reliable in the present Russian conditions. In most of the companies observed, the absence of operating profit in income statements indicated not an outcome of business troubles but the ability of chief accountants to

hide real profits from taxation. Return on assets (equity), like any other ratios of capital efficiency, has become completely irrelevant under recent high-inflation conditions.

Under such circumstances, we have chosen the composite measure of success/trouble using two key variables: the efficiency of production and the financial stability of a company. For measuring efficiency we implemented a method known as Data Envelopment Analysis (DEA). DEA floats a hyperplane on data for a set of operating units, such that units with maximal output/input ratios are on the surface and units with less than maximal output–input ratios are beneath it. DEA is a variation of linear programming, suitable for benchmarking efficiency among a set of comparable decision-making units (DMUs).

The formal formulation of a DEA problem is as follows:

$$\min h = \sum_{i=1}^{m} v_i x_{i0} / \sum_{r=1}^{s} u_r y_r 0 ,$$

subject to

$$\sum_{i=1}^{m} v_i x_{ij} / \sum_{r=1}^{s} u_r y_{rj} \geq 1 ;$$

where

y_{rj} = output r ($r = 1, \ldots s$) from producer j;
x_{ij} = input i ($i = 1, \ldots m$) used by each producer j in the sample;
j = ($1, \ldots n$) = index of decision-making units;
u_r = shadow prices (dual variable) of output;
v_i = shadow prices (dual variable) of input;
h = input-based efficiency indices;
x_{i0}, y_{j0} = inputs and outputs of the particular producer whose efficiency is being measured.

We chose, as a measure of output, gross sales adjusted for inflation. For inputs, we used three items: number of employees (labor input), inverse liquidity ratio (as a measure of capital intensity), and ratio of quarterly sales to stocks of finished goods (as a measure of marketing success/trouble).

The second measure of success/trouble under the specific Russian conditions is the level of financial stability. Insolvency is a common feature of many industrial companies. Russian financial experts developed a system of equations to assess the level of a firm's insolvency. In

that five-level system, the first level corresponds to a sufficient solvency, when a company is able to meet both its short-term and long-term liabilities. The fifth level presents a bankruptcy situation.

The third component of the study was a survey of managers that involved managers at all levels. The questionnaire was distributed and collected by research assistants and students of the Higher School of Economics (State University), Moscow. Individual respondents were repeatedly and explicitly reassured that neither their supervisors nor their colleagues would have access to their answers. The response rate varied between 60 percent and 80 percent in different companies.

The questionnaire consisted of several constructs used to measure and map the response to the following key variables:

- Managers' trust in the ability of top managers to improve the companies' economic performance;
- Transformations in the decision-making authority of managers;
- Perception of changes that took place after privatization in the company;
- Perception of environmental factors;
- Managers' opinion about the "real owner" of their companies.

Managers' trust in the abilities of top executives

Managers' trust in the abilities of top executives was assessed using an original eleven-item instrument. The respondents were asked to indicate their opinions about the management's ability to improve the economic position of the firm, the loyalty of top executives in defending the interests of their employees, and the efficiency of conflict resolution within the firm. The five-point scale ranged from "strongly disagree" to "strongly agree." The reliability of the instrument (Cronbach's alpha) is 0.55.

Transformations in decision-making authority

This section of the questionnaire contained twenty-seven items pertaining to four types of decisions common in managerial work, namely:

1. Strategic and capital investment—eight items;
2. Human resources—seven items;
3. Wage and benefits—five items;

4. Production (i.e., product characteristics, value chain, quality issues)—seven items.

Managers were asked to describe the level of decision-making authority they experienced for each decision item on a five-point scale ranging from "marginal authority" (a value of one) to "total authority" (a value of five). This scale builds an McCarty and Puffer's instrument (1992). The respondents indicated the perceived changes after privatization. The additional point on the scale ("beyond my responsibilities," with a value of zero) allowed us to restrict the appraisal of perceived authority to strongly reliable points. The reliability of the instrument (Cronbach's alpha) is 0.95.

Perception of changes

Managers were asked to indicate the new possibilities that arise after privatization (possibilities to attract financial resources, to improve internal management systems, to change the production mix, etc.). They also reported on the direction (positive or negative) and the degree of the changes they perceived to have happened in their companies in the last few years. The five-point scale ranged from "much worse" to "much improved," with "no change" set at the midpoint (a value of three). The reliability of the instrument (Cronbach's alpha) is 0.90.

Perception of environmental factors

We asked managers to indicate the influence of fifteen business-environment factors at two levels: operational business decisions and company policy. The response to the seven-point Stapel's two-pole scale ranged from "completely determines negatively" (a value of –3) to "completely determines positively" (a value of +3), with "no influence" set at the midpoint (a value of 0). The total number of factors influencing the firm's activities was limited to fifteen. The main reason for including this instrument in the survey was to get a picture of the macro environment and of the industry environment of the surveyed companies. We included in the macro environment such political, social, and macroeconomic factors as the "disintegration of the former USSR, high inflation, tax policy of the central government." The set of industry-environment factors follows Porter's model and includes the bargaining power of suppliers, consumers, and competitors (present and potential). The reliability of the instrument (Cronbach's alpha) is 0.93.

Perception of ownership

All respondents were asked to give their perception of who were the real and who the desired owners of a firm. They were asked to choose one answer from eleven items, including "your fellow workers," "the managing director" and even "nobody really owns." Although the standard reliability measures were not applicable for this construct, we performed the Kolmogorov-Smirnov test, which showed a sufficient difference of the distribution of answers from the normal distribution ($p < 0.01$). (For a detailed presentation of the questionnaire, see Gurkov, 1995a).

Respondents

The broad scope of data required from the companies and the very limited financial support for the research project restrained the scale of field study to companies located no farther than a day's travel away from Moscow. Field research was carried out in two steps. First, from November 1993 through May 1994 we examined thirty-five companies in the central region of Russia. This study proved the reliability of the measurements used and the general applicability of the research methodology. Among those thirty-five companies, twenty were then selected for repeat observation, conducted in April–May 1995. We assumed that, after privatization, different kinds of governance transformation would occur. Under the assumption that various control structures would lead to divergence in performance, and taking into account the small size of the sample, we tried to avoid the possible influence of exogenous factors such as size. For this reason, our main attempt in selecting companies was to search for "pairs" of quite similar enterprises. Among the twenty enterprises we observed were two textile companies, two chemical factories, two mechanical works, six food-processing companies, and eight companies involved in production of construction materials.

We were able to obtain complete financial information from twelve companies in which 157 managers were surveyed and 63 interviews were conducted with top executives. These twelve companies included "pairs" in textile, panels construction, and machine building, and "triplets" in food processing and construction materials. We regard this work as a pilot study for larger corporate surveys on adaptation mechanisms in Russian industries.

Statistical analysis

In our analysis we first evaluated the performance of the surveyed companies. For each company we computed an average score of productive efficiency in 1994 using the DEA method. For each of the surveyed firms, we computed a separate DEA problem, using the firm's data for sixteen individual quarters (1991-I through 1994-IV) as data points. DEA analysis provided an efficiency measure---a scalar, varying from 0 to 100 percent---for every firm for each quarter. We then computed the average of the quarterly efficiency scores for 1994. Next, we compared the annual efficiency scores for companies engaged in the same line of business. The companies with above-average efficiency scores were labeled "overperformers" while those with below-average efficiency scores were labeled "underperformers."

We then recalculated the items on the balance sheets of the surveyed companies, computing the corresponding level of solvency for each company. The companies at the first, second, and third levels were pooled together into a single group labeled "financially stable companies." The companies at the fourth and fifth levels were called "financially unstable companies." The conjunction of DEA efficiency and financial stability enabled us to construct an integrative index of productive efficiency: DEA-FIN. For efficient and financially stable companies, the value of DEA-FIN was set at 3; for efficient but unstable, or for stable but inefficient, companies the DEA-FIN was set at 2; while the DEA-FIN for unstable and inefficient companies was set at 1. Next, we looked for the relationship between the constructed performance measure (DEA-FIN) and selected companies' characteristics. For this purpose, we performed a correlation analysis of the performance and qualitative measures. To reveal the possible sources of good performance, we also ran a correlation analysis between the efficiency measure and the variables drawn from the questionnaire distributed to the surveyed companies' managers. Finally, we evaluated the distribution of managers' responses concerning the perception of ownership for each surveyed company separately and computed the modes. This enabled us to identify the prevalent types of control patterns for privatized companies in Russia. We then computed the averages of the qualitative measures and performance measures for each identified type of control.

Results

The average efficiency scores and the level of financial stability for each of the surveyed companies, as well as the averages for the whole sample, are presented in Table 1. The data clearly demonstrate that insolvency is the predominant financial predicament of Russian industrial firms. Three of the twelve companies surveyed were on the verge of bankruptcy in 1994. Two others occupied the fourth level of financial stability, which corresponds to financial crisis, characterized by minimal current solvency and inability to discharge the company's long-term liabilities. In 1994, only one of the companies surveyed enjoyed a more or less normal financial situation, as a result of its productive efficiency.

The results of the correlation analysis of performance and qualitative measures are presented in Table 2. A close positive correlation ($r = 0.34$, 2-tailed $p < 0.01$) was found between economic efficiency and the social orientation of a company's top managers. Another outcome of the correlation analysis was a strong negative relationship between involvement in the shadow economy (MAF) and productive efficiency ($r = -0.36, p < 0.01$) and between involvement in the shadow economy and the share of relevant markets (MARK) ($r = -0.44, p < 0.01$).

The results of the correlation analysis between the efficiency measure and variables drawn from the questionnaire answered by managers are presented in Table 3. First and foremost, a positive correlation between DEA-FIN and the "impact of shifts and fluctuations of consumer demand on corporate policy" ($r = 0.26$, $p < 0.01$) signifies that the overachieving companies have successfully captured significant shares of demand. This is also suggested by the positive correlation between DEA-FIN and the managerial assessment of the positive influence of privatization on consumer satisfaction ($r = 0.24, p < 0.01$).

Currently, overachieving companies appear to have a good chance of surviving. Such confidence is not only consistent with managers' self-assessment (the correlation between DEA-FIN and the managers' agreement with the statement "The present top management is capable of considerably improving the situation of the company" is 0.27, $p < 0.001$). It is also confirmed by the fact that economic performance is correlated with "accessibility of external financial resources" ($r = 0.24$, $p < 0.01$) and with "possibilities of improving responsibility and job requirements" ($r = 0.22, p < 0.01$).

Table 1

Productive efficiency scores and levels of financial stability for the surveyed companies

	Branch											
	Food processing $N = 3$			Machine building $N = 2$		Panels construction $N = 2$		Textiles $N = 2$		Construction materials $N = 3$		
Average efficiency score in 1994 (%)	60.4			75.1		72.7		52.8		79.0		
Disguising symbol of companies	F–1	F–2	F–3	M–1	M–2	P–1	P–2	T–1	T–2	C–1	C–2	C–3
Average efficiency score in 1994 (%)	69.4	38.1	73.8	50.2	100	88.5	56.9	72.3	33.3	77.4	93.0	67.4
Level of financial stability in 1994	5	3	3	4	2	3	3	3	5	3	3	5
Composite measure DEA-FIN	2	3	2	3	1	1	2	1	3	2	1	3

Average efficency score of 1994 for all the surveyed companies is 69 percent.

Table 2
Correlation matrix of qualitative and performance measures (12 companies)

Correlations:	DEA-FIN	EXP	SOC	LOC	MAF
EXP	0.06				
SOC	0.34**	–0.08			
LOC	–0.10	0.76**	0.07		
MAF	–0.36**	–0.15	0.06	–0.22*	
MARK	–0.09	–0.30**	0.05	–0.29**	–0.44**

* $p < 0.01$; ** $p < 0.001$.
DEA-FIN = the integrative index of productive efficiency. For efficient and financial stable companies the value of DEA-FIN was set 3, for efficient but unstable or stable but inefficient companies DEA-FIN was 2, and for unstable and inefficient companies DEA-FIN was set at 1.
EXP = the share of exports in sales: 1 = complete absence of export; 5 = export is more than 50% of total sales.
SOC = the level of social orientation of the top managers: 1 = "almost absent," 5 = "extremely intensive."
LOC = the intensity of contacts between the company and the local administration: 1 = "almost absent," 5 = "extremely intensive."
MAF = the degree of company's involvement in informal business transactions: 1 = "almost absent," 5 = "extremely intensive."
MARK = the top managers' reported share of their companies in the relevant markets. 1 = less than or equal to 20%; 2 = 21–40%; 3 = 41–60%; 4 = 61–80%; 5 = more than 80%.

Good performance is also related to a positive assessment of some of the main actors in the corporate environment. There are statistically significant positive correlations between the performance measure and the perceived behavior of suppliers ($r = 0.25$, $p < 0.01$), banks ($r = 0.28$, $p < 0.01$), customers ($r = 0.24$, $p < 0.01$) and even tax inspectors ($r = 0.26$, $p < 0.01$). The DEA-efficiency correlates positively with the perceived impact of public opinion on both "operating business decisions" ($r = 0.23$; $p < 0.01$) and "corporate policy" ($r = 0.26$; $p < 0.01$) but as involvement in the shadow economy increases, public opinion becomes increasingly negative ($r = -0.18$ for the impact on operating decisions and $r = -0.20$ for the impact on corporate policy).

The correlation analysis also revealed Russian managers' highly selective perception of the government's economic policy. Indeed, as the role of exports expands, so do negative assessments of the impact of the current customs policy on corporate decisions ($r = -0.21$, $p < 0.01$).

Table 3
Correlation matrix of qualitative and performance measures with some variables drawn from the questionnaire for managers ($N = 157$)

Perception of impact of enviromental factors on corporate policy[1]	Variables					
	DEA-FIN	EXP	SOC	LOC	MAF	MARK
Shifts and fluctuations of consumer demand	0.26*	0.11	–0.02	–0.03	–0.14	0.01
Behavior of suppliers	0.25*	–0.04	–0.08	–0.15	–0.10	0.06
Behavior of banks	0.28*	0.01	–0.14	–0.08	–0.15	–0.02
Behavior of customers	0.24*	–0.02	–0.03	–0.08	–0.04	–0.11
Behavior of tax inspectors	0.26*	–0.02	–0.01	0.10	–0.20*	0.11
Public opinion	0.23*	0.09	0.09	0.02	–0.18	0.11
Disintegration of the USSR	0.08	–0.20*	–0.11	–0.19	0.01	0.04
Customs policy	–0.02	–0.21*	–0.07	–0.14	0.06	0.12
Local authorities	0.10	–0.02	–0.06	0.09	–0.21	0.00

Agreement with statements[2]	Variables					
	DEA-FIN	EXP	SOC	LOC	MAF	MARK
Privatization influenced positively consumer satisfaction	0.24*	–0.05	0.09	–0.03	–0.10	0.10
Privatization influenced positively accessibility to external financial resources	0.24*	–0.17	0.13	–0.21*	0.01	0.13
Privatization influenced positively possibilities to improve responsibilities and job requirements	0.22*	–0.13	0.10	–0.08	–0.05	0.04
The present top management is capable of considerably improving the situation of the company	0.27**	–0.18	–0.01	–0.14	–0.06	–0.04
It became interesting to work	0.22*	–0.14	0.10	–0.19	–0.01	0.03

* $p < 0.01$; ** $p < 0.001$.
[1] The 7-point scale ranges from "completely determines negatively = –3" to "completely determines positively = +3," where "no influence = 0."
[2] The 5-point scale ranges from "strongly disagree = 1" to "strongly agree = 5."

Table 4
Average scores of qualitative and performance measures in different types of control

	Average scores						
Type of control in 1994	Level of financial stability	Efficiency scores (%)	EXP	SOC	LOC	MAF	MARK
Collective	3.67	53.3	1.33	3.33	3.67	2	3.33
Managerial	3	73.8	2	4	4.5	1.5	4
Director's	3	68.9	1.67	4	3.67	3	1.67
Unclear	4.67	76.6	1	3.67	3.33	2.67	3.33
Outsider	3	75.1	2.5	3.5	4.5	3.5	1.5

Besides, there is a significant negative correlation between the degree of involvement in the shadow economy and the assessment of the impact of local authorities ($r = -0.21, p < 0.01$).

Our survey allowed us to reveal the types of control that governed the companies. Of the twenty companies surveyed in 1994, dispersed managerial control prevailed in six, concentrated managerial control governed another six, the general director was viewed as the real owner of three companies, while no clear control was reported in five (see Gurkov, 1995b).

During the 1995 survey, managers expressed a different perception of control over their companies. First, there was a shift toward concentrated control in two companies that were previously under dispersed managerial control, while another company shifted toward directorial control. Another significant result of the comparison between the 1994 and 1995 surveys was the appearance of a new type of control—"outsiders' control." In 1995, three companies previously reported as under unclear control come under outsider control, while in another three companies at least 10 percent of managers believed that outside shareholders—in particular, investment funds and banks—had become the "real owners" of their company.

We stress that the distribution of control arrangements in our twelve-company subsample corresponds to the general distribution. The *t*-test shows no significant difference in the distribution of type of control between this subsample and the larger sample of twenty com-

panies. We therefore decided to present the results of the relationship between efficiency measures, qualitative measures, and the control arrangements for the subsample as a sufficient representation of the whole sample.

The averages of the qualitative measures and performance measures for each type of control are shown in Table 4. Outsider-controlled companies are characterized by the highest observed export orientation, relatively stable productive efficiency, a high level of contact with local authorities, and the highest involvement in gray-market transactions. The companies under "managerial" and "directorial" control have low perceived shares of the relevant markets. Nevertheless, they are characterized by the best observed financial stability, relatively high productive efficiency, and a marked social orientation in corporate policy. What distinguishes director-controlled companies is their relatively higher involvement in gray-market transactions. Companies under "unclear" control furnish the most interesting case. On the one hand, they exhibit the highest productive efficiency. On the other hand, this does not protect them from complete insolvency (the fifth level in our measure of financial stability is bankruptcy). Finally, companies viewed by their managers as "collectively controlled" are characterized by the lowest level of productive efficiency as well as by low financial stability.

Discussion

The results of this statistical analysis, especially the relationship between performance and qualitative measures, raise questions about the possible "contributions" of internal and external factors to a company's success or instability. It is hardly surprising that good economic performance correlated with the achievement of customer satisfaction and captured demand. Far more surprising was the close positive correlation between economic efficiency and the social orientation of top managers. Our efficiency measure is based partly on the relationship between output and the number of employees. This means that, by definition, the decrease in employment—proportionally more than the fall of output—signifies the rise of productive efficiency. When excess labor is eliminated, a company's management makes a concerted effort to retain the services of its most skilled employees. Various social programs have been implemented for the benefit of these employees as

a means of augmenting not only their incentive to work, but their productivity and efficiency as well. Increasing employees' motivation, therefore, leads to higher production efficiency. In fact, we discovered a strong positive correlation between the DEA-FIN and the surveyed managers' admission that, under such conditions, "it became interesting to work." Good performance, in turn, facilitates the implementation of further social programs.

Another outcome of the statistical analysis was the discovery of a close relationship between various institutional factors and a company's performance. We identified three "kinds" of institutional factors: involvement in gray-market operations, intensity of contacts with local authorities, and control arrangements. All of these factors are closely interconnected.

We demonstrated a strong negative relationship between involvement in grey-market transactions and productive efficiency, as well as between involvement in the gray market and the share of relevant markets (see Table 2). This may be explained by the fact that "weak" companies, which have an insufficient share of their relevant markets and low economic efficiency, make easy targets for Mafia infiltration. This assertion is supported by the fact that high levels of involvement in the shadow economy correlate with a low level of decision-making power by top-level management.

We also found a significant negative correlation between the degree of involvement in the gray market and the intensity of contacts between a company's top executives and local authorities. This illustrates the competition between two types of "business protectors." The weakening of national-government support for Russian industry has made local authorities an important player in the business game. While local authorities usually lack the means to help industrial companies directly, they do wield a wide range of instruments that can create considerable problems for a company. As the head of a district administration said, "We are able to bankrupt half of the companies of our district, but we try to save everyone." A total of eleven taxes, for example, are levied on a company's profits by the district and national administrations. Accordingly, the companies' debt to the tax service is usually very high. In half the companies surveyed, the tax debt amounted to at least 10 percent of total assets, while in four companies the tax debt amounted to at least 20 percent of total assets. The surveyed companies' internal accounting documents revealed that district authorities actively inter-

ceded on behalf of companies in cases of central tax inspections. Whether or not fines for air and water pollution are levied upon a company also depends largely on the company's relationship with district authorities who also typically protect local markets against incursions by producers from other regions.

In the competition for the right of "business protection," local authorities use a variety of methods, including manipulation of public opinion against Mafia-run companies and their top executives. Indeed, we found that, as involvement in the grey market increases, the influence of public opinion on a company's business decisions becomes increasingly negative (see Table 3).

The two factors mentioned above—involvement in the gray market and intensity of contacts with local authorities—played a crucial role in the establishment of different control mechanisms over privatized companies.

As we stressed above, in the broad socioeconomic sense, the adaptation of enterprises may be viewed as a company's ability to develop networks of legal, economic, and social relationships that enable it to conform to a new system of economic organization. The principal institutional component of the new system of economic organization being created in Russia is the appearance of a previously nonexistent market for corporate control.

A market for corporate control was initially created by the legalization of privatization. With the launching of the State Program of privatization in June 1992, Russian enterprises were forced to incorporate (i.e., to transform themselves as a legal entity into a joint partnership or a joint-stock company), to select ways of privatizing, and to develop and submit their privatization plan to a supervisory privatization agency (for a detailed description of the legal framework of the "voucher" stage of Russian privatization, see Frydman, Rapaczinski, and Earle, 1993).

Most of the companies initially fell into the hands of their employees. Until mid-1993, the government allowed complete employee buyouts. As a result, many state enterprises were transformed into 100 percent employee-owned closed partnerships or closed joint-stock companies. Since mid-1993, when complete employee buyouts were banned, managers have sought to circumvent this proscription by collecting vouchers from workers or buying vouchers on the "street market," thereby assuring the "working collective" the largest possible

share of corporate ownership. At the first stage of privatization, however, the top managers were unable to concentrate large holdings in their personal possession. According to Blasi (1994), at the beginning of 1994, the average top managers' holdings did not exceed 5 percent of the shareholders' equity. The wide dispersion of shares created by the initial scheme of privatization, therefore, facilitated the penetration of Russian industry by "outsiders"—namely, financial companies.

Between 1991 and 1994, the Russian financial sector accumulated considerable resources from its foreign trade, currency operations, and state funds. It is currently engaging in active penetration of the industrial sector. Two peculiarities of the Russian capital market encourage "corporate raiders." First and foremost, the face value of shares in Russian privatized companies still corresponds to the book value of fixed assets expressed in 1992 prices. In order to counterbalance the deleterious effects of high inflation during the era of privatization, fixed assets were reevaluated annually in accordance with new replacement prices. The resulting increase in equity, however, was simply accounted "additional capital," without any issues of new stock or alterations of the face value of existing stock. As a result, the formal stockholders' equity (registered capital) amounts to less than 1 percent of the total equity in the majority of the surveyed companies.

Second, despite the program of economic privatization and liberalization, the development of the institutional mechanisms characteristic of capital markets has been extremely limited. Although privatization has created more than 20,000 open joint-stock companies, only 500 to 600 of the major Russian companies are listed on stock exchanges (none of the joint-stock companies we surveyed were listed on the stock exchange). Such a situation leads to the creation of a specific type of buyer's market, which is manipulated and monopolized by the buyers. As a result, employees' shares have been sold off at prices ranging between fifteen and fifty times the stock's face value, which is still appreciably below its real value.

Our survey showed that, by 1995, the intervention of outsiders in the management of Russian industrial companies had become glaringly apparent to an ever-increasing number of managers. In our sample, outsider-controlled companies are characterized by the strongest observed export orientation, relatively stable productive efficiency, high levels of contact with local authorities, and the greatest involvement in grey-market transactions. This may suggest that one of the main inter-

ests of outsiders who invest in Russian companies is the overseas market presence of those companies. Indeed, while export activities under conditions of stable overvaluated local currency seldom resulted in high profit margins, export operations are a much more stable source of cash inflow and local sales, affected by payment arrears. In addition, the presence on oversea markets, especially in western Europe and the United States, is seen as very prestigious, and this therefore increases the "respectability" of outsiders—financial companies.

As we have seen, export activities are closely related to the intensity of contacts with local authorities. Moreover, such intensity is indicative of the means by which a company was acquired. The success of a corporate takeover depends largely on the consent of local authorities. Outsider-controlled companies' participation in the grey market and their ability simultaneously to maintain close contacts with local authorities contradict the previously demonstrated negative correlation between these two variables (see Table 3). This might be explained by a "double ethical standard" of local authorities toward insider- versus outsider-controlled companies. Whenever the local authorities approve a corporate takeover through direct interaction with the acquiring company, they are more likely to allow the acquired company's new owners greater "legal managerial discretion" in the conduct of the company's affairs.

We should stress, however, that, as in developed market economies, corporate takeovers in Russia do not inevitably lead to financial prosperity for the targeted companies. Indeed, before a corporate takeover is completed—that is, before outside shareholders have become actively involved in the company's management, the targeted company experiences the type of general organizational confusion descibed by the managers surveyed as "nobody really owns the company." Our survey revealed that, in such a situation, not even the highest level of productive efficiency is capable of protecting an acquired company from complete insolvency. In fact, pure productive efficiency cannot lead to financial stability without consistent marketing and financial policies. The development and implementation of such policies, however, is virtually impossible if there are internal power struggles.

Insider-controlled companies may by divided into three subclasses—"collective," "manager," and "director"—according to the opinion of a company's managers concerning the "real owner" of their company. Manager- and director-controlled companies are quite similar. Both are

characterized by the best observed financial stability, relatively high productive efficiency, and a marked social orientation in corporate policy. The greater involvement of director-controlled companies in gray-market transactions may be explained by the fact that such transactions facilitate the accumulation of personal wealth, which directors need to buy shares in a company. Collective-controlled companies, by contrast, are experiencing a marked decay in both productive efficiency and financial stability, while manager- and director-controlled companies, by definition, enjoy a strong managerial structure. Outside ownership, on the other hand, not only creates new opportunities for financial assistance, but often enables a company to create new distribution networks that are facilitated by the support of the outside owners (banks or trading companies). Collective-controlled companies enjoy neither of these opportunities. Therefore, the trend toward displacement of collective control by other forms of control revealed by our surveys has a major economic underpinning.

Summary and conclusions

We have presented some patterns of adaptation in Russian industries. The key findings may be summarized as follows:

- Good performance is a product of successfully capturing segments of domestic consumer demand. The degree of export orientation has no direct impact upon the financial well-being of the companies.
- Good performance is closely associated with the social orientation of top corporate executives. The social orientation becomes evident when we look at the priorities of resource allocation. Maintaining jobs and salary level encourages higher motivation among managers of lower ranks.
- In general, involvement in gray-market transactions has a negative impact on a company's performance. It is also associated with poor relations with local authorities.
- Five types of control were identified as a means of classifying the configuration of power within and around the surveyed privatized companies. Control by top executives is associated with better economic performance. Companies whose financial situation is weaker but that have good export potential are

the main targets of corporate takeovers by financial institutions.

- Companies viewed by their managers as "collective-controlled" are characterized by the lowest level of productive efficiency and bad financial performance. The inefficiency of so-called "collective control," in both a purely economic and a broader socioeconomic sense, leads to a company's demise. In our sample, the share of collective-controlled companies has decreased by one-third in one year.

These findings enable us to draw the following conclusions about the character of the adaptation processes of privatized Russian industrial companies.

First, *socioeconomic adaptation, in its broad sense, predetermines "pure" economic adaptation*—that is, the transformation of an enterprise to fit a new system of economic organization—depends upon the choice of postprivatization corporate control. This choice, however, depends on the level of operational efficiency a company has historically achieved, the creativity of managers in capturing segments of domestic demand, the intensity of export operations, and other factors that make the privatized enterprise attractive to private investors, either insiders (company directors) or outsiders (financial and trading companies).

Second, *a company's adaptation depends heavily on both environmental and internal factors*. On the one hand, our study shows that local authorities and involvement in gray-market operations influence economic performance. On the other hand, the social orientation of the chief executives, inherited from the times of the communist economy or recently developed as a means to encourage employee motivation, affects corporate performance. Moreover, there is statistical evidence that all these factors are related to institutional factors, such as the type of corporate control.

Third, *organizational control over privatized Russian industrial companies is extremely unstable*. This reflects the unstable character of corporate ownership in Russia at the present time. The collective ownership has proved its inefficiency and the share of collective-controlled firms is sharply decreasing. The unstable character of ownership and control makes it difficult to predict which form of corporate control (except for collective ownership) will lead to optimal economic performance.

In this respect, it seems highly probable that the future of the adaptation process will be characterized by competition between insiders (concentrated management's and/or chief executive's ownership) and outsiders (financial institutions) for control over Russian companies.

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