Management quality, firm performance and market pressure in Russia

Guido Friebel and Helena Schweiger

Summary

We investigate whether management quality explains firm performance in Russia. We find that it explains relatively little in terms of firm performance, but it does explain some of the differences between firms in Russia's Far East and the rest of Russia. While management practices may not yet affect firm performance in a measurable way, they may do so in the future. This conjecture motivates us to look at the determinants of firms' adoption of good management practices. We find that market pressure, both in the product and the labour market, has some impact on adoption of management practices, in particular in the Far East. It thus appears that the economy in Russia's Far East may function according to different rules than in the rest of Russia, as market forces seem to be stronger there because the Far East is more exposed to foreign competition than the rest of Russia.

Address for correspondence: European Bank for Reconstruction and Development, One Exchange Square, London EC2A 2JN, United Kingdom.

Tel: +44 20 7338 6710; Fax: +44 20 7338 6111;

E-mail: schweigh@ebrd.com, gfriebel@wiwi.uni-frankfurt.de

Guido Friebel is a Professor at the Department of Economics and Business at the Goethe University Frankfurt. Helena Schweiger is a Principal Economist at the European Bank for Reconstruction and Development.

Working Paper No 144   **Prepared in April 2012**

1 Introduction

Recent research suggests that management practices are strongly associated with firm performance. A study of about 6,000 medium-sized manufacturing firms across Asia, Europe, and North and South America by Bloom and Van Reenen (2010) found that there were large differences in management practices across firms as well as countries, and that these practices were strongly associated with firm-level productivity and other performance measures, such as profitability and survival rates. Differences in management practices were found to be larger between firms in the same country than across countries, suggesting that firm- and sector-specific factors were at least as important as the general business environment in shaping managerial performance. Differences in management correlated with competition, labour market flexibility, education and ownership structure (with dispersed ownership being associated with better performance than state- or family-run firms).

Firms in transition countries were in general not exposed to market forces until the beginning of the 1990s, and in some of them the state still accounts for over 50 per cent of GDP (Belarus, Turkmenistan, Uzbekistan). Hence, the question arises whether the link between management practices and performance can be found in transition countries as well. The European Bank for Reconstruction and Development (EBRD), in cooperation with the World Bank, conducted a new survey – the Management, Organisation and Innovation (MOI) survey – that applies this line of research to a large number of transition countries for the first time. The survey focused on practices in four core management areas – operations, monitoring, targets and incentives – conducting 1,874 face-to-face interviews with factory managers in 10 transition countries (Belarus, Bulgaria, Kazakhstan, Lithuania, Poland, Romania, Russia, Serbia, Ukraine and Uzbekistan) as well as Germany as an advanced country benchmark, and India as a developing country benchmark.

Using the MOI survey, Bloom et al. (2011b) find that across the countries in the MOI survey, quality of management practices is positively associated with various measures of firm performance. In particular, an improvement in management practices scores from the lower to the upper quartile of their distribution is associated with a 9 per cent increase in operating revenue, an increase in profit margins by more than 85 per cent, and an increase in the return on total assets by almost 20 per cent. They find that differences in the quality of management practices can be explained by competition, the human capital available, and ownership. Importantly, privatised (formerly state-owned) firms do not differ significantly from firms that were privately owned from the beginning in terms of the quality of management practices, and both have better management practices than state-owned firms.

We focus on the quality of management practices in manufacturing firms in Russia, an economy that experienced significant changes in the last two decades. The share of industry has declined from 50 per cent of GDP in 1990 to about 30 per cent of GDP in 2009. Russia has experienced a natural resources boom since 2000, with natural resources dominating its exports. The Far East federal district is much richer in natural resources than the rest of Russia and it attracts more foreign direct investment (FDI; as a percentage of GDP) as well.[1] These trends had an effect on the share of manufacturing to GDP, and should possibly also have impact on the quality of management practices. One may conjecture that resource-rich economies or regions will be less likely to adapt innovative management practices, as

---

[1] The majority of the FDI flows in the Far East federal district go into the natural resources sector, and the share of manufacturing sector in GDP is small compared with the rest of Russia.

management and owners may not feel the need or competitive pressure to do so. Van der Ploeg's (2011) survey of empirical evidence suggests that whether resource abundance is a curse or a blessing depends on the strength of institutions. As Russia's institutions are notoriously weak, one would therefore expect the Far East to lag behind the rest of Russia in terms of the quality of management practices.

Following the findings of Djankov and Murrell (2002), we augment the firm performance analysis in Bloom et al. (2011b) by controlling for the type of ownership, and we look at the differences between the factors explaining differences in management practices between the Far East and the rest of Russia. In contrast to the papers cited above, we do not find robust positive correlations between the quality of management practices and firm performance for manufacturing firms in Russia. We do find some – albeit weak – evidence that management practices affect the performance of manufacturing firms in the Far East, but not in the rest of Russia. We offer some explanations for why this may be the case, and then move on to look at the factors that can explain differences in the quality of management practices across manufacturing firms in Russia. We find that both product and labour market competition matter, along with ownership, and that the correlation is much stronger for firms in the Far East.

We offer an interpretation of these differences between the rest of Russia and the Far East: the proximity of the Far East to large economies such as China, Korea and Japan exposes companies in the Far East to more extensive competition, while the rest of Russia is relatively protected from competition. FDI may act as a catalyst by bringing technology and managerial know-how to firms (Campos and Kinoshita, 2003, p. 3), and a number of studies find that the productivity of foreign-owned firms is higher than the productivity of domestic-owned firms and some (for example, Brown et al., 2006) point out that the reason for this could be better management skills and access to finance and new technologies. However, in the Far East there is relatively little FDI. Foreign competition is nonetheless present through trade and through competition on labour markets: people may prefer working as traders rather than in manufacturing firms, which may force firms to modernise their management practices.

Existing literature offers some evidence of both. Foreign competition can affect productivity of firms through selection by triggering market share reallocations between firms that differ in their productivity (Melitz, 2003) and through spillovers (by improving the firms' technologies through learning externalities). Bloom et al. (2011a) show that Chinese import competition increased total factor productivity and management quality as well as innovation within surviving firms in 12 European countries, in addition to significantly reducing demand for unskilled workers. They do not find the same results for imports from developed countries; they explain this with the disproportionate effect of Chinese imports on the profitability of low-tech products, which provides firms with greater incentives to innovate new goods. Ahn et al. (2008) find that outsourcing to Asia had a negative impact on demand for unskilled workers and a positive impact on demand for skilled workers in Japan. Hijzen et al. (2005) show the same for the United Kingdom. Looking at the impact of US imports on selection and spillovers in a sample of industrialised countries covering the period from 1973-2002, Acharya and Keller (2008) find that import liberalisation increases productivity in domestic industries in the short run, but lowers it in domestic industries in the long run through selection. However, they find that the negative long-run impact could be offset if imports embody advanced foreign technologies, which generate technological learning.

In a nutshell, the behaviour of firms in the Far East seems to be closer to what is predicted by trade theory for a small open economy than the rest of Russia. Our results thus seem to indicate that competition may to some extent be a substitute for institutions. It is interesting to note that Prime Minister Putin formulated a strategy to expose Russian firms to more competition; in line with what we find, the Far East of Russia may be a good laboratory for the effects of cross-country competition.

This paper is structured as follows. Section 1 describes data and methodology. We present basic descriptive statistics about the quality of management, and compare Russia with two other resource-rich countries in the MOI survey, Kazakhstan and Uzbekistan, in Section 2. In Section 3 we look at the association between the quality of management practices and firm performance in Russia. In Section 4 we investigate the factors that may explain the differences in the quality of management practices across manufacturing firms in Russia. In Section 5 we discuss why the Far East may be different to the rest of Russia.

2 Data and methodology

2.1 The sample

The MOI survey covers almost 1,900 manufacturing firms with between 50 and 5,000 employees in 10 transition countries (Belarus, Bulgaria, Kazakhstan, Lithuania, Poland, Romania, Russia, Serbia, Ukraine and Uzbekistan), Germany and India (Table 1 shows the breakdown of interviews by country). MOI interviews were conducted face-to-face and the interviewers were recruited by the local survey companies. The survey took place between October 2008 and April 2010. Information on the sample frame and additional data can be found in Appendix A. The process is described in more detail in Bloom et al. (2011b).

Table 1: Number of completed MOI interviews by country

Country	Number of completed interviews
Belarus	102
Bulgaria	154
Germany	218
India	200
Kazakhstan	125
Lithuania	100
Poland	103
Romania	152
Russia	311
Serbia	135
Ukraine	147
Uzbekistan	123

Source: EBRD and World Bank MOI survey.

The fieldwork in Russia took place between October 2008 and March 2009 in all federal districts apart from the Far East, where the survey was in the field between February and April 2010. All the federal districts were covered except the North Caucasian federal district.[2] At least one region (federal subject) was covered in each of them, typically the largest. However, as Table A.1 in Appendix A illustrates, the sample is only big enough to make meaningful comparisons between the Far East and the rest of Russia. At the level of federal districts, share of mining in GDP in the Far East was more than twice the share of mining in GDP in the rest of Russia in 2007. At the level of federal districts, the Far East federal district is the second federal district in terms of natural resource abundance, after the Urals federal district.[3] The share of manufacturing in GDP in the Far East was less than a third of the share of manufacturing in GDP in the rest of Russia in 2007. There are of course differences among regions within the federal district, most significantly so in the Urals federal district, where mining represented 69.1 per cent of regional GDP in Khanty-Mansy Autonomous District, but

---

[2] The North Caucasian federal district was split from the Southern federal district in January 2010, after our fieldwork in Russia (except the Far East) was completed.

[3] The Far East federal district regions with the highest share of regional GDP created in extraction industries in 2007 were Sakhalin (53.7 per cent), Sakha (36.1 per cent), Magadan (18.6 per cent) and Chukotka (11.8 per cent).

only 0.7 per cent of regional GDP in Kurgan. The regions included in the MOI survey in the Urals federal district – Chelyabinsk and Sverdlovsk – are regions where the share of mining in GDP is fairly low, less than 4 per cent. Far East district as a whole appears to be more dependent on natural resources, and thanks to them it has attracted a lot more FDI as a share of GDP than the rest of Russia in 2007.

2.2 Scoring management practices

The concept of "good" or "bad" management in terms of its impact on firm productivity needs to be translated into a measure applicable to different firms across the manufacturing sector in various countries. The questionnaire was based on Bloom and Van Reenen (2010), who in turn used a practice evaluation tool developed by a leading international management consultancy firm. The focus was on practices that are clearly "good" for firm productivity, regardless of the environment a particular firm is in, such as monitoring production to identify and fix repeated problems, making promotion decisions based on employees' performance (rather than, for example, family connections) and retraining or moving incompetent employees (rather than leaving them in post).

Management practices were grouped into four areas: *operations*, *monitoring*, *targets*, and *incentives*. The operations question focused on how the establishment handled a process problem, such as machinery breakdown. The monitoring questions covered collection, monitoring, revision and use of production performance indicators. The targets question focused on the time-scale of production targets and the incentives questions covered promotion criteria, practices for addressing poor employee performance, and rewarding production target achievement. The questions we used for each management practice and the scoring we assigned to answers are listed in Appendix B.

To deal with the different scaling used across management practices, we follow the procedure used in Bloom et al. (2011b) and convert the scores to z-scores by normalising each practice (that is, question) to mean zero and standard deviation one:

$$z_{m_i} = \frac{m_i - \overline{m}_i}{\sigma_{m_i}} \tag{1}$$

where z_{m_i} is the z-score of management practice m_i in firm i, $\overline{m}_i$ is the unweighted average of management practice m_i across all observations and σ_{m_i} is the standard deviation of management practice m_i across all observations. To avoid putting the most emphasis on the monitoring aspect of management practices (which had the most underlying questions), we first calculate an unweighted average across z-scores for a particular area of the four management practices:

$$\overline{m}_{i,A} = \frac{1}{n_{m_{ii,A}}} \sum_{m \in A} z_{m_i} \tag{2}$$

where $\overline{m}_{i,A}$ is the unweighted average of management practices belonging to an area of management A (operations, monitoring, targets or incentives) in firm i, and $n_{m_{ii,A}}$ denotes the number of observations for which the measures are available. Lastly, we then take an

unweighted average across the scores for the four practices, and finally calculate a z-score of the measures obtained:[4]

$$\tilde{M}_i = \frac{1}{4}\left(\overline{m}_{i,operations} + \overline{m}_{i,monitoring} + \overline{m}_{i,t\arg ets} + \overline{m}_{i,incentives}\right)$$

$$z_{\tilde{M}_i} = M_i = \frac{\tilde{M}_i - \overline{\tilde{M}}_i}{\sigma_{\tilde{M}_i}} \tag{3}$$

This means that the average management practices across all firms in all countries in the sample are equal to zero, and the actual management practices of the firm deviate from zero either to the left ("bad" practices) or to the right ("good" practices).

Firm-level performance data – balance sheets and income and loss statements – were obtained from Bureau Van Dijk's *Orbis* database for the countries covered and matched to the sample of completed interviews. These data come from a source independent of the survey. Bloom et al. (2011b) show that the measures of management practices that we use in this paper are correlated with data on firm performance in the cross-country sample, which ensures the external validity of our measures of management practices.
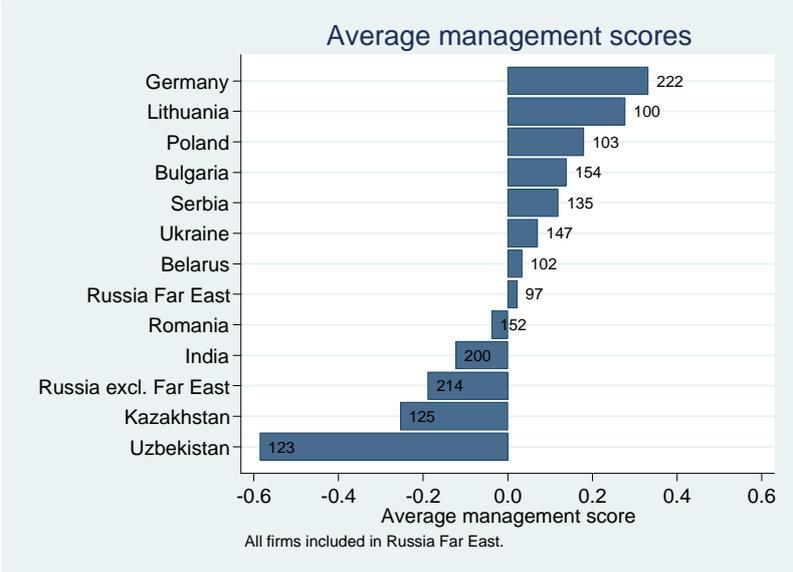
---

[4] This is an accepted way of calculating index numbers – see Bresnahan et al. (2002).

3 Quality of management in Russia

3.1 Comparing Russia with other countries

Many findings about the management practices in developed and a couple of developing countries hold for transition countries as well, as documented in Bloom et al. (2011b). Chart 1 distinguishes the Russian Far East federal region from the other federal regions. Germany has the highest management practice scores on average (as we expected), followed by Lithuania and Poland, with Uzbekistan in the last place. The Russian Far East has on average better management practices than the rest of Russia, but the difference is not statistically significant (p-value=0.1004).

Chart 1: Management practices across countries

Average management scores

| Country	Score
Germany	222
Lithuania	100
Poland	103
Bulgaria	154
Serbia	135
Ukraine	147
Belarus	102
Russia Far East	97
Romania	152
India	200
Russia excl. Far East	214
Kazakhstan	125
Uzbekistan	123

All firms included in Russia Far East.

Source: Own calculations based on the EBRD and World Bank MOI survey.

Russia excluding the Far East, and also Kazakhstan and Uzbekistan, have on average worse management practices than India, a developing country with a lower GDP per capita than any of them in 2008 (but close to the GDP per capita of Uzbekistan). The reason for this could be the business environment: India is a more open economy than Kazakhstan, Russia or Uzbekistan and is more attractive for foreign investors, who are likely to bring better management practices with them. These three countries are also rich in natural resources, while India is not. According to the Economic Freedom of the World data (Gwartney and Lawson, 2009) Russia stands out as the country with the least freedom to trade internationally in the sample, as measured by revenues from trade taxes, mean tariff rate, taxes on international trade, non-tariff trade barriers, regulatory trade barriers, compliance cost of importing and exporting, and foreign ownership/investment restrictions.

The overall management scores can be separated into four areas: operations, monitoring, targets and incentives, as shown in Chart 2. Firms in the Russian Far East federal district appear to be better managed than firms in other parts of Russia in terms of operations, monitoring and incentives management, and indistinguishable in terms of targets management. Differences in monitoring and incentives management scores are statistically significant at 1

per cent (p-value=0.0060) and 10 per cent (p-value=0.0739), respectively. Given that a relatively low share of GDP is created in manufacturing in the Far East, the better quality of incentives management practices there could perhaps be explained by the need to compete for good workers and managers with other sectors, in particular natural resources, construction and trade.

Chart 2: Management scores across countries by management categories
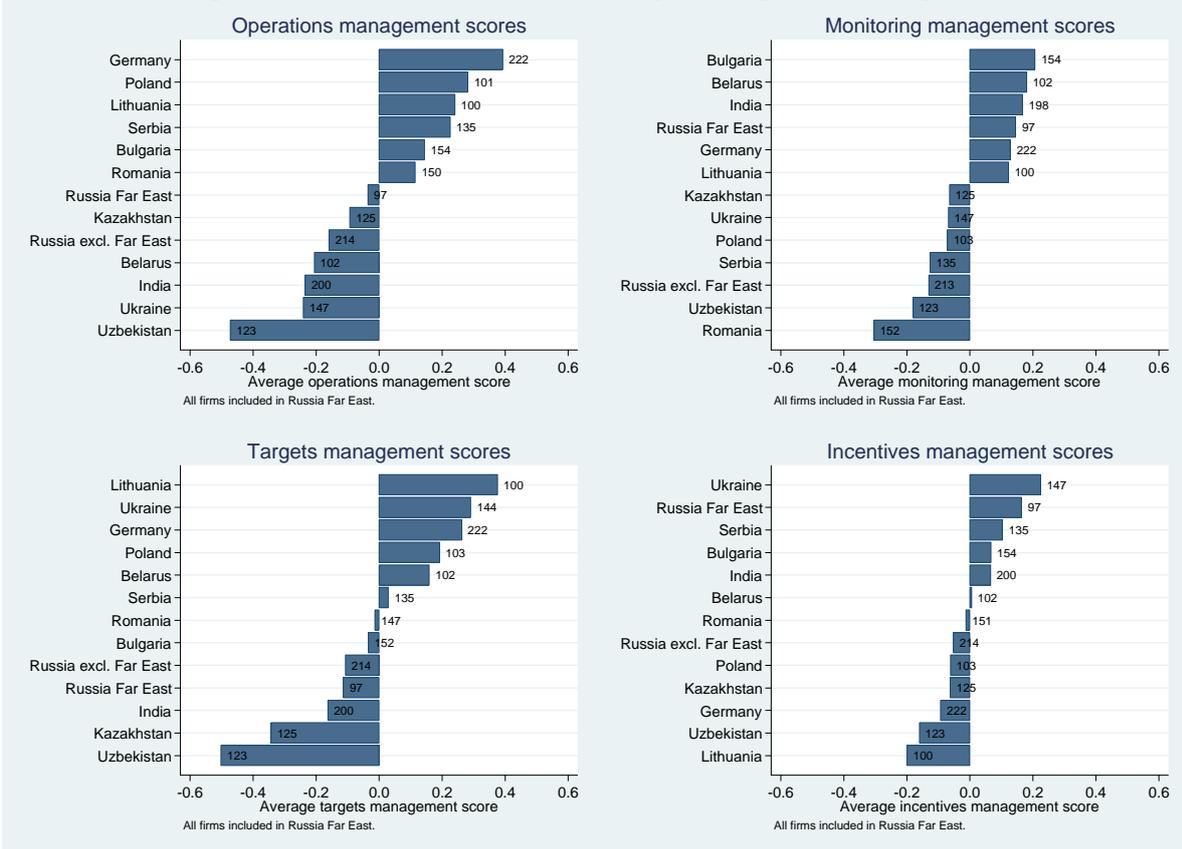
Source: Own calculations based on the EBRD and World Bank MOI survey.

3.2 Management practices in Russia by type of firm

In Russia, private-sector share in GDP is comparatively low, at 65 per cent. A majority of formerly state-owned firms were privatised to insiders, often in non-transparent ways, usually without bringing in new capital or management. Table 2 shows descriptive statistics on the size of firms and quality of management practices in the Russian Far East, the rest of Russia, and two resource-rich countries – Kazakhstan and Uzbekistan – as additional benchmarks.

Firms that have always been in private ownership are also relatively young firms in these countries. They are in general smaller than privatised or state-owned firms. State-owned firms tend to be the worst-managed on average. Within Russia, all three categories of firms are on average better managed in the Far East than in the rest of Russia, and always private firms are the best managed firms in the Far East, but not in the rest of Russia.

This could indicate that manufacturing firms in the natural-resources-rich Far East need to be better managed on average than manufacturing firms in the rest of Russia in order to compete

with the natural resources sector for production inputs, including managers and workers. In addition, private manufacturing firms in the Far East (that have always been private) are on average particularly good at incentives management, which supports the argument that new firms will enter a non-favoured sector in a natural-resources-rich region if they can compete for the best workers with the favoured sectors. Note that the same is true in Uzbekistan, and to a lower degree in Kazakhstan. Always-private manufacturing firms also tend to be on average better managed on the operations dimensions of management practices. By contrast, they do not perform as well on the targets or monitoring dimension in these three countries.

Table 2: Average management z-scores by ownership status for Kazakhstan, Russia and Uzbekistan

	Kazakhstan	Russia Far East	Russia excl. Far East	Uzbekistan
Average number of employees				
Privatised	262	251	404	145
State-owned	308	194	224	339
Always private	189	114	175	165
Average overall management z-score				
Privatised	-0.339	0.067	-0.074	-0.736
State-owned	-0.615	-0.297	-0.471	-0.425
Always private	-0.135	0.136	-0.203	-0.507
Average operations management z-score				
Privatised	-0.273	0.028	-0.324	-0.603
State-owned	-0.200	-0.364	-0.147	-0.426
Always private	0.068	0.040	-0.079	-0.364
Average monitoring management z-score				
Privatised	0.003	0.276	0.078	-0.345
State-owned	-0.574	-0.159	-0.792	0.074
Always private	-0.048	0.160	-0.137	-0.128
Average targets management z-score				
Privatised	-0.404	-0.181	0.122	-0.538
State-owned	-0.502	0.032	-0.177	-0.222
Always private	-0.270	-0.115	-0.208	-0.587
Average incentives management z-score				
Privatised	-0.022	0.184	0.008	-0.221
State-owned	-0.302	-0.271	-0.223	-0.408
Always private	-0.066	0.397	-0.059	0.000

Source: Own calculations based on the EBRD and World Bank MOI survey.

In Table 3 we look at the proportion of younger firms (less than 20 years old) and associated quality of management, as measured by management z-scores. In Kazakhstan, Russian Far East and Uzbekistan there are relatively fewer young firms in the sample, compared with Russia excluding Far East. This might indicate that the second channel through which natural resource abundance could affect the quality of management practices in manufacturing is at work: new firms may only enter the manufacturing sector if they are convinced that they have a good product and are able to compete with the booming sectors for good managers and workers. However, there is a caveat: the MOI survey was not stratified according to firm age,

so it is possible that this finding relates only to our sample and not to the entire population of manufacturing firms eligible to participate in the survey.

With this in mind, younger firms in Kazakhstan and Russia have on average better management z-scores than older firms, and both younger and older firms are much better managed in the Far East than the rest of Russia. In Uzbekistan, younger firms appear to be on average worse managed than older firms, but the difference is not statistically significant.

Table 3: Average management z-scores by firm age for Kazakhstan, Russia and Uzbekistan

	Kazakhstan	Russia Far East	Russia excl. Far East	Uzbekistan
Percentage of firms in the sample				
Age<=20	59.5	55.0	72.0	54.4
Age>20	40.5	45.1	28.0	45.6
Average overall management z-score				
Age<=20	-0.069	0.162	-0.154	-0.642
Age>20	-0.470	-0.031	-0.252	-0.583

Source: Own calculations based on the EBRD and World Bank MOI survey.

In the next section, we investigate whether the quality of management practices is related to firm performance in Russia, and we look at factors that explain the differences in management practices across firms.

4 Quality of management and firm performance

We estimate a firm-level production function similar to Bloom et al. (2011b) for Russia only, and augment it with broad corporate governance variables: namely, indicators for new (always) private and privatised (formerly state-owned) firms, as it has been shown in numerous studies (see Djankov and Murrell, 2002, for an overview) that these firms behave in quite different ways. Hence, our production function can be written as:

$$y_{it} = \alpha_l l_{it} + \alpha_k k_{it} + \alpha_n n_{it} + \beta M_i + \mathbf{\eta O}_{it} + \mathbf{\gamma Z}_{it} + u_{it} \tag{1}$$

where y is a measure of firm performance, l the natural logarithm of labour, k the natural logarithm of capital, and n the natural logarithm of intermediate inputs (materials) of firm i at time t. The $\mathbf{O}$ s are indicators for new private and privatised firms and the $\mathbf{Z}$ s are a number of other controls that affect productivity, such as workforce characteristics (employees with a completed university degree and the average weekly hours worked), firm characteristics (firm age and whether it is listed on the stock market), a set of two-digit industry dummies and country-year (or only country) dummies. M is the variable of interest and represents average management quality.

We present the results using the firm performance data for 2003-2010 in the paper.[5] In Table 4, we do not allow the coefficient on management z-score to vary for Far East versus the rest of Russia. In this regression we do not find any impact of quality of management on firm performance,[6] but some evidence that always private firms perform better than state-owned firms (which are the omitted category) – a result which indeed corroborates the ones by Djankov and Murrell (2002).

In Table 5 we allow the coefficient of the z-score of management quality to differ between the Far East and the rest of Russia. The quality of management practices and operating revenue is positive for firms in the Far East, but statistically insignificant. The point estimates change sign for the rest of Russia in all specifications apart from column (1). The correlation between the quality of management practices and operating revenue per employee in the Far East is positive, but the p-value is only at 11.8 per cent. The only thing that is significant in terms of the z-scores is the difference between the estimated coefficients in the Far East and those for the rest of Russia in column (5) of Table 5 at 9.6 per cent.

It thus seems that managerial quality as measured by the methodology of the MOI survey explains relatively little of the performance differentials across firms in Russia, but there seem to be emerging differences between the Far East and the rest of Russia.

Russia is not the only country in which the quality of management practices does not affect firm performance, but it is noteworthy that it is the only country in which this is true for all measures of firm performance: gross profit/loss, operating profit/loss, profit margin, EBITDA margin, return on capital employed and return on total assets. We also looked at the

---

[5] We also ran the estimations using the firm performance data for 2003-2007, 2003-2008 and 2009-2010. The results are similar to those presented in the paper, and are available upon request.

[6] Positive associations between the quality of management practices and measures of firm performance found in Bloom et al. (2011) as well as Bloom and Van Reenen (2010) do not necessarily hold when the regressions are restricted to one country at a time. In some cases, this could be ascribed to the sample being too small (Poland, Lithuania).

correlations of operating revenue with each of the four dimensions of management quality (operations, monitoring, targets and incentives), as well as individual management practices, with similar (lack of) success.

Table 4: Estimates of firm performance equations – operating revenue

Dependent variable	(1)	(2)	(3)	(4)	(5) Log operating revenue per employee
	Log operating revenue				
Management z-score	0.066	0.013	0.007	0.003	-0.000
	(0.060)	(0.035)	(0.037)	(0.034)	(0.035)
Ln(Labour)		0.834***	0.858***	0.714***	
		(0.043)	(0.047)	(0.057)	
Ln(Capital)				0.126***	
				(0.022)	
Ln(Capital per Employee)					0.120***
					(0.022)
Always private			0.083	0.261**	0.280**
			(0.114)	(0.114)	(0.119)
Privatised			0.099	0.163	0.101
			(0.123)	(0.118)	(0.121)
Ln(% of employees with a college degree)			0.087	0.068	0.086
			(0.055)	(0.054)	(0.056)
2-digit industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Extra controls	No	No	Yes	Yes	No
Noise controls	No	No	Yes	Yes	No
Firms	260	260	260	260	260
Observations	1608	1608	1608	1608	1608
R-squared	0.168	0.608	0.641	0.669	0.319

Source: Own calculations based on the EBRD and World Bank MOI survey.
Notes: Operating revenue. All columns are estimated by OLS, with robust standard errors clustered by firm. The sample is of all firms with available accounts data at some point between 2003 and 2010. The management score has a mean of -0.127 and a standard deviation of 1.058 in the sample. Extra controls comprise log of firm age, log of average hours worked for production and non-production workers, and indicators for missing information on % of production and non-production employees with a college degree. Noise controls are gender, years working in the position for the respondent, the day of the week the interview was conducted, the time of day the interview was conducted, the duration of interviews, interviewer's perception of the truthfulness of the information and respondent's knowledge about the firm as well as controls for interviewer's age, gender and education.

There are a couple of possible explanations for the fact that the quality of management practices seem to matter little in Russia. First, even though our data on firm performance come from *Orbis*, a source accepted among economists as a good database of firm level variables, it is based on officially reported firm performance, and firms may not report their actual performance truthfully for tax or other purposes. While this may be a problem in many countries, corporate tax standards in Russia are known to be lower than the ones in the EU countries. Bertrand and Betschinger, who use *Ruslana*, a subset of *Orbis*, in their analysis of mergers and acquisitions in Russia, mention that there are problems with the "reliability of

accounting data and acquisition reporting" (forthcoming) in micro and small firms, so they focus only on firms with at least €10 million of revenue, where the data are likely to be more reliable due to the focus of Russian tax authorities on firms with large turnover. The average operating turnover in our sample is US$ 4.5 million (about €3.3 million).

Table 5: Estimates of firm performance equations, allowing the coefficient to vary for Far East vs. the rest of Russia – operating revenue

	(1)	(2)	(3)	(4)	(5)
					Log operating revenue per employee
Dependent variable	Log operating revenue				
Management z-score, Far East	0.127	0.108	0.101	0.094	0.098
	(0.196)	(0.090)	(0.081)	(0.071)	(0.063)
Management z-score, rest of Russia	0.060	-0.006	-0.016	-0.017	-0.025
	(0.062)	(0.039)	(0.043)	(0.040)	(0.042)
Far East indicator	-0.243	-0.044	0.018	-0.024	0.028
	(0.173)	(0.087)	(0.105)	(0.099)	(0.097)
Ln(Labour)		0.834***	0.861***	0.716***	
		(0.043)	(0.048)	(0.057)	
Ln(Capital)				0.126***	
				(0.022)	
Ln(Capital per Employee)					0.119***
					(0.021)
Always private			0.076	0.249**	0.272**
			(0.118)	(0.117)	(0.123)
Privatised			0.100	0.159	0.104
			(0.125)	(0.118)	(0.122)
Ln(% of employees with a college degree)			0.095*	0.077	0.094*
			(0.055)	(0.054)	(0.056)
2-digit industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Extra controls	No	No	Yes	Yes	No
Noise controls	No	No	Yes	Yes	No
Firms	260	260	260	260	260
Observations	1608	1608	1608	1608	1608
R-squared	0.175	0.610	0.643	0.670	0.323

Source: Own calculations based on the EBRD and World Bank MOI survey.
Notes: Operating revenue. All columns are estimated by OLS, with robust standard errors clustered by firm. The sample is of all firms with available accounts data at some point between 2003 and 2008. The management score has a mean of -0.127 and a standard deviation of 1.058 in the sample. Extra controls comprise log of firm age, log of average hours worked for production and non-production workers, and indicators for missing information on % of production and non-production employees with a college degree. Noise controls are gender, years working in the position for the respondent, the day of the week the interview was conducted, the time of day the interview was conducted, the duration of interviews, interviewer's perception of the truthfulness of the information and respondent's knowledge about the firm as well as controls for interviewer's age, gender and education.

Second, and more interestingly, it may be too early to expect to find a positive association between the quality of management practices and firm performance in Russia, as there may be

complementarities between management practices and other institutional factors not yet in place in Russia, for instance with transparency and corporate governance.[7] Furthermore, management practices may take a while to have a measurable impact on performance, and firm performance data beyond 2010 are not yet available. Following this lead it may then be interesting to investigate the factors leading to the adoption of these innovative practices, which we do in the next section.

---

[7] Transparency and corporate governance indicators at the regional level in Russia are not available for the years we are interested in.

5   Factors explaining differences in management practices

There is a lot of heterogeneity in management practices within Russia and regions within Russia, as shown in Chart 3 below. Bloom et al. (2011b) find that factors that may help to explain the difference in firm-level management scores across countries participating in the MOI survey include product market competition, ownership and education of employees.

Chart 3: Management scores across firms in Russia and Germany

Distribution of firm level management scores
with fitted distribution for Germany

Source: Own calculations based on the EBRD and World Bank MOI survey.
Notes: Bars are the histograms of the actual density. The line is the smoothed (kernel) density of the German density for comparison.

Table 6 shows the results of the estimation when all factors that could explain differences in management practices are included jointly in the estimation. We allow the coefficients on certain factors to be different for Far East and the rest of Russia. Note that we do not allow the coefficients on currently state-owned firms, foreign-owned multinationals and percentage of employees with a college degree to vary across these two parts of Russia – the reason is that there are either not enough firms with such characteristics or the difference was not found to be significant. Quality of management practices could be different because of different environments that firms face, both in terms of product market competition and labour markets.

Table 6: Factors explaining differences in management practices

	(1)	(2)	(3)	(4)	(5)	(6)
2-5 competitors	0.578**	0.548*	0.532*			
	(0.278)	(0.300)	(0.300)			
2-5 competitors, rest of Russia				0.436		
				(0.439)		
2-5 competitors, Far East				0.493		
				(0.409)		
More than 5 competitors	0.610**	0.567*	0.554*			
	(0.271)	(0.289)	(0.289)			
More than 5 competitors, rest of Russia				0.466		
				(0.433)		
More than 5 competitors, Far East				0.526		
				(0.369)		
National market as the main market					0.305**	
					(0.139)	
National market as the main market, rest of Russia						0.124
						(0.160)
National market as the main market, Far East						0.779***
						(0.206)
Foreign-owned MNEs	0.312	0.366	0.395	0.511	0.409	0.587
	(0.618)	(0.717)	(0.710)	(0.701)	(0.664)	(0.695)
Currently state-owned	-0.393*	-0.302	-0.273	-0.242	-0.230	-0.182
	(0.203)	(0.220)	(0.224)	(0.226)	(0.235)	(0.235)
Size of the city			-0.051		-0.038	
			(0.064)		(0.061)	
Size of the city, rest of Russia				-0.116		-0.106
				(0.077)		(0.072)
Size of the city, Far East				0.207*		0.254**
				(0.125)		(0.116)
Far East indicator	0.574***	0.463***	0.352	-3.960*	0.357*	-4.689**
	(0.168)	(0.177)	(0.217)	(2.172)	(0.198)	(1.856)
Ln(% of employees with a college degree)	0.007	0.017	0.023	0.002	0.023	-0.003
	(0.081)	(0.083)	(0.083)	(0.085)	(0.086)	(0.086)
2-digit industry fixed effects	No	Yes	Yes	Yes	Yes	Yes
Extra controls	Yes	Yes	Yes	Yes	Yes	Yes
Noise controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	302	302	301	301	292	292
R-squared	0.224	0.282	0.287	0.300	0.293	0.326

Notes: Dependent variable is management z-score. All columns are estimated by OLS, with robust standard errors. Extra controls comprise log of firm size (number of employees), log of firm age, log of average hours worked for production and non-production employees, and indicators for missing information on percentage of employees with a college degree. Noise controls are gender, years working in the position for the respondent, the day of the week the interview was conducted, the time of day the interview was conducted, the duration of interviews, interviewer's perception of the truthfulness of the information and respondent's knowledge about the firm as well as controls for interviewer's age, gender and education.
Source: Own calculations based on the EBRD and World Bank MOI survey.

Stronger competition can drive out poorly managed firms but can also change the behaviour of incumbent managers who have to lift their performance in order to survive and prosper, in the spirit of Schumpeterian "creative destruction". This is in line with a modern micro-economic literature that has shown how intensity of competition in the product market affects managerial incentives, in particular Raith (2003). Competition in the product and labour markets would affect the incentives of managers to restructure for different reasons: in order to compete in contested markets operational efficiency is important. This does not only increase the rents that can be shared with workers, but may also be a strategic instrument to attract and retain the workforce, in line with papers of Earle and Sabirianova (2002), Friebel and Guriev (2005) and Commander et al. (2011) who have shown that labour market competition affects various types of firm policies.

We use the self-reported number of competitors a firm faces from the MOI survey and create two dummy variables: one for firms with two to five competitors and another for firms with more than five competitors. The omitted category is firms with zero competitors or one competitor.[8] Degree of competition in the product market, as measured by the self-reported number of competitors, matters: better management practices are positively and significantly associated with the managers' own self-reported measure of the number of competitors they face. The estimated coefficient on the dummy variable for firms with more than five competitors is about the same as the estimated coefficient on the dummy variable for firms with two to five competitors (columns (1) and (2)).[9]

Bloom and Van Reenen (2010) show that foreign multinationals are better managed than domestic firms in every country in their sample. In our sample, however, there are only six foreign-owned firms in the sample (none in the Far East), and only three of them are foreign-owned multinationals, and there is not enough variation to estimate the coefficient more precisely. The majority of the foreign investment flows into the natural resources sectors, which may help explain Russia's place in the bottom half of the countries in the MOI sample according to the average management scores.

We also compare currently state-owned firms with firms that were always private or that were privatised. The estimated coefficient on the indicator for currently state-owned firms is negative and significant at the 5 per cent level of significance in column (1), where we do not control for 2-digit industry effects. It, however, loses its significance once we control for 2-digit industry effects. The majority of currently state-owned firms are in one of the industries where the estimated coefficient is statistically significant (and always negative). All these industries taken together have on average lower management practices score than the other industries. Within this group of industries, currently state-owned firms have on average statistically significantly worse management practices (p-value= 0.0007), while the same is not true for the group of other industries. Hence, some of the variation in management practices due to state-owned firms is picked up by the industry effects and the remaining variation is not large enough to result in a statistically significant coefficient.

The association between the quality of management practices and labour market competition (in addition to factors already mentioned) is explored in columns (3) and (4) of Table 6. We use the log of the size of the city (as measured by the number of inhabitants in the 2002 Census) where the establishment is located as a proxy. The coefficient on the log of the size

---

[8] We also control for firms that claim not to know the number of competitors they face in the regression.

[9] Product market competition matters more in the Far East than in the rest of Russia – but the significance of the estimated coefficient disappears once we control for 2-digit industry effects.

of the city is negative (though not significant) in column (3), indicating that in larger cities firms do not have to have the best management practices to attract or retain workers – the pool of workers is larger. On the other hand, the coefficient on the log of the size of the city in the Far East is positive and significant at 10 per cent in column (4), indicating that manufacturing firms in the Far East need to have good management practices to attract or retain workers. Perhaps this is because they have to compete for workers with the natural resource sector, services and residential construction sector as well as with more central regions in Russia to which many inhabitants emigrate. Interregional migration in Russia is low by international standards, but northern and eastern regions are net sources of emigrants (Andrienko and Guriev, 2004).

In columns (5) and (6) we use an alternative measure of competition, namely an indicator for the main market in which the establishment sold its main product: regional, national or international. We excluded firms that named the international market as their main market from the estimation because there were only seven such firms in the sample. Firms competing in the national market have on average better management practices than firms competing in the regional market (column 5), and this is especially true for the manufacturing firms in the Far East (column 6): switching from competing regionally to competing nationally is associated with a management z-score increase of 0.737 in the Far East. They are faced with much higher transportation costs than firms located more centrally and in order to compete, they need to run their operations efficiently, and may consequently invest more into adopting good management practices.

Bloom et al. (2011b) also find that the average education level of employees is correlated with the quality of management practices. We have included percentage of employees with a completed college degree among the controls in all of our estimations in Table 6. However, while the estimated coefficient is always positive, it is never significant. Employees with a completed college degree may be more familiar with the best practices used in their line of work and be more supportive of implementing them in their workplace, but it appears that in Russian manufacturing firms other factors are at play. It is possible that the owners are either not aware of the best practices used in their industry or are not willing to listen to the suggestions of their employees and implement changes.

6 Concluding remarks

Both the differences in correlations between the quality of management and firm performance, and the factors explaining the differences in management practices across firms, indicate that Russia's Far East is different from the rest of Russia.

But why is this? The Far East can be seen as a small open economy in which the relative proximity of attractive markets such as China, South Korea or Japan may create incentives for the managers to restructure their firms and invest effort into adopting top-notch management practices.

Furthermore, firms facing a tight labour market, either because of more lucrative opportunities in other sectors or because of net migration, also have an incentive to improve their management practices in order to attract or retain good workers. State-owned firms, on the other hand, are on average worse managed than always-private or privatised firms. They may have better access to subsidies from the government or may be able to win contracts due to the connections with the government.

This may not yet affect productivity, but could show up in the future. The intensity of competition seems to have a stronger effect on the adoption of good management practices in the Far East, which is a related factor to the fact that firms in the Far East which are selling their products nationally tend to adopt better management practices.[10] We would indeed predict that a manager who faces stiffer competition or larger transportation costs would, other things being equal, be willing to invest more into running the operations efficiently, and may consequently invest more in good management practices.

While the business environment (quality of the public sector, regulations and law enforcement) is arguably not better in the Far East than in the rest of Russia, the Far East may hence resemble a sort of "Wild East" in which market forces have more intensive effects on managers, and in which distortions such as subsidies or interventions from the central government in Moscow were less frequent in the past[11] and therefore have less distortionary effects.

---

[10] In their analysis of business constraints in 11 regions in Russia using BEEPS data, Isakova and Plekhanov (2011) find that in the Primorsky region firms complain strongly about access to land and trade regulations and customs – the latter indicates the importance of international trade for the Far East.

[11] The share of subsidies in the Far East federal district expenditures has increased by 10 percentage points between 2006 and 2009.

References

R. C. Acharya and W. Keller (2008), "Estimating the productivity selection and technology spillover effects of imports," NBER Working Paper No. 14079, June 2008.

S. Ahn, K. Fukao and K. Ito (2008), "Outsourcing in East Asia and its impact on the Japanese and Korean labour markets," OECD Trade Policy Working Papers No. 65.

Y. Andrienko and S. Guriev (2004), "Determinants of interregional mobility in Russia: Evidence from panel data", *Economics of Transition*, Vol. 12, No. 1, pp. 1-27.

O. Bertrand and M.-A. Betschinger (forthcoming), "Performance of domestic and cross-border acquisitions: Empirical evidence from Russian acquirers", *Journal of Comparative Economics*.

N. Bloom, M. Draca and J. Van Reenen (2011a), "Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity," NBER Working Paper No. 16717, January 2011.

N. Bloom, H. Schweiger and J. Van Reenen (2011b), "Quality of management practices in transition countries", NBER Working Paper No. 17231, July 2011.

N. Bloom and J. Van Reenen (2007), "Measuring and explaining management practices across firms and countries", *Quarterly Journal of Economics*, Vol. 122, No. 4, pp. 1351-1408.

N. Bloom and J. Van Reenen (2010), "Why do management practices differ across firms and countries?", *Journal of Economic Perspectives*, Vol. 24, No. 1, pp. 203-224.

T. Bresnahan, E. Brynjolfsson and L. Hitt (2002), "Information technology, workplace organisation, and the demand for skilled labour: firm-level evidence", *Quarterly Journal of Economics*, Vol. 117, No. 1, pp. 339-76.

J. D. Brown, J. S. Earle and A. Telegdy (2006), "The productivity effects of privatization: Longitudinal estimates from Hungary, Romania, Russia, and Ukraine", *Journal of Political Economy*, Vol. 114, No. 1, pp. 61-99.

N. F. Campos and Y. Kinoshita (2003), "Why does FDI go where it goes? New evidence from the transition economies", IMF Working Paper No. 228.

S. Commander, Z. Nikoloski and A. Plekhanov (2011), "Employment concentration and resource allocation: One-company towns in Russia", EBRD Working Paper No. 130, June 2011.

S. Djankov and P. Murrell (2002), "Enterprise restructuring in transition: A quantitative survey", *Journal of Economic Literature*, Vol. 40, No. 3, pp. 739-792, September.

J. S. Earle and K. Z. Sabirianova (2002), "How late to pay? Understanding wage arrears in Russia", *Journal of Labour Economics*, Vol. 20, No. 3, pp. 661-707.

G. Friebel and S. Guriev (2005), "Attaching workers through in-kind payments: Theory and evidence from Russia", *The World Bank Economic Review*, Vol. 19, pp. 175-202.

J. Gwartney and R. Lawson with H. Grubel, J. de Haan, J.-E. Sturm and E. Zandberg (2009), "Economic Freedom of the World: 2009 Annual Report", Vancouver, BC: The Fraser Institute. Data retrieved from www.freetheworld.com.

A. Hijzen, H. Görg and R. C. Hine (2005), "International outsourcing and the skill structure of labour demand in the United Kingdom," *The Economic Journal*, Vol. 115, No. 506, pp. 860-878.

A. Isakova and A. Plekhanov (2011), "Region-specific constraints to doing business: Evidence from Russia", *Aussenwirtschaft*, Vol. 66, No. 2, pp. 181-210.

M. Melitz (2003), "The impact of trade on intra-industry reallocations and aggregate industry productivity," *Econometrica*, Vol. 71, No. 6, pp. 1695-1725.

M. Raith (2003), "Competition, risk and managerial incentives", *American Economic Review,* Vol. 93, No. 4, pp. 1425-1436.

F. van der Ploeg (2011), "Natural resources: Curse or blessing?", *Journal of Economic Literature*, Vol. 49, No.2, pp. 366-420.

Appendix A: Background information on the MOI survey

Sampling frame and additional data

The sampling frame, from which these firms were picked in main cities randomly with equal probability, was based on Bureau Van Dijk's Orbis database (as available in August 2008) with the exception of India, Kazakhstan and Uzbekistan. The sampling frame in Kazakhstan was the official list of establishments obtained from the Agency of Statistics of the Republic of Kazakhstan,[12] and in Uzbekistan the Uniform State Register of Enterprises and Organisations published by the State Department of Statistics of the Republic of Uzbekistan. In the Russian Far East, Orbis database was augmented with BCD (business card database).[13] In Poland and Germany, as well as in India, several establishments that participated in a previous survey on management practices were re-interviewed as well. All regions within a country had to be covered[14] and the percentage of the sample in each region was required to be equal to at least one half of the percentage of the sample frame population in each region.[15]

We were able to perfectly match the survey data back to the Bureau van Dijk's Orbis database on the basis of the Bureau van Dijk's firm identification number, which was included in the survey data. The latter also included the name, address and phone number of the firm, and we cross-checked the firm names and addresses manually after the matching. In some of the countries that did not use Bureau van Dijk's Orbis database as a sample frame, we were able to find some of the firms in the Orbis database on the basis of their name, industry and address at a later date when the coverage in Orbis improved.

---

[12] At the time of fieldwork preparation, Bureau van Dijk's Orbis had very little data on manufacturing firms in Kazakhstan. They have since improved the coverage, but financial information is available only for a limited number of firms.

[13] BCD includes systematised statistical and other information on manufacture and infrastructure of area, region and the country as a whole.

[14] Far East in Russia was covered in a subsequent wave of the MOI survey, which took place from February to April 2010.

[15] More details on the sampling are available in the Sampling Note for the MOI survey, available on the EBRD web site.

Table A.1. Some characteristics of the Russian regions covered by the MOI survey

	Number of observations	Share of mining in GDP, 2007	Share of manufacturing in GDP, 2007	Exports to GDP, 2006	FDI to GDP, 2007
Far East	*97*	*21.3*	*6.3*	*15.7*	*11.4*
Amur	7	4.8	4.1	4.0	2.8
Jewish Autonomous Oblast	3	0.8	6.9	1.4	0.1
Khabarovsk	39	4.2	14.2	36.3	1.0
Primorsky	44	1.5	8.2	10.4	0.1
Sakhalin	4	53.7	3.3	8.1	48.4
rest of Russia	*214*	*9.3*	*20.1*	*25.4*	*2.2*
Central	*93*	*0.7*	*18.9*	*31.3*	*4.9*
Kaluga	1	0.5	29.3	4.6	3.5
Kursk	4	14.1	13.3	7.0	0.7
Moscow city	74	0.0	15.3	42.6	6.3
Moscow oblast	5	0.3	25.2	5.3	4.6
Tver	3	0.1	20.6	3.2	1.3
Voronezh	6	0.6	18.1	9.0	0.1
North-western	*29*	*8.0*	*22.0*	*26.4*	*2.0*
St. Petersburg	29	0.1	20.8	29.0	2.0
Siberia	*17*	*7.6*	*27.0*	*23.4*	*0.7*
Krasnoyarsk	8	3.5	50.4	25.7	0.0
Novosibirsk	9	3.2	15.0	7.3	0.4
Southern	*19*	*2.1*	*18.1*	*11.8*	*1.1*
Krasnodar	9	0.6	12.2	8.8	0.8
Rostov	10	1.3	20.6	11.6	2.1
Urals	*16*	*47.1*	*9.2*	*24.6*	*0.3*
Chelyabinsk	6	1.0	40.5	23.7	1.9
Sverdlovsk	10	3.6	32.8	22.9	0.4
Volga	*40*	*13.7*	*24.5*	*21.3*	*0.7*
Bashkortostan	7	12.2	27.2	32.9	0.5
Nizhny Novgorod	17	0.1	31.9	8.7	0.7
Perm	9	13.9	30.3	15.4	0.2
Samara	7	10.0	28.0	31.9	0.4
Russia total	*311*	*10.5*	*19.3*	*25.0*	*2.6*

Source: The EBRD and World Bank MOI survey and GosKomStat.
Note: The numbers for the federal district are calculated based on all regions in the federal district, not only on the regions that were included in the MOI survey.

Appendix B: Details of the survey questions and management practice scoring

Operations

Practice 1

R.1	What normally happens when a process problem arises, for example, machinery breakdown, human errors or failures in communication?

	Score in questionnaire	Management score
Nothing is done about it.	1	1
We fix it but do not take further measures.	2	2
We fix it and take measures to make sure that it does not happen again.	3	3
We fix it and take measures to make sure that it does not happen again and we also have a continuous improvement process to anticipate problems.	4	4
Don't know.	-9	.
Refusal.	-8	.

Monitoring

Practice 2

R.2a	How many production performance indicators are monitored in this establishment?

	Score in questionnaire	Management score
None.	1	1
One or two production performance indicators (for example, volume and quality).	2	2
More than two production performance indicators.	3	3
Don't know	-9	1
Refusal	-8	.

Practice 3

R.2b	How frequently are these production performance indicators collected in this establishment?

	Score in questionnaire	Management score
Yearly	1	1
Quarterly	2	2
Monthly	3	3
Weekly	4	4
Daily	5	5
Hourly	6	6
Don't know	-9	1

Practice 4
Note: The answers to this question were recoded on the basis of the answers in the "Other" category.

R.2c	How frequently are production performance indicators shown to factory managers?

	Score in questionnaire	Management score
Annually		2
Semi-annually		3
Quarterly	1	4
Monthly	2	5
Weekly	3	6
Daily	4	7
Hourly	5	8
Never	6	1
Other	7	Recoded where possible, otherwise .
Don't know	-9	.

Practice 5
Note: The answers to this question were recoded on the basis of the answers in the "Other" category.

R.2d	How frequently are production performance indicators shown to workers?

	Score in questionnaire	Management score
Annually		2
Semi-annually		3
Quarterly	1	4
Monthly	2	5
Weekly	3	6
Daily	4	7
Hourly	5	8
Never	6	1
Other	7	Recoded where possible, otherwise .
Don't know	-9	.

Practice 6

R.2e	Where in the factory building are the production display boards showing output and other production performance indicators located?

	Score in questionnaire	Management score
There are no display boards anywhere.	1	1
They are all located in one place.	2	2
They are located at multiple places.	3	3
Don't know	-9	1

Practice 7

R.3	How often are production performance indicators reviewed by top or middle managers?

	Score in questionnaire	Management score
They are continually reviewed.	1	3
They are periodically reviewed.	2	2
They are rarely reviewed.	3	1
Don't know	-9	.
Refusal	-8	.

Practice 8

R.6	Does this establishment use any production performance indicators to compare different teams of employees in the production line, in different shifts, or similar?

	Score in questionnaire	Management score
Yes	1	2
No	2	1
Don't know	-9	.

Targets

Practice 9

R.4	What is the timescale of this establishment's production targets for its main product?

	Score in questionnaire	Management score
The main focus is on short-term (less than one year) production targets for the main product.	1	2
There are short- and long-term (more than three years) production targets for the main product, but they are set independently.	2	3
There are integrated short- and long-term production targets for the main product.	3	4
There are no production targets set for the main product.	4	1
Don't know	-9	1
Refusal	-8	.

Incentives

Practice 10

R.7	How do you reward this establishment's production target achievement?

	Score in questionnaire	Management score
There are no rewards.	1	1
Only top and middle management is rewarded.	2	2
All staff is rewarded.	3	3
Don't know	-9	.
Refusal	-8	.

Practice 11

O.14	Which of the following best corresponds to the main way employees are promoted in this establishment?

	Score in questionnaire	Management score
Promotions are based solely on individual's effort and ability.	1	3
Promotions are based partly on individual's effort and ability, and partly on other factors such as tenure (how long they have worked at the firm).	2	2
Promotions are based mainly on factors other than on individual's effort and ability, such as tenure.	3	1
Other	4	.
Does not apply	-7	.
Don't know	-9	.

Practice 12

O.15	Which of the following best corresponds to this establishment's main policy when dealing with employees who do not meet expectations in their position?

	Score in questionnaire	Management score
They are rarely or never moved from their position.	1	1
They usually stay in their position for at least a year before action is taken.	2	2
They are rapidly helped and re-trained, and then dismissed if their performance does not improve.	3	3
Other	4	.
Does not apply	-7	.
Don't know	-9	.