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Determinants of Enterprise Restructuring in Transition

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Determinants of enterprise restructuring in transition: description of a survey in Russian industry

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1 Introduction

To achieve sustainable economic growth in transition countries, it is crucial that enterprise performance is improved (eg EBRD, 1997). However, it is not a priori clear which factors are essential for this. Russia is a particularly interesting case, because the performance of its enterprises since market reforms started has falsified expectations most widely, generally remaining poor. Also, it is obviously still the most important of the transition countries. However, data to investigate the potential determinants of enterprise performance in Russia is scarce. The little data collection which *has* been done is mainly aimed at investigating the effects of privatization. The empirical (econometric) literature based on this data seems to allow for only two firm conclusions.[2] Firstly, privatization *per se* is not related with better performance. Secondly, more (regional) competition is. However, this literature is not based on *recent* data, which would be desirable, now that more time has passed to properly uncover effects. Moreover, one is still largely left in the dark if looking for data to *integrally* investigate the relative roles of *more* potential determinants of enterprise performance in Russia.

The survey underlying this paper is a modest attempt to collect exactly this sort of data. It covers the period of market reforms, between the start of 1992 and September 1999. The survey questions focus on enterprise restructuring in Russian industry on the one hand, and potential determinants on the other. The aim is to describe both, including a tentative check of the effects of the latter on the former. Note that the attention goes to *restructuring*, ie of enterprises which already existed in the plan economy. This is as opposed to the more general term *performance*, which includes new private enterprises (de novo, DN) too. Note also that the attention goes to Russian *industry*. This focus comes from the coverage of the enterprise panel used. This is the panel of the September 1999 business-cycle survey of the Moscow (Russia) Institute for the Economy in Transition (IET), in connection with which this survey was implemented.

The potential determinants paid attention to are ownership, competition, budget constraints and, particularly, institutions. Following North (1990), institutions are roughly defined as the rules of the (economic)

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game. These can be both formal ('rule of law', externally enforced by the state) and informal ('trust', internally enforced by convention). Institutional factors are emphasized because their effects in Russian industry (and transition in general, for that matter) have been least researched so far. At the same time, they seem important, as suggested by eg the developing macroeconomics literature on (cross-country) growth empirics with institutional measures (eg Moers, 1998). Even within one country, certainly a *transition* country as *diverse* as Russia, different enterprises may be confronted with different (quality of) institutions, influencing their operations. Private ownership, competitive markets and hard budget constraints have of course long been regarded as the major disciplinary forces on enterprises, gaining prominent attention in the transition economics literature (eg Earle and Estrin, 1998).

IET's enterprise panel will be discussed in section 2. Section 3 will look at the questions on which enterprise-level response was obtained. The response itself will be described in section 4. This will pave the way for a tentative check whether or not differences in the extent of enterprise restructuring can be ascribed to the mentioned factors, particularly institutions, in section 5. Section 6 will conclude.

2 Panel

IET is an independent and non-profit research institute, founded in 1990 by Yegor Gaidar (hence it is also known as the 'Gaidar institute'), later the first Russian Prime Minister under President Boris Yeltsin. Its purpose is to analyze the economic and political processes taking place in Russia as a result of the economic reforms. IET tries to promote a new economic mentality in the country, and drafts economic policy recommendations. To these ends, it has also been operating a monthly business-cycle survey, since March 1992. As this paper makes use of this mail survey, this section first takes a look at its quality, in particular the representativeness of its enterprise panel.

IET's is the longest-running enterprise survey in Russia. It is conducted with European-harmonized methodology, methodological aid coming from the Confederation of British Industry, Organization for Economic Cooperation and Development (OECD), European Commission, and Eurostat. Results have been published in the OECD 'Short-term economic indicators: transition economies' since 1995. In September 1999 IET's panel, having been developed in the course of the monthly business-cycle surveys, consisted of 1444 industrial enterprises. In general, the response rate is 65 to 70%.

IET uses one respondent per enterprise. By mailing questionnaires to concrete persons, whose names and positions are updated regularly, it explicitly aims to establish informal terms with all respondents, and thus create a sound basis for future surveys and good co-operation. In the course of the monthly business-cycle surveys respondents have been trained to fill in the questionnaires on a regular basis. They are generally ready to provide

[2] This is according to the reading of the evidence so far in Moers (2000).

extra information if needed. Sometimes they themselves contact IET for data or consultation. In any case, respondents always receive the (aggregate) results of the survey of the previous month (eg Tsukhlo, 1999). Table 1 shows that this information is their main reason for responding. More generally, the dominant reasons in table 1 reveal that respondents take IET's surveys seriously.

Table 1: Main reasons for responding to IET's enterprise surveys (% of response)

REASONS	1996	1997	1998	1999
Exchanging response for useful information	50	53	54	57
Awareness of 'social' use of such surveys	45	42	38	39
Good pretext to think over performance of own enterprise	28	31	33	34
Mere habit to react to any inquiry sent to my enterprise	10	11	10	12
My managers charged me responsible for this	5	8	8	9
Curiosity	6	6	8	7
Hard to assess	2	2	3	2
Other	2	2	2	1

Source: IET

The respondents in IET's enterprise panel are top-officers. 41 per cent are a Chief Executive Officer (CEO), 35 per cent a deputy CEO, and 18 per cent a Financial Department Chief. Table 2 shows the percentages of respondents in different positions by enterprise (employment) size.

Table 2: Respondents' positions by size (% of response)

POSITIONS	EMPLOYMENT (in persons)								
	1-50	51-200	201-500	501-1000	1001-2000	2001-5000	5001-10000	10000-20000	> 20000
CEO	52	53	55	48	37	22	8	12	0
DEPUTY CEO	29	24	23	27	41	51	48	56	60
FINANCIAL DEPARTMENT CHIEF	5	11	18	21	21	18	35	32	30
DEPUTY FINANCIAL DEPARTMENT CHIEF	0	0	0	0	1	5	5	0	10
OTHER FINANCIAL DEPARTMENT OFFICERS	14	12	4	3	0	4	5	0	0
TOTAL	100	100	100	100	100	100	100	100	100

Source: IET

The primary source of information of IET's panel is the official register of *all* industrial enterprises developed by the Russian State Statistical Committee (Goskomstat). This was used in the following way. Firstly, all enterprises of each sector were extracted from the Goskomstat register and ranked according to employment. Secondly, all large enterprises of each sector were included in the panel, and only part of the rest of the enterprises was included.[3] Thus IET's panel is biased towards the larger enterprises in each sector. This is simply because its budget constraint restricts the number of enterprises that can be approached. Also, recall that DN are not

included (which are usually small).[4] Thirdly, a letter of invitation, the one-page business-cycle questionnaire, the survey results of the previous month, and a pre-paid return envelope were sent to all included enterprises, as has been done since. If an answer was received, the enterprise was taken into the panel and the next mail was sent to a concrete enterprise officer. The structure of the panel is improved regularly.

Enterprises from all Russian industrial sectors are included in the panel, with the microbiological industry as the sole exception. Table 3 illustrates the coverage of the Goskomstat register and IET panel by industrial sector, using the official classification into sixteen sectors producing similar major products.[5] The bias towards the larger enterprises is clearly visible from the fact that the total enterprise share represented in the panel, which is 5.8%, is only about one fourth of the total employment share, which is 22.7%. The engineering sector is surely overrepresented, the food sector underrepresented, though the latter much less so in terms of employment than of enterprise share. Still, over the different sectors, both the enterprise and employment shares of the panel generally track those of the register rather well.

[3] What is considered large depends on the sector, because IET judges the sizes and size distributions of enterprises over sectors too different to use one general size classification for selecting enterprises. Officially, Goskomstat only classifies the category of small enterprises separately, as those with 1-200 employees.

[4] My contact person at IET actually expressed skepticism about the existence of proper DN in Russian industry at all, fuelled by his finding that 'practically all new enterprises are on old addresses'. Empirical studies of the Russian de novo sector show that it is clearly much smaller than its counterparts in the transition countries that started the reform process early (eg Richter and Schaffer, 1996). Also, surveys show that it is largely confined to the services sector (eg Clarke and Kabalina, 1999).

[5] This table compares IET's September 1999 panel with Goskomstat's 1995 register, because IET does not have a more recent register available. The same goes for table 4. However, considering the previous footnote, it is unlikely that the register has expanded (Russian industrial enterprises are dying, but hardly being born). Thus, it is equally unlikely that, in terms of Goskomstat's 1999 register, IET's coverage would have been lower, though its distribution could have changed.

Table 3: Coverage of Goskomstat's register and IET's panel by sector

SECTORS	NUMBER OF ENTERPRI-SES		ENTERPRI-SE SHARE (in % of covered number of enterprises)[6]		ENTERPRISE SHARE REPRESENTED IN PANEL (P, in % of number of enterprises in register, R)[7]	EMPLOYMENT (in persons)		EMPLOYMENT SHARE (in % of covered employment)[8]		EMPLOYMENT SHARE REPRESENTED IN P (in % of employment in R)[9]
	R	P	R	P	P	R	P	R	P	P
ELECTRICAL ENERGY	841	29	3.4	2.0	3.4	708310	142083	5.3	4.6	20.1
FUEL INDUSTRY	494	21	2.0	1.5	4.3	802809	35950	6.0	1.2	4.5
FERROUS METALS	275	47	1.1	3.3	17.1	718041	248062	5.3	8.1	34.5
NON-FERROUS METALS	417	15	1.7	1.0	3.6	523400	127378	3.9	4.2	24.3
(PETRO-) CHEMICALS	634	67	2.6	4.6	10.6	845664	189366	6.3	6.2	22.4
ENGINEERING	6142	556	24.8	38.5	9.1	5406350	1670709	40.1	54.6	30.9
WOOD, FURNITURE, PULP	3076	125	12.4	8.7	4.1	1043166	135073	7.7	4.4	12.9
BUILDING MATERIALS	2408	97	9.7	6.7	4.0	671245	59020	5.0	1.9	8.8
GLASS INDUSTRY	167	5	0.7	0.3	3.0	108808	12929	0.8	0.4	11.9
LIGHT INDUSTRY	2976	237	12.0	16.4	8.0	1050559	268828	7.8	8.8	25.6
FOOD INDUSTRY	5767	192	23.3	13.3	3.3	1184091	104910	8.8	3.4	8.9
MICROBIOLOGICAL	40	0	0.2	0	0	23832	0	0.2	0	0
MILLING INDUSTRY	494	4	2.0	0.3	0.8	97392	1308	0.7	0.1	1.3
MEDICAL INDUSTRY	152	5	0.6	0.3	3.3	104514	7292	0.8	0.2	7.0
PRINTING AND PUBLISHING	422	5	1.7	0.3	1.2	77510	1963	0.6	0.1	2.5
OTHER	484	2	2.0	0.1	0.4	106306	1358	0.8	0.1	1.3
TOTAL	24789	1444	100	100	5.8	13471997	3062567	100	100	22.7

Source: IET

Enterprises from all over Russia are included in the panel, with the exception of some of the small republics in the South. Also, note that no enterprises are included from republics which suffered from the consequences of major and persistent security conflicts or related blockades (which are usually in the South, eg Chechen Republic). Table 4 illustrates the coverage of the Goskomstat register and IET panel by *economic* region. This division follows the official classification of Russia into twelve economic regions, which differ not only in their geographic locations, but also in their levels of economic development and infrastructure, the availability of natural and human resources, and their fields of specialization. Again, the panel bias towards the larger enterprises is clear. The center is surely overrepresented, though much less so in terms of employment than of enterprise share. However, even more so than over sectors, over the different regions, both the enterprise and employment shares of the panel generally track those of the register rather well.

[6] More exactly: the number of enterprises in a certain sector as a percentage of the total number of enterprises covered by the register and panel respectively.

[7] More exactly: the number of enterprises in a certain sector covered by the panel as a percentage of the number of enterprises in that sector covered by the register.

[8] See footnote 6, substituting employment for number of enterprises.

[9] See footnote 7, again substituting employment for number of enterprises.

Table 4: Coverage of Goskomstat's register and IET's panel by region

REGIONS	NUMBER OF ENTERPRI-SES		ENTERPRI-SE SHARE (in % of covered number of enterprises)		ENTERPRISE SHARE REPRESENTED IN P (in % of number of enterprises in R)	EMPLOYMENT (in persons)		EMPLOYMENT SHARE (in % of covered employment)		EMPLOYMENT SHARE REPRESENTED IN P (in % of employment in R)
	R	P	R	P	P	R	P	R	P	P
NORTH	1185	53	4.8	3.7	4.5	607110	71986	4.5	2.4	11.9
NORTHWEST	1286	87	5.2	6.0	6.8	672224	106303	4.9	3.5	15.8
CENTER	5272	446	21.3	30.9	8.5	2875250	749578	21.1	24.5	26.1
VOLGA-VYATKA	1657	97	6.7	6.7	5.9	991424	312282	7.3	10.2	31.5
CENTRAL BLACK EARTH	1459	69	5.9	4.8	4.7	696834	162855	5.1	5.3	23.4
VOLGA	2694	167	10.9	11.6	6.2	1687563	515118	12.4	16.8	30.5
NORTH CAUCASUS	2479	101	10.0	7.0	4.1	951233	100345	7.0	3.3	10.5
URALS	3286	192	13.3	13.3	5.8	2388128	603358	17.5	19.7	25.3
WEST SIBERIA	2428	94	9.8	6.5	3.9	1302580	194887	9.6	6.4	15.0
EAST SIBERIA	1538	55	6.2	3.8	3.6	811574	188620	6.0	6.2	23.2
FAR EAST	1417	35	5.7	2.4	2.5	568649	50066	4.2	1.6	8.8
KALININGRAD	192	14	0.8	1.0	7.3	58408	7169	0.4	0.2	12.3
TOTAL	24789	1444	100	100	5.8	13471997	3062567	100	100	22.7

Source: IET

The above serves to show that IET's surveys are reliable. In particular, its enterprise panel, though not randomly drawn, represents Russian industry in general (as officially registered by Goskomstat) rather well. From the IET panel documentation, the arrangement made for this paper allowed the use of the enterprise-level information on enterprise code, industrial sector, and region, listed in Appendix A.

3 Questions

The main part of the arrangement made with IET consisted of the attachment of a one-page special questionnaire to its monthly business-cycle questionnaire. Thus, this survey was implemented along with the September 1999 IET business-cycle survey. Appendix B integrally shows both, translated into English, and in the original Russian version that respondents received. As part of the arrangement, besides the enterprise-level response to the special questions, IET also delivered this response to four further questions which are relevant for this paper. Two of these come straight from its September 1999 business-cycle survey. The other two have been asked periodically since IET started surveying in March 1992. Appendix C again integrally gives both, translated into English, and in the original Russian version that respondents received. These questions allow for an investigation into the effects on enterprise restructuring in Russian industry of ownership, competition, budget constraints and institutions respectively. The period covered runs from the start of 1992 until the month of implementation of the

survey, September 1999. Thus, it includes as much as possible of the period of market reforms, since the Russian state in its present form appeared after the collapse of the Soviet Union.

Questions B1 and B2 (reference henceforth being made by the letter of the Appendix, and the list number therein) ask for the cumulative change in the sales volume and the number of workers respectively. Subtracting the response to question B2 from that to question B1 gives an estimate of the change in (real) labor productivity. Labor-productivity change is the main measure of enterprise restructuring in transition used in this paper, and generally considered to be its least problematic one (eg Linz and Krueger, 1998). Note that the question about the sales volume asks for sales for *money*, thus not including barter. This is based on the idea that ultimately, to foster sustainable economic growth, it is sales for money which is needed, contrary to barter allowing for the full advantages of economic specialization. Question B4 is intended to give an alternative measure of enterprise restructuring, asking whether or not strategic perspectives (long-term viability) have (has) improved. This, to some extent, may also address the point made by Earle and Estrin (1997), that the multidimensionality of restructuring suggests that it may be desirable to try to construct an index of overall restructuring that includes a number of separate components. On the other hand, Earle and Estrin (1998, p 14) also state that they '… believe that real labor productivity is a more reliable indicator than any measure of total factor productivity that could be estimated with Russian data'. The information obtained from IET's panel documentation allows for the classification of enterprise restructuring by sector (A2) and region (A3). Furthermore, this can be done by enterprise size too, because question C1 asks for the number of persons employed at the enterprise.

The other questions address the potential determinants of enterprise restructuring mentioned above. Question B3 asks for the extent to which the state owns shares in these enterprises, all of which were completely state-owned before market reforms started. Thus, implicitly this question is about the extent of privatization, to enable a check for its generally hypothesized positive relationship with restructuring (eg Boycko, Shleifer and Vishny, 1995). Note that the question concerns *voting* shares, because moving non-voting shares into private hands does not give the actual governance powers normally associated with privatization. This difference may matter quite a lot. Regarding non-voting shares in Russia, Earle and Estrin (1998, p 16) notice: 'Taking into account the existence of type A shares tends to reduce the fraction of voting shares held privately, but taking into account type B tends to raise it, so on average the two effects roughly cancel, and the private proportion differs little. Particular firms shift a great deal, however, so this could be an important factor to take into account when we consider the association between private ownership and enterprise performance'. Question C2 also gives information about ownership, since it asks for enterprise status, categorized as state enterprise, joint-stock enterprise, leased facilities, limited-liability enterprise, and other.

Question C4 makes it possible to check whether or not stronger competition leads to more restructuring, as is usually assumed (eg Dycker and Barrow, 1995). It asks for the intensity of competition on the sales markets of the enterprise, specified into competition from enterprises in Russia, the rest of the former Soviet Union (FSU), and further foreign countries. Because, as Earle and Estrin (1998, p 18) note, for the usual (objective)

concentration measures there are '… difficulties in choosing the appropriate size of the market for any given firm and of measuring the strength of actual and potential competitors in it', respondents' (subjective) evaluation of the intensity of competition may actually be a better indicator to investigate.

Question B5 intends to give an indication about the hardness of the budget constraint under which the enterprise is operating, in order to be able to test the standard hypothesis that harder constraints result in more restructuring (the classic reference being Kornai, 1980). In most of the transition economics literature, a budget constraint is judged to be harder if less *state* subsidization is received (eg Earle and Estrin, 1998, who include tax arrears). However, subsidies may effectively come from *any* source of finance. Besides, regarding its influence on enterprise restructuring, the hardness of the budget constraint may be better reflected by the potential subsidies *expected* than by the actual subsidies *given*. Therefore, question B5 essentially asks for this expectation: would the enterprise have been left to itself if it would have run into a real problematic situation, or would it still have been bailed out, directly by the state, or indirectly by banks, investors or any other parties?

Finally, the largest number of questions is on institutional factors, enabling a test whether better (different) institutions are indeed associated with more (a different extent of) restructuring (eg Greif and Kandel, 1995). Questions B6 to B9 ask for the influence on the business environment of the enterprise of respectively: federal and local laws, corruption and crime, the risk of non-payment (again, in *money*), and the level of trust. The former two of these are taken as different indicators of the (quality of the) rule of law. The third can be considered a more specific aspect of the rule of law, relating to property-rights security. These three factors all focus on formal institutions. This does not go for the fourth factor, which focuses on informal institutions. Note that the level of trust more directly represents informal institutions than its capturing by the extent of associational membership (eg Narayan and Pritchett, 1996). Thus, question B9 is more in the spirit of the World Values Survey (eg Inglehart, 1994). Question B10 asks which network helped the respondent most to solve the problems of his enterprise: that formed before or after the start of 1992. As the former period subsumes the Soviet era, contacts acquired in this period are taken to be largely of a 'nomenclature' nature compared to contacts acquired in the period of market reforms. Question C3 is related to B10. It asks for the number of years which the respondent is working in his (current) position. The higher this number, the more likely it seems that the respondent has his origins in the nomenclature network, particularly if it is higher than seven (in which case the respondent already held his position before market reforms began). In the *spectrum* from formal to informal institutions, networks can be said to take a middle position in between the extremes of laws and trust, combining enforcement aspects of both (cf Hendley, Murrell and Ryterman, 1999).

Before using the response to the questions above for a tentative investigation of the effects on enterprise restructuring in Russian industry of ownership, competition, budget constraints, and institutions respectively, the next section first treats this response per se.

4 Answers

The survey answers are interesting to discuss in themselves, for they can give a feel for the extent of restructuring, privatization, competition, the hardness of budget constraints, and the quality of institutions in Russian industry respectively. However, before doing so, the coverage of IET's panel and the responding sample should be compared (as section 2 compared the coverage of Goskomstat's register and IET's panel).

The questionnaires were sent out on 27 August 1999, taking 2 to 7 days to arrive at their destinations. Out of the 1444 enterprises in IET's September 1999 panel 1013 replied to the monthly business-cycle questions, and 945 replied to the special questions. This implies response rates of 70.2 and 65.4% respectively.[10] Table 5 shows that, over the different sectors, both the enterprise and employment shares of the responding sample nicely track those of the panel.

Table 5: Coverage of IET's panel and sample by sector

SECTORS	NUMBER OF ENTERPRI-SES		ENTERPRI-SE SHARE (in % of covered number of enterprises)		ENTERPRISE SHARE REPRESENTED IN SAMPLE (S, in % of number of enterprises in P)	EMPLOYMENT (in persons)		EMPLOYMENT SHARE (in % of covered employment)		EMPLOYMENT SHARE REPRESENTED IN S (in % of employment in P)
	P	S	P	S	S	P	S	P	S	S
ELECTRICAL ENERGY	29	16	2.0	1.6	55.2	142083	83738	4.6	3.7	58.9
FUEL INDUSTRY	21	13	1.5	1.3	61.9	35950	23347	1.2	1.0	64.9
FERROUS METALS	47	35	3.3	3.5	74.5	248062	211377	8.1	9.4	85.2
NON-FERROUS METALS	15	11	1.0	1.1	73.3	127378	111999	4.2	5.0	87.9
(PETRO-) CHEMICALS	67	55	4.6	5.4	82.1	189366	154515	6.2	6.9	81.6
ENGINEERING	556	382	38.5	37.7	68.7	1670709	1201667	54.6	53.4	71.9
WOOD, FURNITURE, PULP	125	81	8.7	8.0	64.8	135073	96271	4.4	4.3	71.3
BUILDING MATERIALS	97	66	6.7	6.5	68.0	59020	38665	1.9	1.7	65.5
GLASS INDUSTRY	5	4	0.3	0.4	80.0	12929	6536	0.4	0.3	50.6
LIGHT INDUSTRY	237	171	16.4	16.9	72.2	268828	195773	8.8	8.7	72.8
FOOD INDUSTRY	192	136	13.3	13.4	70.8	104910	69534	3.4	3.1	66.3
MICROBIOLOGICAL	0	0	0	0	0	0	0	0	0	0
MILLING INDUSTRY	4	4	0.3	0.4	100	1308	1308	0.1	0.1	100
MEDICAL INDUSTRY	5	3	0.3	0.3	60.0	7292	2081	0.2	0.1	28.5
PRINTING AND PUBLISHING	5	5	0.3	0.5	100	1963	1963	0.1	0.1	100
OTHER	2	2	0.1	0.2	100	1358	1358	0.1	0.1	100
TOTAL	1444	1013	100	100	70.2	3062567	2248268	100	100	73.4

Source: IET

[10] Where responding is defined as answering *at least* one question from the respective lists. 337 enterprises answered *all* 10 special questions (23.3%); 742 enterprises answered all 10 special questions *except* question B10 (51.4%). The latter question, about respondents' contacts, received by far most non-availables (NAs).

Over the different regions, the same message is clear from table 6. Thus, according to these tables, non-response (which is relatively low anyway) does not appear to create the problem of sample selection bias. Since (as section 2 concluded) the panel itself tracks Russian industry in general rather well, the responding sample should be of rather good quality too.

Table 6: Coverage of IET's panel and sample by region

REGIONS	NUMBER OF ENTERPRI-SES		ENTERPRI-SE SHARE (in % of covered number of enterprises)		ENTERPRISE SHARE REPRESENTED IN S (in % of number of enterprises in P)	EMPLOYMENT (in persons)		EMPLOYMENT SHARE (in % of covered employment)		EMPLOYMENT SHARE REPRESENTED IN S (in % of employment in P)
	P	S	P	S	S	P	S	P	S	S
NORTH	53	33	3.7	3.3	62.3	71986	51300	2.4	2.3	71.3
NORTHWEST	87	55	6.0	5.4	63.2	106303	59993	3.5	2.7	56.4
CENTER	446	324	30.9	32.0	72.6	749578	514469	24.5	22.9	68.6
VOLGA-VYATKA	97	67	6.7	6.6	69.1	312282	266303	10.2	11.8	85.3
CENTRAL BLACK EARTH	69	48	4.8	4.7	69.6	162855	108117	5.3	4.8	66.4
VOLGA	167	119	11.6	11.7	71.3	515118	386672	16.8	17.2	75.1
NORTH CAUCASUS	101	68	7.0	6.7	67.3	100345	66856	3.3	3.0	66.6
URALS	192	141	13.3	13.9	73.4	603358	469388	19.7	20.9	77.8
WEST SIBERIA	94	61	6.5	6.0	64.9	194887	124220	6.4	5.5	63.7
EAST SIBERIA	55	33	3.8	3.3	60.0	188620	157388	6.2	7.0	83.4
FAR EAST	35	27	2.4	2.7	77.1	50066	37275	1.6	1.7	74.5
KALININGRAD	14	11	1.0	1.1	78.6	7169	6287	0.2	0.3	87.7
TOTAL	1444	1013	100	100	70.2	3062567	2248268	100	100	73.4

Source: IET

The response on enterprise restructuring in Russian industry is in line with its well-known devastating crisis in the period covered.[11] The *average* cumulative decrease in sales volume in the period between the start of 1992 and September 1999 is 54%. Though still devastating, the decrease in number of workers is less, 42.6%, confirming labor hoarding in Russian industry (eg Commander, Dhar and Yemtsov, 1996). These figures imply a decrease of labor productivity of 11.4%. The response to the question about strategic perspectives appears to show a somewhat less depressing picture. There is still 19.3% of response reporting that strategic perspectives improved. It may be that this difference is because respondents take account of their (political) lobbying power in their assessment of strategic perspectives. If so, then the response on the latter may not be interpretable as an indicator of enterprise restructuring. Still, a majority of 55.3% of response reports that strategic perspectives did not improve, and 25.5% that it is hard to assess whether they did. The latter is interesting in itself, for it illustrates the widespread uncertainty.

Table 7 shows the response on enterprise restructuring by sector. Both in terms of sales and employment the engineering and light industry sectors have been hit worst. The largest decreases of labor productivity are

registered in other sectors however, most notably electrical energy, which combines a sales decrease of 50.3% with an employment *increase* of 3.8%. There are only two sectors which post a sales increase: medical industry (67%), and printing and publishing (92.4%). This is combined with the best productivity performances (increases of 77% and 141.4% respectively). Note that respondents in the printing and publishing sector nevertheless overwhelmingly report that strategic perspectives did not improve. This illustrates that even in enterprises performing relatively well with regards to sales and productivity, their broader situation is not necessarily perceived as such. The contrary also occurs: in the fuel industry and ferrous metals sectors more often than not respondents report that strategic perspectives improved, in spite of still performing badly with regards to sales, employment and productivity. As suggested above, this could have something to do with the fact that these two sectors, particularly the former, have relatively large lobbying power (largely based on their export-orientation, ie access to dollars), which they may have included in their assessment of strategic perspectives.

Table 7: Enterprise restructuring by sector (% of response, unless noted otherwise)

Response: 809 enterprises[12] (A2) Sectors	Number of enterprises	(B1) Change in sales volume (average %)	(B2) Change in number of workers (average %)	Change in labor productivity (average %)	(B4) Strategic perspectives did not improve	(B4) Strategic perspectives improved	(B4) Hard to assess whether strategic perspectives improved
Total	809	-54.0	-42.6	-11.4	55.3	19.3	25.5
Electrical energy	12	-50.3	3.8	-54.1	41.7	25.0	33.3
Fuel industry	10	-54.2	-24.2	-30.0	30.0	40.0	30.0
Ferrous metals	27	-38.0	-28.4	-9.6	29.6	37.0	33.3
Non-ferrous metals	10	-44.3	-28.7	-15.6	30.0	20.0	50.0
(Petro-)chemicals	41	-50.0	-42.1	-7.9	43.9	24.4	31.7
Engineering	329	-61.8	-52.8	-9.0	59.0	16.1	24.9
Wood, furniture, pulp	68	-50.6	-35.4	-15.2	52.9	19.1	27.9
Building materials	63	-46.2	-29.3	-16.8	69.8	14.3	15.9
Glass industry	5	-49.0	-41.0	-8.0	40.0	20.0	40.0
Light industry	147	-61.3	-56.1	-5.2	57.1	19.7	23.1
Food industry	88	-40.7	-12.7	-28.0	48.9	23.9	27.3
Microbiological	0	NA	NA	NA	NA	NA	NA
Milling industry	2	-25.0	5.0	-30.0	100.0	0	0
Medical industry	1	67.0	-10.0	77.0	0	100.0	0
Printing and publishing	5	92.4	-49.0	141.4	80.0	0	20.0
Other	1	0	-30.0	30.0	100	0	0

Source: Survey response

The response on enterprise restructuring by region is shown in table 8. Note in particular the devastating sales figures for Siberia and the Far East. This is where the plan economy put many of the notorious one-company

[11] According to the official figures, as of 1 September 1999, Russian industrial production cumulatively decreased by 47% in 1992-1999 (eg BOFIT, 1999).

[12] For proper comparison (of the *same* responding enterprises over the *different* questions), responding enterprises are the ones which answered *all* questions referred to in the table here. The same goes for the numbers of response mentioned in the further

towns, in circumstances particularly unsuitable for commercial exploitation. In spite of a massive decrease of employment, the extent of labor hoarding (the decrease of labor productivity) in these regions is also relatively large, most likely in order to avoid even worse social disruption.[13] Labor-productivity increases are only posted in North Caucasus (16%), Kaliningrad (3.8%), and Central Black Earth (0.9%). Finally, again, there is a discrepancy between the response on sales and employment, and that on strategic perspectives.

Table 8: Enterprise restructuring by region (% of response, unless noted otherwise)

Response: 809 enterprises (A3) Regions	Number of enterprises	(B1) Change in sales volume (average %)	(B2) Change in number of workers (average %)	Change in labor productivity (average %)	(B4) Strategic perspectives did not improve	(B4) Strategic perspectives improved	(B4) Hard to assess whether strategic perspectives improved
Total	809	-54.0	-42.6	-11.4	55.3	19.3	25.5
North	23	-57.2	-41.8	-15.3	69.6	4.3	26.1
Northwest	42	-58.2	-46.8	-11.4	69.0	11.9	19.0
Center	285	-49.6	-44.2	-5.3	50.2	23.5	26.3
Volga-Vyatka	54	-63.0	-36.3	-26.7	50.0	16.7	33.3
Central Black Earth	39	-31.2	-32.1	0.9	51.3	30.8	17.9
Volga	90	-57.0	-42.0	-15.0	56.7	13.3	30.0
North Caucasus	54	-31.6	-47.6	16.0	66.7	9.3	24.1
Urals	114	-61.1	-39.0	-22.1	50.9	24.6	24.6
West Siberia	53	-71.8	-51.5	-20.2	69.8	11.3	18.9
East Siberia	26	-74.1	-38.8	-35.3	46.2	23.1	30.8
Far East	19	-66.1	-38.4	-27.6	52.6	21.1	26.3
Kaliningrad	10	-38.5	-42.3	3.8	80.0	10.0	10.0

Source: Survey response

The response on restructuring is lastly ordered by enterprise size in table 9. The nine size categories used by IET were reclassified into the four categories that have become standard since used in Commander, Fan and Schaffer (1996).[14] This gives the clearest picture. Generally, the larger the enterprises, the larger the decrease of sales, the smaller the decrease of employment, the larger the decrease of labor productivity, and the more respondents report improved strategic perspectives. The labor-productivity figures thus show that the smaller Russian enterprises are restructuring more. This is also a legacy of the plan economy, which clearly repressed smaller enterprises, and these have thus naturally done best since the start of market reforms. Furthermore, again, it may be that the larger enterprises want to avoid even worse social disruption, by keeping workers on the books, in spite of massive sales decreases. Also, they may be simply using their larger lobbying clout to generate profits without restructuring. Again, the discrepancy between the figures on labor productivity and those on strategic

tables of this section. Note that this cross-sectioning of the data reduced these numbers (more enterprises answering any *one* question in the table).

[13] Remember that the large enterprises in one-company towns are in many cases still performing the host of social functions they used to have in the plan economy, which the state has not taken over, such as providing child care and social housing. To a large extent these enterprises *were* and still *are* these towns. Thus, the social consequences of becoming unemployed here go far beyond the 'normal'.

[14] That is: IET's categories 1 and 2 became 1-200 employees; 3 and 4 became 201-1000; 5,6 and 7 became 1001-10000; and 8 and 9 became >10000 respectively (see question C1).

perspectives may be taken as an indication of this: here it is even the case that the largest enterprises combine the largest decrease in labor productivity with most reporting of improved strategic perspectives. Finally, note that the general panel overrepresentation of the larger enterprises, documented in section 2, probably biases the results of this survey on enterprise restructuring downward in terms of labor-productivity change, and upward in terms of the percentage of response reporting improved strategic perspectives.

Table 9: Enterprise restructuring by size (% of response, unless noted otherwise)

Response: 809 enterprises (C1) Sizes (numbers of employees)	Number of enterprises	(B1) Change in sales volume (average %)	(B2) Change in number of workers (average %)	Change in labor productivity (average %)	(B4) Strategic perspectives did not improve	(B4) Strategic perspectives improved	(B4) Hard to assess whether strategic perspectives improved
Total	809	-54.0	-42.6	-11.4	55.3	19.3	25.5
1-200	84	-38.2	-49.5	11.3	69.0	11.9	19.0
201-1000	399	-56.2	-44.6	-11.6	59.4	16.3	24.3
1001-10000	302	-55.1	-39.1	-16.0	46.4	24.8	28.8
>10000	24	-59.1	-28.3	-30.8	50.0	25.0	25.0

Source: Survey response

Having seen the extent of enterprise restructuring by sector, region and size, it is time to turn to a discussion of the survey results on its mentioned potential determinants: ownership, competition, budget constraints and institutions respectively. Table 10 illustrates the response on ownership. Enterprises with more than 50% of voting shares belonging to the state have been classified as state-owned (SO); enterprises with 50% or less of voting shares belonging to the state have been classified as privatized. It shows the massive privatization that has taken place in Russian industry; only 8.1% of the responding enterprises can still be classified as SO, down from virtually full state ownership at the start of 1992. This is nicely confirmed by the response on status, giving a rather similar percentage of enterprises classifying themselves as SO (without reference to voting-share distribution). The overwhelming majority of responding enterprises has the status of joint-stock enterprise.

Table 10: Ownership (% of response, unless noted otherwise)

Response: 930 enterprises	(B3) State share of voting shares (average %)	SO/Privatized	(C2) Status
Total	10.4		
SO		8.1	
Privatized		91.9	
State enterprise			10.3
Joint-stock enterprise			85.1
Leased facilities			0
Limited-liability enterprise			3.6
Other			1.1

Source: Survey response

The response on competition, which is available for several periods, is shown in table 11. In general, the intensity of competition is still rather weak, though up from virtually no competition at the start of market reforms. The enterprises reporting strong competition still form a minority. The response over time does indicate an increase in the intensity of competition from Russian enterprises, but there is not much of a discernible trend in the intensity of competition from foreign enterprises. In the response on the latter, the August 1998 crisis is clearly visible, however. After the crisis there has been a drop in the intensity of foreign competition, which later again recovered somewhat. This must of course be related to the devaluation of the Ruble, resulting in a large increase in the competitiveness of Russian industry (stimulating both exports and import substitution), which gradually eroded thereafter. On average, competition is mostly reported as being of intermediate intensity from the side of Russian enterprises, and as being absent from the side of foreign enterprises. The average percentage of response reporting no competition from the side of foreign enterprises from the FSU is even 40%. This may be a legacy of the strong specialization that was formed over the different FSU states in the Soviet era.

Table 11: (C4) Competition (% of response)

Response: 719 (54) enterprises		Average (54)	Oct 95 (54)	Apr 96 (54)	Oct 96 (54)	Apr 97 (54)	Oct 97 (54)	Apr 98 (54)	Oct 98 (54)	Apr 99 (54)	Apr 99
From Russian enterprises	None	16.2	20.4	18.5	18.5	18.5	16.7	13.0	14.8	9.3	8.6
	Weak	21.1	29.6	20.4	24.1	24.1	16.7	11.1	22.2	20.4	14.6
	Intermediate	43.1	31.5	40.7	40.7	40.7	48.1	46.3	48.1	48.1	52.3
	Strong	13.2	11.1	11.1	11.1	11.1	13.0	24.1	7.4	16.7	18.8
	Hard to assess	6.5	7.4	9.3	5.6	5.6	5.6	5.6	7.4	5.6	5.7
From foreign enterprises from the FSU	None	40.0	40.7	35.2	48.1	53.7	29.6	35.2	44.4	33.3	23.8
	Weak	19.9	20.4	25.9	11.1	16.7	29.6	16.7	14.8	24.1	23.5
	Intermediate	15.7	11.1	11.1	14.8	20.4	14.8	18.5	16.7	18.5	19.7
	Strong	8.3	9.3	9.3	11.1	3.7	13.0	11.1	3.7	5.6	6.5
	Hard to assess	16.0	18.5	18.5	14.8	5.6	13.0	18.5	20.4	18.5	26.4
From further foreign enterprises	None	29.6	31.5	35.2	27.8	31.5	29.6	22.2	27.8	31.5	21.0
	Weak	11.6	18.5	7.4	7.4	11.1	11.1	7.4	13.0	16.7	14.2
	Intermediate	13.7	5.6	16.7	14.8	20.4	16.7	7.4	14.8	13.0	17.8
	Strong	19.9	18.5	22.2	27.8	20.4	22.2	27.8	13.0	7.4	12.1
	Hard to assess	25.2	25.9	18.5	22.2	16.7	20.4	35.2	31.5	31.5	34.9

Source: Survey response

Table 12 shows the response on budget constraints. Enterprises replying yes to the question whether they could have counted on help from the outside if under a real threat of bankruptcy have been classified as having soft budget constraints, those replying no have been classified as having hard budget constraints. On this interpretation, 63.8% of responding enterprises is operating under hard budget constraints. This percentage seems higher than what might have been expected from the persisting pervasiveness of soft budget constraints in Russian industry reported elsewhere (eg Commander, Fan and Schaffer, 1996). One reason may be that this is a subjective rather than a conventional objective measure. Subsidization may be still pervasive, but certainly in a subjective sense budget constraints must have hardened from the essentially guaranteed existence of the

enterprises in the plan economy. Another reason may be that respondents do not judge the possibility of various kinds of arrears as help from the *outside*, in the formulation of question B5. Schaffer (1997) makes a case for viewing specifically tax arrears as a, if not the, major source of soft budget constraints.

Table 12: (B5) Budget constraint (% of response)

Response: 934 enterprises	
Soft	12.7
Hard	63.8
Hard to assess	23.4

Source: Survey response

Finally, table 13 displays the response on the potential determinant of enterprise restructuring which is of particular interest in this paper: institutions. Respondents stress the bad quality of formal institutions. Laws, corruption and crime, and particularly the risk of non-payment are all overwhelmingly judged negatively. Interestingly, the response on trust suggests a relatively positive evaluation of informal institutions. It seems that the bad quality of formal institutions makes respondents more appreciative of informal institutions, although the picture of the latter is mixed.[15] Networks seem to be largely of a nomenclature nature, 100% of response reporting having benefited most from contacts formed before the start of market reforms, and reported tenures revealing that, on average, respondents were in the same position already then. Note that about a quarter of respondents reports having benefited most from contacts formed after the start of market reforms as well.[16] Nevertheless, the response on networks indicates that, whatever may have changed, Russian industry is still largely ruled by 'red directors'.

[15] From a cross-country perspective, trust in Russia is certainly low, in particular relative to the West (eg Oleynik, 1997). However, this does not preclude its usefulness in a business environment with bad-quality formal institutions.
[16] Many respondents took the liberty to fill in more than one answer in reply to question B10.

Table 13: Institutions (% of response, unless noted otherwise)

Response: 159 enterprises		
(B6) Laws	Definitely negative	20.8
	Rather negative	55.3
	No influence	13.8
	Rather positive	8.8
	Definitely positive	1.3
(B7) Corruption and crime	Definitely negative	32.7
	Rather negative	31.4
	No influence	35.8
	Rather positive	0
	Definitely positive	0
(B8) Risk of non-payment	Definitely negative	61.6
	Rather negative	28.9
	No influence	6.9
	Rather positive	1.9
	Definitely positive	0.6
(B9) Trust	Definitely negative	10.7
	Rather negative	28.9
	No influence	20.8
	Rather positive	33.3
	Definitely positive	6.3
Network	(B10) Older contacts	100
	(B10) None	0
	(B10) Newer contacts	24.5
	(C3) Tenure (average number of years)	9.7

Source: Survey response

Recapitulating, the responding sample to this survey represents Russian industry in general rather well. The response on enterprise restructuring shows that positive changes in labor productivity are very hard to find; with very few exceptions, only different extents of crisis are discernible. The response on strategic perspectives seems to show somewhat less negative restructuring figures, but they may be distorted by respondents including their lobbying power in these assessments. With respect to the potential determinants of enterprise restructuring, the survey makes it plain that massive privatization has taken place in Russian industry. On the contrary, the intensity of competition is still rather weak, particularly from the side of foreign enterprises. Unexpectedly, budget constraints come out as rather hard. Finally, regarding institutions, to some extent, a relatively positive judgement about informal substitutes for an overwhelmingly negative judgement about formal institutions, and networks seem to be still largely of a nomenclature nature.

5 Determinants of restructuring?

Now that the response on restructuring and its mentioned potential determinants has been discussed separately, the natural question is of course whether there are significant differences in the extent of the former depending

on the status of the latter. This is the subject of table 14, giving the average response on restructuring ordered by the status of the respective potential determinants, and the P-values of the T-tests for significant differences in these averages (P of T).[17] Of course, these are only tentative results; a more general econometric analysis is left for future work.

Ownership per se turns out not to be associated with more restructuring. Privatized enterprises do show a slightly smaller decrease of sales, but this does not result in a smaller decrease of labor productivity. Furthermore, a somewhat smaller percentage of privatized enterprises reports that strategic perspectives did not improve, mainly offset by a somewhat larger percentage reporting that it is hard to assess whether strategic perspectives improved, ie more uncertainty. However, none of the differences between SO and privatized enterprises is anywhere near the conventional statistical significance levels.

On the contrary, some of the results on competition are statistically significant.[18] In particular, stronger competition from non-FSU enterprises turns out to be associated with a significantly smaller decrease of labor productivity. For the lion's share, this is the result of a significantly smaller decrease of sales, not of more layoffs. Unexpectedly, stronger competition from Russian enterprises goes with significantly less layoffs. The further results on competition are not significant. Nevertheless, note that the pictures emerging from the results on competition from Russian and foreign FSU enterprises are rather alike, and unlike the picture emerging from the results on competition from non-FSU enterprises. The more positive role of the latter may be a result of a higher efficiency of non-FSU compared to FSU competitors (which all come from a plan-economy background), thus exercising stronger disciplinary forces on inefficient Russian enterprises, eg to speed up the introduction of new technologies in order to remain solvent. Non-FSU competition is also a more likely source for transfer of such technologies.[19]

A harder budget constraint is associated with a slightly bigger decrease of sales, number of workers, and labor productivity, and a more negative assessment of strategic perspectives. As with the results on ownership, however, the status of the budget constraint does not make any statistically significant differences. On this basis, these are simply not important determinants of restructuring.

As the results on competition, the results on institutions are stronger. A better quality of laws is associated with a smaller decrease of sales, number of workers, and labor productivity, of which only the second is not statistically significant. Unlike any of the other potential determinants discussed so far, better laws seem to have beneficial effects on all counts. No one enterprise judges corruption and crime as positive, and thus P of T cannot be calculated here. However, the fact that the restructuring figures under a negative assessment of corruption and crime are in the same order of magnitude as those under a negative assessment of laws may

[17] Note that, in this table, subtracting the response on the change in number of workers from the change in sales volume does not necessarily exactly match with the change in labor productivity, because each may contain different NAs (which were restricted to be the same in the tables in the previous section). Between brackets is the number of enterprises with the specified status.
[18] In order to utilize the response of a maximum number of enterprises, table 14 uses the most recent observations on competition.
[19] In the international macroeconomics literature, Coe and Helpman (1995) report evidence that international knowledge spillovers are important, and that trade is a mediator of these.

indicate a similarity in the negative effects of these two indicators of the (quality of the) rule of law. The same conclusion may be drawn for the more specific aspect of the rule of law, relating to property-rights security, from the fact that the restructuring figures under a negative assessment of the risk of non-payment are also in this same order of magnitude. However, regarding the risk of non-payment, there are enterprises giving a positive assessment, and the restructuring figures that go with it are not significantly better. The absence of significant restructuring differences by the status of the risk of non-payment, and its presence by the status of laws, indicates that better property-rights security is less important for enterprise restructuring than a better rule of law *in general*.

Moving from formal to informal institutions, enterprises with a negative assessment of trust generally show significantly worse restructuring figures than enterprises with a positive assessment of trust. As better laws, higher trust seems to have beneficial effects on all counts. With regards to their networks, the same can be said of enterprises benefiting most from newer contacts, though only significantly so in the case of the decrease of employment. Recall, however, that the previous section showed that the respondents reporting that they benefited most from newer contacts reported that they benefited most from older contacts as well. Thus, for better restructuring figures enterprises probably need both. This seems to be confirmed by the results on tenure, which are also not significant, apart from the smaller decrease of employment reported by respondents who were already in the same position before the start of market reforms. The more positive role of trust than of networks could be explained by the fact that the former offers a broader group of (potential) business partners than the latter (cf McMillan and Woodruff, 1998). The essence is that trust can allow for transactions *beyond* the network, giving the possibility of more efficient transactions.

Thus, according to these tentative results, it is stronger (foreign) competition and better (formal and informal) institutions which go with more enterprise restructuring in Russian industry, while privatization and harder budget constraints do not. Admittedly, this is much less clear from the results on strategic perspectives than from the other results, but, as indicated in the previous section, the former may be distorted by respondents' reference to their lobbying power. Russia's massive privatization and harder budget constraints on their own may not have led to more restructuring precisely *because* of the weak intensity of competition and the bad quality of formal institutions (cf previous section). This way, the right incentives are simply still not given. The substitution, to some extent, of informal for formal institutions may have prevented even worse restructuring figures, but the results also suggest that better formal institutions in general would have improved things further (in fact, according to table 14, almost halting the decrease of labor productivity). In the end, the rule of law seems a prerequisite for Russia to benefit from the most impersonal transactions which can make a decentralized market economy thrive.

Table 14: (Non-)determinants of enterprise restructuring in Russian industry (% of response, unless noted otherwise)

			Change in sales volume (average %)	Change in number of workers (average %)	Change in labor productivity (average %)	Strategic perspectives did not improve	Strategic perspecti-ves improved	Hard to assess whether strategic perspectives improved
Ownership		SO (75)	-56.6	-42.5	-11.3	62.2	17.6	20.3
		Privatized (857)	-53.7	-42.2	-11.5	53.5	19.3	27.2
		P of T	0.713703	0.940817	0.983793	0.519089		
Competition	From Russian enterprises	None/weak (167)	-54.8	-47.4	-7.4	59.1	17.6	23.3
		Intermediate/ strong (511)	-51.7	-40.4	-11.8	52.2	20.6	27.2
		P of T	0.564368	0.008581**	0.398595	0.88555		
	From foreign enterprises from the FSU	None/weak (340)	-54.0	-43.6	-10.3	54.1	20.7	25.2
		Intermediate/ strong (189)	-52.0	-40.4	-12.1	51.1	26.3	22.6
		P of T	0.672337	0.238195	0.693851	0.186264		
	From further foreign enterprises	None/weak (253)	-59.0	-41.3	-17.7	49.2	24.8	26.0
		Intermediate/ strong (215)	-48.7	-43.9	-5.1	56.7	21.9	21.4
		P of T	0.019539**	0.373502	0.003448***	0.793679		
Budget constraint		Soft (119)	-51.2	-38.7	-11.7	38.1	30.5	31.4
		Hard (596)	-56.9	-43.6	-13.5	62.5	16.9	20.6
		P of T	0.248744	0.113821	0.709949	0.655335		
Institutions	Laws	Negative (682)	-56.2	-43.0	-13.0	56.4	18.3	25.3
		Positive (76)	-40.8	-40.5	-0.2	33.3	33.3	33.3
		P of T	0.03639**	0.498415	0.089712*	0.392362		
	Corruption and crime	Negative (567)	-54.9	-41.3	-13.1	55.9	20.0	24.1
		Positive (0)	NA	NA	NA	NA	NA	NA
		P of T	NA	NA	NA	NA		
	Risk of non-payment	Negative (851)	-55.0	-42.6	-12.4	55.3	18.6	26.1
		Positive (19)	-48.6	-43.1	-6.8	26.3	26.3	47.4
		P of T	0.675932	0.950133	0.71917	0.383906		
	Trust	Negative (317)	-61.5	-46.3	-15.1	64.2	13.1	22.7
		Positive (404)	-47.3	-39.8	-7.3	45.6	26.7	27.7
		P of T	0.004209***	0.005544***	0.124432	0.094464*		
	Network	Older contacts (404)	-52.9	-43.2	-9.8	60.9	18.0	21.1
		Newer contacts (99)	-44.7	-36.7	-8.5	43.9	31.6	24.5
		P of T	0.268616	0.088089*	0.869318	0.167649		
		Tenure ≤ 7 years (311)	-56.9	-47.0	-10.7	57.1	18.5	24.4
		Tenure > 7 years (255)	-49.2	-38.5	-11.2	57.4	18.7	23.9
		P of T	0.180018	0.00135***	0.928763	0.891369		

* = Significant at 10% level; ** = Significant at 5% level; *** = Significant at 1% level

Source: Survey response

6 Conclusion

Both IET's panel and its sample responding to the survey described in this paper do quite a good job in tracking the structure of Russian industry in general. The survey questions allow for an investigation into the effects on enterprise restructuring in Russian industry of ownership, competition, budget constraints and institutions respectively.

On their own, the survey answers first and foremost confirm the devastating crisis experienced by Russian industry between the start of market reforms and September 1999. The response on ownership shows just how far privatization in Russian industry has gone: roughly 90% of the responding enterprises can be classified as privatized, up from virtually no private ownership at the start of 1992. The opening-up of markets has gone much less far: the intensity of competition is still rather weak, particularly from the side of foreign enterprises. Budget constraints seem to be harder than expected. Finally, formal institutions are overwhelmingly judged negatively, to some extent substituted for by a relatively positive evaluation of informal institutions, and the networks ruling Russian industry seem to be still largely of a nomenclature nature.

Ironically, tentative results based on this survey indicate that (un)important determinants of enterprise restructuring in Russian industry are exactly those on which, according to the response per se, least (most) reform has been accomplished. That is: stronger (foreign) competition and better (formal and informal) institutions go with more restructuring, while privatization and harder budget constraints do not. These results may be interrelated. Stronger competition and better institutions may be necessary conditions for more restructuring, without which privatization and/or harder budget constraints cannot provide the right incentives. The substitution, to some extent, of informal for formal institutions may have prevented even worse restructuring figures, but the results also suggest that better formal institutions in general would have led to further improvements. While trust plays a more positive role than networks, the best restructuring figures are obtained under a better quality of laws. In the end, the rule of law seems a prerequisite for Russia to benefit from the most impersonal transactions which can make a decentralized market economy thrive. Note again that these are of course only *tentative* results, based on simple T-tests. A more general econometric analysis is left for future work.

Nevertheless, these tentative results are informative in their description of the survey data. They suggest that, for more enterprise restructuring, Russian policies should focus more on stimulating competition and building institutions. Incidentally, this could also help the development of the de novo sector, which is the main source of rapid growth in manufacturing in the more advanced transition countries, in particular Poland (eg Johnson and Loveman, 1995). Also note that both these reforms could do well from the political-economy perspective, so crucial in the transition countries. Firstly, according to the results, they do not go with less employment. Secondly, they may be perceived as relatively 'just'. However, at the same time, the political-economy perspective also suggests that, in the current state of affairs, these reforms may be hard to implement,

given that the powerful oligarchy stands to lose much from them. The danger of lock-in of this inefficient situation seems real. In the Russian case, to say the least, privatization (cum liberalization) has not created the hoped-for market pressure to fuel the development of the competition and institutions needed for proper enterprise restructuring.

Appendix A Information from panel documentation

This appendix mentions the enterprise-level information which was obtained straight from the IET panel documentation.

1. Both the unique IET and Goskomstat enterprise codes.

2. Enterprise industrial sectors (Russian in between brackets), using the official (Goskomstat) codes of the 16 (main) sectors. The sectors displayed below are the same as those in table 2 in the main text. They are coded as follows:

CODE	SECTORS	(ÎÒÐÀÑËÈ
1	ELECTRICAL ENERGY	ÝËÅÊÒÐÎÝÍÅÐÃÅÒÈÊÀ
2	FUEL INDUSTRY	ÒÎÏËÈÂÍÀß
3	FERROUS METALS	×ÅÐÍÀßÌÅÒÀËËÓÐÃÈß
4	NON-FERROUS METALS	ÖÂÅÒÍÀßÌÅÒÀËËÓÐÃÈß
5	(PETRO-)CHEMICALS	ÕÈÌÈß È ÍÅÔÒÅÕÈÌÈß
6	ENGINEERING	ÌÀØÈÍÎÑÒÐÎÅÍÈÅ
7	WOOD, FURNITURE, PULP	ËÅÑÍÀß,ÄÅÐÅÂÎÎÁÐÀÁÀÒÛÂÀÞÙÀß ÈÖÅËËÞËÎÇÍÎ-ÁÓÌÆ ÍÀß
8	BUILDING MATERIALS	ÐÎÌÛØËÅÍÍÎÑÒÜ ÑÒÐÎÈÒÅËÜÍÛÕ ÌÀÒÅÐÈÀËÎÂ
9	GLASS INDUSTRY	ÑÒÅÊÎËÜÍÎ-ÔÀßÍÑÎÂÀß
10	LIGHT INDUSTRY	ËÅÃÊÀß
11	FOOD INDUSTRY	ÏÙÅÂÀß
12	MICROBIOLOGICAL	ÌÈÊÐÎÁÈÎËÎÃÈ×ÅÑÊÀß
13	MILLING	ÌÓÊÎÌÎËÜÍÎ-ÊÐÓßÍÀß
14	MEDICAL INDUSTRY	ÌÅÄÈÖÈÍÑÊÀß
15	PRINTING AND PUBLISHING	ÏÅ×ÀÒÍÀÔÈ×ÅÑÊÀß
16	OTHER	ÐÎ×ÈÅ)

3. Enterprise region (Russian in between brackets), according to the official (Goskomstat) codes of the 12 economic regions. The regions displayed below are the same as those in table 3 in the main text. They are coded as follows:

CODE	REGIONS	(ÝÊÎÍÎÌ ÐÀÉÎÍÛ
1	NORTH	ÑÅÂÅÐÍÛÉ
2	NORTHWEST	ÑÅÂÅÐÎ-ÇÀÏÀÄÍÛÉ
3	CENTER	ÖÅÍÒÐÀËÜÍÛÉ
4	VOLGA-VYATKA	ÂÎËÃÎ-ÂßÒÑÊÈÉ
5	CENTRAL BLACK EARTH	ÖÅÍÒÐÀËÜÍÎ-×ÅÐÍÎÇÅÌ
6	VOLGA	ÏÎÂÎËÆ ÑÊÈÉ
7	NORTH CAUCASUS	ÑÅÂÅÐÎ-ÊÀÂÊÀÇÑÊÈÉ
8	URALS	ÓÐÀËÜÑÊÈÉ
9	WEST SIBERIA	ÇÀÏÀÄÍÎ-ÑÈÁÈÐÑÊÈÉ
10	EAST SIBERIA	ÂÎÑÒÎ×ÍÎ-ÑÈÁÈÐÑÊÈÉ
11	FAR EAST	ÄÀËÜÍßÂÎÑÒÎ×ÍÛÉ
12	KALININGRAD	ÊÈÁÀËÒÈÉÑÊÈÉ)

Appendix B Full questionnaire

This appendix firstly gives the English translation of the questionnaire sent out by IET in September 1999, consisting of its one-page monthly business-cycle survey and the one-page special survey. Secondly the original Russian version, as received by respondents, is given.

103918 MOSCOW, GAZETNY PER, 5
IET, SURVEYS DEPARTMENT
PHONE: (095) 229-93-91, **FAX**: (095) 203-88-16
E-MAIL: tsukhlo@iet.ru, **HTTP**://www.iet.ru/

Institute for the Economy in Transition
INDUSTRIAL BUSINESS-CYCLE SURVEY NO.
88
SEPTEMBER 1999

PLEASE FILL IN AND RETURN **IMMEDIATELY** AFTER RECEIVING!

Fill in only one answer for each question.
If a question is not applicable for you, fill in N/A.

How will change IN THIS month compared to the previous one	Up	Same	Down	N/A
1. the physical volume of your PRODUCTION				
2. the average PRICES for your production				
3. the physical volume of SOLVENT demand (in money!)				
4. the volume of BARTER DEMAND (in goods!) for your production				
How do YOU ASSESS the current physical volume of:	Above normal	Normal	Below normal	N/A
5. the PRODUCTION in your enterprise				
6. the solvent DEMAND for production				
7. the EXPORT demand for production				
8. the STOCKS of finished production				
How, IN YOUR OPINION, will change in the next 2-3 months:	Up	Same	Down	N/A
9. the physical volume of your PRODUCTION				
10. the average PRICES for your production				
11. the physical volume of SOLVENT demand (in money!)				
12. the volume of BARTER DEMAND (in goods!) for your production				

How does the intensity of COMPETITION on your sales markets influence:	Upward	No influence	Downward	Hard to assess
13. the volume of your PRODUCTION				
14. your sales PRICES				
15. the COST PRICE of your production				

How many persons are currently employed in your enterprise:

1-50	51-200	201-500	501-1000	1001-2000	2001-5000	5001-10000	10001-20000	>20000
1	2	3	4	5	6	7	8	9

Enter the code number or the name of your industrial sector: _____

If you want to preserve anonymity of answers, then please do not fill in the part of the survey below, or detach and return it, filled-in, in a separate envelope. This information is used for the maintenance of the basis data of addresses of respondents and the sending-out of the results to enterprises.

Surname, first name, patronymic (in full) _____
Position _____
E-mail address _____
Name of enterprise _____
Status of enterprise: state enterprise, joint-stock enterprise, leased facilities, limited-liability enterprise, other _____

Postal address of enterprise (including zip code) _____

PLEASE ALSO FILL IN THE BACK SIDE OF THIS SHEET!

Dear participants of the business-cycle surveys!

The market reforms have changed a lot in our economy. The traditional statistical data reflect changes of demand, output, and prices. However, they do not give a direct answer to one of the main questions – how have the conditions of work of enterprises changed, has the economic and legal environment become more comfortable for producers. It is possible to appraise the comfort on the basis of subjective evaluations of managers of enterprises. Only they are able to summarize the influence of the vast number of formal and informal factors, which in reality have influence on the condition of enterprises. The additional questions of the September survey are devoted to this theme.

1. With respect to the start of 1992, approximately which % constitutes currently the physical volume of SALES (FOR MONEY) of the production of your enterprise? _____ %

2. With respect to the start of 1992, approximately which % constitutes currently the NUMBER OF WORKERS in your enterprise? _____ %

3. How many % of the VOTING shares of your enterprise belongs to the state (federal or local authorities)? _____ %

4. What do you think, have the STRATEGIC PERSPECTIVES of your enterprise improved in the course of market reforms? 1) yes 2) no 3) hard to assess

5. If, in the course of market reforms, on your enterprise would have been hanging a REAL THREAT OF BANKRUPTCY, could you have counted ON HELP FROM THE OUTSIDE (ie from the side of the state, banks, investors, and the like), in order to evade bankruptcy? 1) yes 2) no 3) hard to assess

In the course of market reforms, which influence on the BUSINESS ENVIRONMENT of your enterprise have had the following factors:

	definitely negative	rather negative	no influence	rather positive	definitely positive
6. federal and local laws					
7. corruption and criminal situation					
8. the risk of non-payment for your goods					
9. the level of trust in the relations of the people					

10. Could you assess, in the course of market reforms, which PERSONAL TIES (CONTACTS) have helped you most to solve the problems of your enterprise? 1) those acquired before the start of 1992 2) those acquired after the start of 1992 3) none

Changing languages:

103918 ÌÎÑÊÂÀ, ÃÀÇÅÒÍÛÉ ÏÅÐ, 5
ÈÝÏÏ, ÑËÓÆÁÀ ÎÏÐÎÑÎÂ
òåë.ôàêñ (095) 229-93-91, ôàêñ 203-88-16
e-mail: tsukhlo@iet.ru, **http**://www.iet.ru/

Èíñòèòóò ýêîíîìèêè ïåðåõîäíîãî ïåðèîäà
ÊÎÍÚÞÍÊÒÓÐÍÛÉ ÎÏÐÎÑ ÏÐÎÌÛØËÅÍÍÎÑÒÈ N 88
ÑÅÍÒßÁÐÜ 1999

ÏÎÆÀËÓÉÑÒÀ, ÇÀÏÎËÍÈÒÅ È ÎÒÎØËÈÒÅ ÎÁÐÀÒÍÎ Ñ—À˙Ó ÏÎ ÏÎËÓ×ÅÍÈÈ!

¸òìå÷àéòå îòâåòû çíàêîì "+", íå áîëåå îäíîãî â ñòðîêå.
¯æºŁ âîïðîñû ìåñÿ÷íûå ßæºàî, òìå÷àéòå ÒÎËÜÊÎ ÒÅÊÓÙÅÅ.

Êàê Â ÝÒÎÌ ìåñÿöå ñðàâíåíèþ ñ ïðåäûäóùèì èçìåíÿåòñÿ

1. ôèçè÷åñêèé îáúåì Âàøåãî ÏÐÎÈÇÂÎÄÑÒÂÀ
2. ñðåäíèå ÖÅÍÛ íà Âàøó ïðîäóêöèþ
3. ôèçè÷åñêèé îáúåì ÏËÀÒÅÆÅÑÏÎÑÎÁÍÎÃÎ (çà äåíüãè!) ñïðîñà
4. îáúåì ÁÀÐÒÅÐÍÎÃÎ (çàòîâàðû!) ÑÏÐÎÑÀ íà Âàøó ïðîäóêöèþ

ðîñò	íåòèç-ìåíåíèé	ñíè-æåíè	íåò îòâåòà

Êàê ÂÛ ÎÖÅÍÈÂÀÅÒÅ òåêóùèé ôèçè÷åñêèé îáúåì:

5. ÏÐÎÈÇÂÎÄÑÒÂÀ íà Âàøåì ïðåäïðèÿòèè
6. ïëàòåæåñïîñîáíîãî ÑÏÐÎÑÀ íà ïðîäóêöèþ
7. ÝÊÑÏÎÐÒÍÎÃÎ ñïðîñà íà ïðîäóêöèþ
8. ÇÀÏÀÑÎÂ ãîòîâîé ïðîäóêöèè

âûøå íîðìû	íîðìà-ëüíûé	íèæå íîðìû	íåò îòâåòà

Êàê, ÏÎ ÂÀØÅÌÓ ÌÍÅÍÈÞ, èçìåíèòñÿ âñëåäóþùèå 2-3 ìåñÿöà:

9. ôèçè÷åñêèé îáúåì Âàøåãî ÏÐÎÈÇÂÎÄÑÒÂÀ
10. ñðåäíèå ÖÅÍÛ íà Âàøó ïðîäóêöèþ
11. ôèçè÷åñêèé îáúåì ÏËÀÒÅÆÅÑÏÎÑÎÁÍÎÃÎ (çà äåíüãè!) ñïðîñà
12. îáúåì ÁÀÐÒÅÐÍÎÃÎ (çàòîâàðû!) ÑÏÐÎÑÀ íà Âàøó ïðîäóêöèþ

âîç-ðàñòåò	íåèç ìåíèòñÿ	ñíè çèòñÿ	íåò îòâåòà

Êàê âëèÿåò èíòåíñèâíîñòü ÊÎÍÊÓÐÅÍÖÈÈ íà Âàøè òðóäíîñòè ñ ñáûòîì:

13. îáúåì Âàøåãî ÏÐÎÈÇÂÎÄÑÒÂÀ
14. Âàøè îòïóñêíûå ÖÅÍÛ
15. ÑÅÁÅÑÒÎÈÌÎÑÒÜ Âàøåé ïðîäóêöèè

â ñòîðîíó óâåëè÷åíèÿ	íèêàêîãî âëèÿíèÿ	â ñòîðîíó ñíèæåíèÿ	ñëîæíî îöåíèòü

Ñêîëüêî ÷åëîâåê ðàáîòàåò÷àñ íà Âàøåì ïðåäïðèÿòèè:

1-50	51-200	201-500	501-1000	1001-2000	2001-5000	5001-10000	10001-20000	>20000
1	2	3	4	5	6	7	8	9

Óêàæèòå êîä ÎÊÎÍÕ èëè íàçâàíèå Âàøåé îòðàñëè: ________________________________

¯æºŁ´ß ıîòŁòåëî ıðàíŁòü àíîíŁìíîñòü àíêåòû, æàºóØæòå, çàïîºíÿØòå ðàçäåë ÞæàòñÿíŒåðòºß, çàïîºíŁâ îòîðâàŁòå åãî îò àíêåòû è íàìåðòâàíŁå îòïðàâüòå íå ºüÿŒíî âåðàòüñÿ ïîñîáèå ôîðìàòŁòå ïîçóåòñÿ ïîäåëåíèÿ, çàïîºíèâ íàøó æåëàòåëüíî ðàææßºŒÍå çóºüòàòû îïðîñà ïðŁÿòŁÿ.

Ô.È.Î.(ïîëíîñòüþ) ____

Äîëæíîñòü ____

Àäðåñýëåêòðîííîéïî÷òû (e-mail) _________________________________

Íàçâàíèå ïðåäïðèÿòèÿ _______________________________________

Ñòàòóñïðåäïðèÿòèÿ: Ãîñ, À/Î, ÀÏ, ÎÎÎ, äðóãîé ___________________________

Ïî÷òîâûé àäðåñïðåäïðèÿòèÿ (ñ èíäåêñîì) ______________________________

ÏÎÆÀËÓÉÑÒÀ, ÇÀÏÎËÍÈÒÅ È ÎÁÐÀÒÍÓÞ ÑÒÎÐÎÍÓ ÝÒÎÃÎ ËÈÑÒÀ!

Óâàæàåìûé ó÷àñòíèê êîíúþíêòóðíûõ îïðîñîâ!

Ðûíî÷íûå ðåôîðìû ìíîãî èçìåíèëè â íàøåé ýêîíîìèêå. Èçìåíåíèå ñïðîñà, âûïóñêà, öåí îòñëåæèâàþò òðàäèöèîí ñòàòèñòè÷åñêèå äàííûå. Íî îíè íå äàþò îòâåòà íà îäèí èç ãëàâíûõ âîïðîñîâ – êàê èçìåíèëèñü óñëîâèÿ ðàáîòû ïðåäïðèÿòèé, ñòàëà ëè ýêîíîìè÷åñêàÿ è ïðàâîâàÿ ñðåäà áîëåå êîìôîðòíîé äëÿ ïðîèçâîäñòâà. Îöåíèòü êîìôîðòíîñòü ìîæíî íà îñíîâå ñóáúåêòèâíûõ îöåíîê ðóêîâîäèòåëåé ïðåäïðèÿòèé. Òîëüêî îíè ñïîñîáíû ñóììèðîâàòü âîçäåéñòâèå îãðîìíîãî ÷èñëà ôîðìàëüíûõ è íåôîðìàëüíûõ ôàêòîðîâ, ðåàëüíî âëèÿþùèõ íà ïîëîæåíèå ïðåäïðèÿòèé. Ýòîé òåìå ïîñâÿùåíû äîïîëíèòåëüíûå âîïðîñû ñåíòÿáðüñêîé àíêåòû.

1. Êàêîé ïðèìåðíî % ïî îòíîøåíèþ ê íà÷àëó 1992 ãîäà ñîñòàâëÿåò ñåé÷àñ ôèçè÷åñêèé îáúåì ÏÐÎÄÀÆ (ÇÀ ÄÅÍÜÃÈ) ïðîäóêöèè Âàøåãî ïðåäïðèÿòèÿ? ______ %
2. Êàêîé ïðèìåðíî % ïî îòíîøåíèþ ê íà÷àëó 1992 ãîäà ñîñòàâëÿåò ñåé÷àñ ×ÈÑËÅÍÍÎÑÒÜ ÇÀÍßÒÛÕ íà Âàøåì ïðåäïðèÿòèè? ______ %
3. Ñêîëüêî % ÃÎËÎÑÓÞÙÈÕ àêöèé Âàøåãî ïðåäïðèÿòèÿ ïðèíàäëåæèò ãîñóäàðñòâó (ôåäåðàëüíûì èëè ìåñòíûì âëàñòÿì)? ______ %
4. Êàê Âû ñ÷èòàåòå, óëó÷øèëèñü ëè ÑÒÐÀÒÅÃÈ×ÅÑÊÈÅ ÏÅÐÑÏÅÊ-ÒÈÂÛ Âàøåãî ïðåäïðèÿòèÿ â õîäå ðûíî÷íûõ ðåôîðì?
   1) äà
   2) íåò
   3) ñëîæíî îòâåòèòü
5. Åñëè áû â õîäå ðûíî÷íûõ ðåôîðì íàä Âàøèì ïðåäïðèÿòèåì íàâèñëà ÐÅÀËÜÍÀß ÓÃÐÎÇÀ ÁÀÍÊÐÎÒÑÒÂÀ, ìîãëè áû Âû ðàññ÷èòûâàòü ÍÀ ÏÎÌÎÙÜ ÈÇÂÍÅ (ò.å. ïî ñòîðîíû ãîñóäàðñòâà, áàíêîâ, èíâåñòîðîâ è ò.ï.), ÷òîáû èçáåæàòü áàíêðîòñòâà?
   1) äà
   2) íåò
   3) ñëîæíî îòâåòèòü

Êàêîå âëèÿíèå â õîäå ðûíî÷íûõ ðåôîðì îêàçûâàëè íà ÓÑËÎÂÈß ÔÓÍÊÖÈÎÍÈÐÎÂÀÍÈß Âàøåãî ïðåäïðèÿòèÿ ñëåäóþùèå ôàêòîðû:

	ðåçêî îòðèöàòåëüíî	ñêîðåå îòðèöà-òåëüíî	íèêàêîãî	ñêîðåå ïîëîæè-òåëüíî	ðåçêî ïîëîæèòåëüíî
6. ôåäåðàëüíûå è ìåñòíûå çàêîíû					
7. êîððóïöèÿ è êðèìèíàëüíàÿ ñèòóàöèÿ					
8. ðèñê íåïëàòåæåé çà Âàøè òîâàðû					
9. óðîâåíü äîâåðèÿ â îòíîøåíèÿõ ëþäåé					

10. Íå ìîãëè áû Âû îöåíèòü, êàêèå ËÈ×ÍÛÅ ÑÂßÇÈ (ÊÎÍÒÀÊÒÛ) áîëüøå âñåãî ïîìîãàëè Âàì ðåøàòü ïðîáëåìû ñâîåãî ïðåäïðèÿòèÿ â õîäå ðûíî÷íûõ ðåôîðì?
    1) ïðèîáðåòåííûå äî íà÷àëà 1992 ãîäà
    2) ïðèîáðåòåííûå ïîñëå íà÷àëà 1992 ãîäà
    3) íèêàêèå

Appendix C Further questions in full

As stated in the main text, besides the enterprise-level response to the special questions, IET also delivered this response to four further questions relevant for the current paper. This appendix firstly gives their translation into English, and secondly their original Russian version, as received by respondents. The first two questions come straight from the September 1999 business-cycle survey; the other two were periodically asked by IET before.

1. How many persons are currently employed in your enterprise:

1-50	51-200	201-500	501-1000	1001-2000	2001-5000	5001-10000	10001-20000	>20000
1	2	3	4	5	6	7	8	9

2. Status of enterprise: state enterprise, joint-stock enterprise, leased facilities, limited-liability enterprise, other

_____

3. How many years are you working in the mentioned position? _____

NB This question is asked every May. The most recent enterprise-level response was obtained (May 1999).

4. Which COMPETITION does your enterprise currently feel on its sales markets from the side of:	strong	intermediate	weak	none	hard to assess
RUSSIAN enterprises					
Foreign enterprises from the FSU					
FURTHER foreign enterprises					

NB This question has been asked every April and October, since October 1995.[20] The enterprise-level response was also obtained from this period on, until the most recent one (April 1999).

Changing languages:

1. Ñêîëüêî ÷åëîâåêñåé÷àñçàíÿòîà Âàøåìïðåäïðèÿòèè:

1-50	51-200	201-500	501-1000	1001-2000	2001-5000	5001-10000	10001-20000	>20000
1	2	3	4	5	6	7	8	9

2. Ñòàòóñ ïðåäïðèÿòèÿ: Ãîñ, À/Î, ÀÏ, ÎÎÎ, äðóãîé _____

[20] More precisely, it has been asked since April 1995 even, but without the split into competition from Russian, foreign FSU, and further foreign enterprises, as IET has asked from October 1995 on. For this reason only the latter response was used.

3. Ñêîëüêî ëåò Âû ðàáîòàåòå âóêàçàííîéäîëæíîñòè ______________________________________

4. Êàêóþ ÊÎÍÊÓÐÅÍÖÈÞ îùóùàåòå ñåé÷àñ Âàøå ïðåäïðèÿòèå íà ñâîèõ ðûíêàõ ñáûòà ñî ñòîðîíû:

ÐÎÑÑÈÉÑÊÈÕ ïðåäïðèÿòèé

ïðåäïðèÿòèé ÁËÈÆÍÅÃÎ çàðóáåæüÿ

ïðåäïðèÿòèé ÄÀËÜÍÅÃÎ çàðóáåæüÿ

ñèëüíóþ	óìåðåííóþ	ñëàáóþ	íèêàêîé	cëîæíî îöåíèòü

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