The Impact of Foreign Direct Investment on the Socio-Economic Development of the Far East of Russia

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Centre for Economic and Financial Research (CEFIR)

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CONTENTS

FOREWORD

BY J. PAUL ROLLINSON

As Chief Executive Officer of Kinross Gold Corporation, I am very pleased to present this research study on the role of foreign direct investment in the development of the Russian Far East prepared by the Centre for Financial and Economic Research (CEFIR) in Moscow. Kinross has been working successfully in the Russian Far East, specifically Magadan and Chukotka, since 1996, and is the largest Canadian investor in Russia and the largest foreign investor in the Russian gold mining sector. Our experience over the years has been very positive and our Russian operations have become a significant part of our company, which also operates in six other countries.

As a Canadian company, Kinross and its employees are comfortable working in the Russian Far East, which has a climate and geography that are very similar to our home environment. For these and many other reasons, we are pleased to have sponsored the preparation of this study.

For some time, the Russian Far East has been experiencing significant social and economic challenges, such as out-migration, high unemployment and inadequate or deteriorating infrastructure. The Federal Government in Russia and regional governments have worked diligently to develop appropriate programs and solutions to reverse these negative trends and enhance the social and economic development of the Region.

Specifically, in the mining sector, we would note the positive efforts of the Ministry of Natural Resources and Environment to promote additional reforms in subsoil legislation and regulation aimed at encouraging investment. We at Kinross know first-hand the operating and working conditions in the Far East, and are acutely aware of the substantial efforts and financing required from all levels of government and from the private sector to more fully develop the Region.

This study seeks to focus attention on the challenges of economic and social development in the Far Eastern Federal District (FEFD) and, in particular, to assess the role that foreign direct investment has played in creating jobs, providing tax revenues and increasing prosperity in some regions. One of the revelations of the study is the significant positive impact that a relatively small number of foreign investments have had on local economies and the wellbeing of residents in the regions in which these investments are made.

Apart from significant tax payments to the regional and federal treasuries, foreign companies have created an impressive number of jobs, have brought new and innovative technologies to the region, and have introduced new approaches to operational, technical and environmental management based on their home country and international experience. This is not to imply that increased foreign investment is a panacea that can solve all of the social and economic problems inherent in the Region. However, the research does clearly demonstrate that foreign direct investment can help to accelerate the pace of economic development and bring new approaches and badly-needed additional capital to help develop the vast resource wealth of the Far East.

The research also includes the first-hand views of foreign investors as well as officials from the local administrations. Some of the remarks are pointed and unvarnished, but they vividly illustrate both the difficulties and the opportunities of operating in the Far East.

As a mining company, Kinross is particularly interested in the responsible development of the gold and silver deposits in the Far East. Our commitment to working in Russia is unwavering, as is our interest in seeing more investment in natural resources come to the Far East. This is one reason why we are an actively engaged member of the Prime Minister's Foreign Investment Advisory Council (FIAC), under whose auspices we undertook to sponsor this study. Within FIAC, we are also a member of the Working Group for the Development of the Far East and Siberia.

If the objective of this report is to raise awareness about the role of foreign direct investment in the Far East, then what are the possible next steps?

In 2011, also under the auspices of FIAC, Kinross prepared a study entitled "Fostering Foreign Investment in Mineral Exploration and Development in Russia". In that study, we offered an assessment of why Russia is not attracting as much investment in mineral exploration and development as other resource-rich countries. That report proposed a number of potential changes to Russian subsoil and foreign investment legislation and regulations to encourage foreign investors to pursue opportunities in Russia. Some of these recommendations have been introduced in different forms, while others are still under consideration.

Regarding the development of the Far East, we believe that a more thorough revamp of regulatory and legislative impediments related to the use of subsoil resources could significantly enhance the prospects of foreign exploration and mining companies seeking projects in the Region.

On a broader level, we hope that this latest report will help to focus attention on measures to stimulate more investment and economic activity in the Far East, in addition to those already undertaken by the Russian Government. FIAC, and the Far East Working Group in particular, provide a key forum in which such proposals and suggestions might be discussed. We are ready to work with other members of the Group to prepare additional recommendations for consideration by the Government.

There is a real opportunity to improve conditions on the ground, enhance the overall image of Russia as an investment destination, and drive more of that investment to the Far East. This will achieve the two-fold goal of enhanced economic development sought by the Russian regional and federal governments, while also providing exciting new opportunities for foreign investors.

In conclusion, I would like to acknowledge Professors Natalia Volchkova and Eugenia Bessonova and their research team at the Centre for Financial and Economic Research for their excellent work in preparing this comprehensive and thought-provoking study. I would also like to thank Minister Sergey Donskoy (Minister of Natural Resources and the Environment for the Russian Federation), Governor Roman Kopin (Governor of Chukotka), and their respective teams — not only for their support in the preparation of this paper, but also for their ongoing and vigorous support of foreign investment in the Far East.

Yours truly,

J. Paul Rollinson

Chief Executive Officer

Kinross Gold Corporation

INTRODUCTION

The Far East of the Russian Federation is an exceedingly attractive region from an economic point of view, given its major deposits of coal, gold, copper, diamonds, ferrous and non-ferrous metals and other minerals. It also has a long sea coastline and a land border, which offer considerable advantages for investments and trade.

However, for foreign investors already implementing or considering projects in the Far East, the investment picture is not black and white. Along with the region's positives, there are a number of obstacles and barriers for doing business. These barriers — which are not unique to Russia and exist in other countries (see Blonigen, 2005) — include the lack of protection of property rights, the poor quality of regional institutions and lack of basic infrastructure.

This study discusses the activities of foreign companies in the Far East and presents a detailed analysis of the factors that impact the investment climate. It is based on statistics and survey data, including the results of numerical analysis and data from a specially organized qualitative study (in-depth interviews with experts and representatives from business and government).

The first three chapters look at the foreign investment situation in the Far East, providing a general analysis of the factors that attract investment to the region, and assessing the impact of foreign investment on regional budget revenues. Chapters 4–6 consider the key factors that impact the regional business environment: the labor market, state regulation and issues connected with infrastructure. The chapters that follow analyze the role of foreign companies in areas such as local business development, innovation, the environment and social responsibility.

As public discussion and government efforts to accelerate and enhance the development of the Far East intensify, it is the hope of the authors that this study will provide additional information about the current and potential contribution of foreign direct investment to this important objective.

The study is based on the results of a survey of foreign enterprises, experts and government representatives, the results of econometric calculations and an analysis of official statistics, as detailed on the next page.

1) Survey of foreign enterprises, experts and regional officials in the Far East

The survey took the form of in-depth interviews with nine heads of foreign companies that have enterprises in the Far East and with ten experts and regional officials.

The total number of foreign companies in the producing sector is quite small in the Far East. The research team managed to find contact data for only thirty such firms working in the extractive and manufacturing industries and nine of them agreed to participate in our survey. This response rate is high but due to the startlingly low numbers of such foreign companies operating in the Far East, the use of this data is necessarily qualitative.

Geographically, the survey covers eight out of the nine regions in the Far East.

2) Econometric analysis based on the following databases:

a. Business Environment and Enterprise Performance Survey (BEEPS). The survey was conducted in 2011 in 37 regions of the Russian Federation and is representative of Russia as a whole and of 30 out of 37 regions. Of the Far East regions in this survey, there are only nine foreign-owned firms.

b. RUSLANA database. Contains information on the enterprises registered in Russia (the balances of enterprises and data on their property structure) for the last ten years.

c. Survey of the health and economic welfare of households: Russia Longitudinal Monitoring Survey, National Research University Higher School of Economics (RLMS-HSE). The survey is nationally representative and has been conducted since 1995.

3) Official statistical data

The analysis used data from the Federal Statistical Service, the Central Bank of the Russian Federation and the Federal Treasury.

EXECUTIVE SUMMARY

The Far East region of the Russian Federation (Far Eastern Federal District or FEFD) has strategic significance for the sustainable development of the Russian Federation. The Far East Region is a priority on the agenda of the Russian Federal Government as witnessed by the measures taken in the last few years:

- Adoption in 2009 of the Strategy for the Social and Economic Development of the Far East and the Baikal Region through the year 2025;
- The creation in 2012 of the RF Ministry for the Development of the Far East;
- The development and launch of the State Program "Social and Economic Development of the Far East and the Baikal Region through the year 2025";
- The signing of Federal Law 267 on 30 September 2013, introducing new tax incentives to encourage investment in the Far Eastern Federal District from 1 January 2014.

A further proof of the seriousness of the state's commitment to accelerating the development of the region is the massive provision of resources aimed at implementing government initiatives.

The Far East region has considerable potential for economic growth and the development of foreign economic links. The region accounts for more than a third of Russia's territory and has huge reserves of natural resources. It also has geographic advantages such as a long coastline and an external border.

Despite these advantages, the living standards in the majority of Far East regions are below the national average. Therefore, the regional and federal authorities consider attracting additional investment to the region to be a key economic policy priority.

There are a number of region-specific adverse geographic and institutional factors in the Far East that detract from its overall appeal as an investment destination. These include the following:

- Vast uninhabited territories
- Harsh climate
- Small population
- Undeveloped infrastructure.

The consequences of these factors for foreign investors include; higher labor costs; additional investment required for basic assets due to climate and permafrost; higher transportation costs; higher energy costs; and higher costs for many supplies and commodities.

Additionally, given the vast mineral resource wealth of the region, foreign investment in the Far East tends to be narrowly focused in the extractive industries. In fact, the largest portion of total foreign investment is in the oil and gas industry and is concentrated in a single part of the Region (Sakhalin).

FDI structure in the Far East

FDI in the Far East is unevenly distributed by region and is concentrated in the sphere of mineral extraction

In 2011, foreign direct investment (FDI) in the Far Eastern Federal District represented 17% of total FDI in Russia. However, in absolute terms, FDI is unevenly distributed in the Far East, given that a single region (the Sakhalin region) accounts for more than 70% of total foreign investment. The remaining regions have attracted far less foreign investment, a mere 6% of the national volume.

Although the absolute amounts of foreign investment in the majority of the FEFD are small by comparison with other Russian regions, the activities of foreign enterprises in the Far East contribute significantly to its economy. In the majority of FEFD regions, the share of foreign companies in the total economic turnover exceeds 25%. In the Sakhalin region, it is 77%, with the Chukotka autonomous district in second place at 54%.

The sectoral structure of FDI reflects the interests of foreign investors in the Far East in the bountiful mineral resource base. This is borne out by the fact that 64% of all company turnover in the Region is accounted for by foreign investors.

Investment attractiveness and risks

Although existing foreign investors in Russia consider the country (including the Far East) to be an investment destination with low political and economic risks, the image of Russia in the world has a negative impact on the inflow of FDI

The main factor negatively affecting foreign investors' views on establishing operations in the Far East is flawed and unstable legislation. When asked about the problems they face in the Far East (and in Russia as a whole), all the foreign investors involved in this study responded that the main challenges to their investment plans in Russia are the unpredictable changes of legislation and conflicting interpretations of some laws and supporting legislation. Regional officials also admit this is a problem. A further factor that makes foreign companies wary (especially in the extractive industry) is the potential risk of the initial terms of a deal being revised by the Russian state after significant investments have been made.

The investment attractiveness of the Far East is limited both for the extractive and manufacturing industries

In the sphere of mineral extraction, the main problems stem from the fact that the deposits are often located in rugged terrain with totally undeveloped infrastructure. Many deposits are also located in areas with a harsh climate, which requires additional expenditure for their development and operation.

For manufacturers and small enterprises in other sectors, the investment potential is low because of high production costs. Compared with developing countries in the Asia Pacific Region, the Far East has few if any competitive advantages in terms of labor cost and availability of qualified specialists. Production costs under all expenditure items in the Far East (wages, transport and utilities, etc.) are, in the opinion of foreign investors, substantially higher than in the neighboring developing countries. This makes it difficult to compete with such countries as China and South Korea which attract large amounts of investment into the manufacturing industry.

The introduction of additional tax benefits, while welcome by all respondents, may fail to attract additional foreign investment if implemented without a substantial improvement in the broader business climate.

Business climate indicators

Our survey reveals some specific characteristics of the business climate in the Far East as compared with other Russian regions. The majority of experts believe that the absence of infrastructure and adverse climatic conditions in some regions of the Far East are the decisive factors that influence the inflow of FDI. The impact of these factors, in their opinion, dwarfs all others. Other experts believe that over-regulation of economic activities, especially in the field of licensing and the customs service, also presents a considerable deterrent to foreign investment. Additionally, the challenges in obtaining licenses and permits can significantly delay and possibly halt construction and development projects. Although some representatives of foreign companies expressed concern about the poor functioning of the court system, others indicate that they have had fair and positive experiences when litigating commercial matters in arbitration courts in the Far East.

The business climate in the Far East is relatively worse than in the other Russian regions, which deters foreign companies from coming to the region

The representatives of major foreign holding companies (industrial conglomerates) that we surveyed point out that while in other countries they are developing business in diverse areas — ranging from the extractive industries to services — in the Far East, they have initiated only

basic production operations. They point to undeveloped infrastructure as the main deterrent to the development of new businesses.

An undeveloped transport infrastructure and high railway and air tariffs combine to make the Far East even more remote from the rest of Russia and other countries, and to directly reduce the profitability of almost every sector. Moreover, the unpredictable increase in the tariffs of natural monopolies in power and energy presents another obstacle to doing business in the Far East. Officials in almost all of the regions surveyed and the heads of foreign firms say that the cost of power acts as a brake on the development of business in the Far East, especially in the processing industry.

The Far East has a considerable labor shortage

Russia's current demographics are such that labor is becoming a commodity in short supply, and this deficit of labor resources is particularly felt in the Far East. This fact was reported by all the foreign investors interviewed, who also all noted the particular difficulty of finding and hiring qualified technical specialists.

Our quantitative analysis shows that undeveloped business infrastructure deters foreign companies from investing in the Far East. However, in further contrast with other regions of Russia, the Far East differs even more in both the scarcity of qualified technical personnel, and the specific Russian legislation that covers terms of employment in remote and northern regions. In addition, some of the acute social problems, such as petty crime and alcoholism, which are experienced in the remote and northern regions of many countries, are particularly evident in parts of the Russian Far East.

Impact of FDI on economic and social challenges in the Far East

The advent of foreign investment in the Far East has made a positive impact on the socio-economic development of the region in various ways

These include the arrival of actual direct investments, job creation, significant payments into regional and national budgets, contracting with local suppliers and the introduction of new and innovative technologies.

Tax payments

The main direct effect of foreign investment in the Far East is the substantial fiscal contribution of tax payments to regional budgets. In the Far East regions with a low level of economic activity, foreign investment into the extractive industries has made a significant impact on the growth of budget revenues. In such regions, taxes paid by foreign companies may account for between 1/5 and 1/3 of budget revenues, which greatly diminishes the need for subsidies from the federal budget.

Human resources policy and CSR

Because of the low population density in the Far East, the shortage of labor resources in the region is greater than elsewhere in Russia. Difficulties in attracting and retaining qualified workers in the Region are one of the greatest impediments to further development. Experts note that those who leave the region are mostly young, energetic and educated people.

Foreign investors from developed countries hire mainly Russian workers

Our study has shown that in spite of difficulties with human resources, foreign investors tend to rely heavily on local labor resources. It is notable that while foreign enterprises from developed countries prefer to hire local labor, companies from developing countries tend to bring their own, less costly labor, which diminishes the positive effect of investments in the economy.

Foreign companies offer their employees fair and equitable compensation and comfortable social benefits, as well as ongoing training and professional development. This helps to attract and retain qualified workers and bolster human capital in the Region

Our econometric analysis shows that foreign companies offer their employees a range of social benefits that would not always be otherwise available to them. These benefits include free meals and accommodation, compensation for transport costs, and subsidies for rented housing, where necessary. From the regression analysis we conducted, it became apparent that foreign companies more readily pay for the training and medical care of their employees than some private and state-owned Russian companies.

At a broader level, foreign companies bring a variety of corporate cultures and unique approaches to social responsibility acquired while working in various countries. Often this is demonstrated by a vigorous and vital program for building a harmonious relationship between business (including Russian business), the local communities and the regional and local authorities.

Infrastructure development

Foreign enterprises invest significant amounts in the development of transportation infrastructure in the region

Russian and foreign enterprises in the Far East must deal with key infrastructure problems in the Far East, such as overloading of existing routes or absence of railways on much of the territory, the absence of short-range aviation, the unsatisfactory state of many ports and the high cost of power supply.

The advent of foreign investors, in addition to increasing regional and local budget revenues that can be used to improve infrastructure, also has a direct positive impact on infrastructure development, because foreign enterprises often build roads to ensure the operation of their own enterprises. In addition, foreign enterprises often take an active part in developing short-range aviation for their own needs. Local citizens and Russian enterprises frequently use the roads and airports built and developed by foreign investors.

In sparsely populated areas, foreign investors typically cover the costs of almost all the infrastructure required by their operations in the extractive industries.

Business activity in the region

Many experts note that the conditions for the development of small business in the Far East are unfavorable, and the advent of foreign companies helps to overcome the institutional constraints on the development of small businesses.

Foreign investment contributes to more dynamic development of small businesses through: 1) the purchase of goods and services for the needs of foreign companies, which stimulates the economic development of the region (mainly public catering, cleaning, security and advertising, as well as transport companies); and 2) the multiplier effect: the employees of foreign enterprises and the production facilities catering to them are often local citizens who spend their earnings in the region, thus creating additional demand and consequently stimulating the development of small and medium-sized enterprises.

However, it must be borne in mind that these effects are more characteristic of production facilities that are not far from population centers. They are less pronounced when it comes to foreign investments in the extractive industries and the mineral deposits or oil fields are located in areas that are difficult to access.

Innovation

Surveys of enterprises show that foreign companies are more frequently involved in innovative activities than do-

mestic companies. It is interesting that in the Far East, it is extractive companies that use more innovative technologies. The number of deposits where simple extraction methods can be used is shrinking; therefore, foreign enterprises have to use more advanced technologies to tackle the challenging problems of extracting subsoil resources.

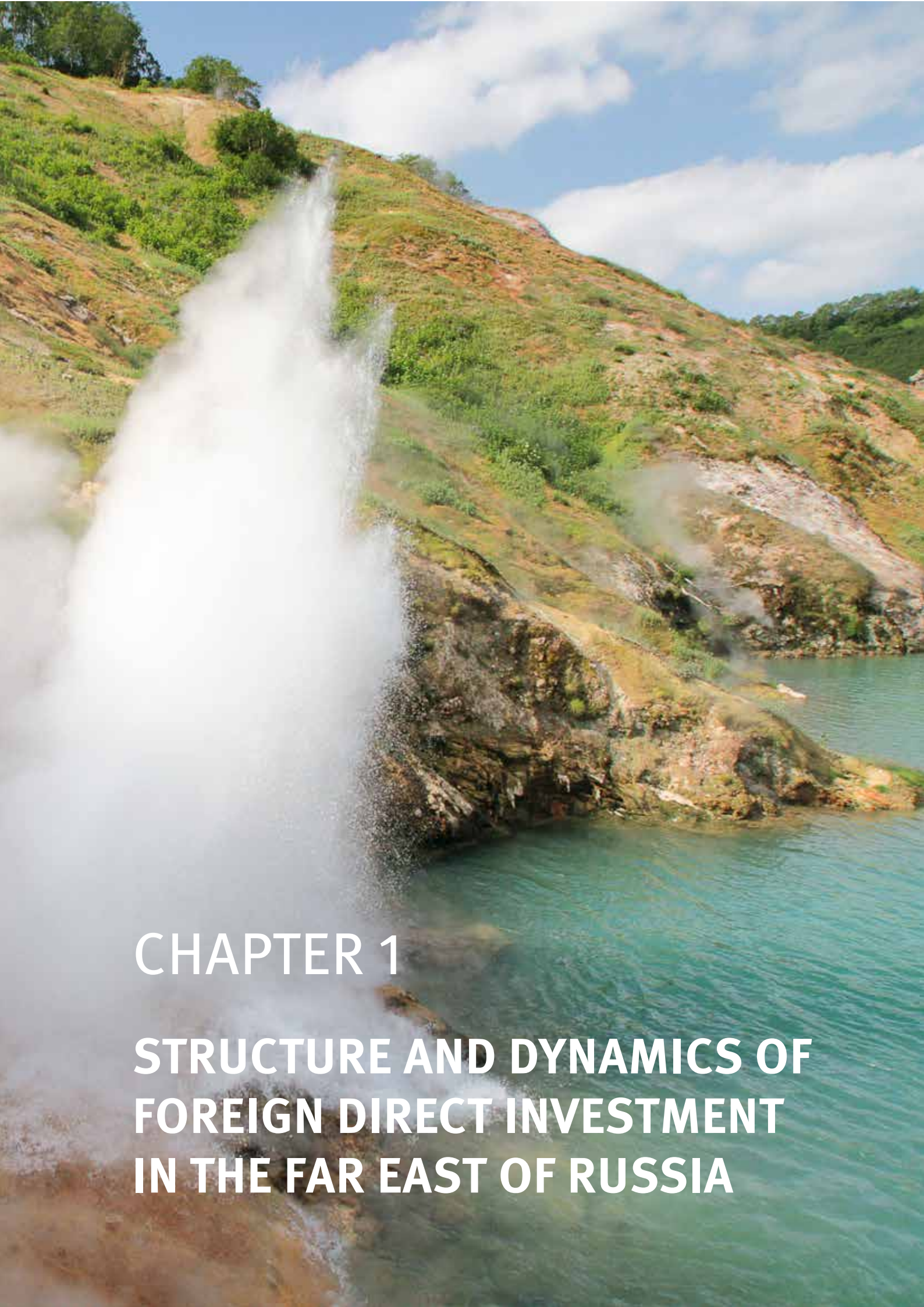
Enterprise surveys show that foreign companies tend to be more often involved in innovative activities than domestic companies

In addition, econometric analysis shows that the advent of foreign companies stimulates the innovative activities of Russian enterprises. However, experts believe that one of the key factors that holds back the spread of new technologies in the Far East is the shortage of highly skilled labor in the region.

Environment

Enterprises from developed countries have a better record of complying with environmental rules

Russian environmental protection rules are at least as demanding as those in the West. The behavior of foreign companies in the environmental sphere is influenced by external factors (the requirements demanded by creditors, insurance companies and investors committed to investing in firms with the best environmental reputation, etc.) which have a further disciplining effect. Many experts and regional officials note that foreign enterprises tend to be strongly committed to a high level of compliance with environmental standards.



CHAPTER 1

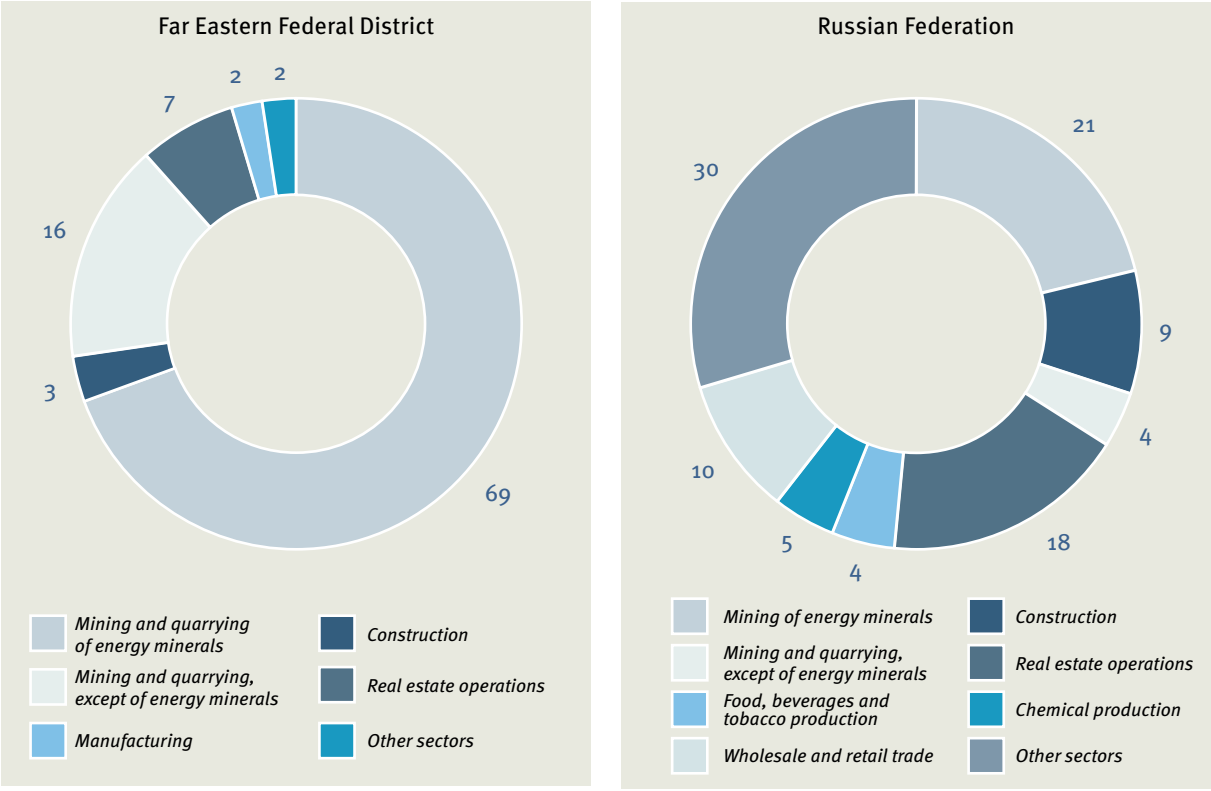
STRUCTURE AND DYNAMICS OF FOREIGN DIRECT INVESTMENT IN THE FAR EAST OF RUSSIA

1 | STRUCTURE AND DYNAMICS OF FOREIGN DIRECT INVESTMENT IN THE FAR EAST OF RUSSIA

The interests of foreign investors in the Far East are focused on the extraction of subsoil resources. In 2011, that sector accounted for 85% of all foreign direct investment in the region, of which 69% was in the fuel extraction industry, mainly the implementation of oil and gas projects in the Sakhalin region. Only 2% of investments in the FEFD go into the processing industry. Investments in wholesale and retail trade, which account for one-tenth of all foreign investments in Russia, are practically non-existent in the FEFD.

FDI in the Far East is focused on the extraction of subsoil resources

Figure 1.1 Foreign direct investment by industry, 2011, %



Source: Rosstat, data from UISIS[1].

In analyzing the entire FEFD, in addition to the Sakhalin region (which in 2011 accounted for 70% of total FDI[2]), significant investments were made in the Amur (13%) and Magadan regions (8%). The other regions of the FEFD account for a mere 1–2% of all FDI in the Far East (see Table 1.1 on pg. 18). The Amur region registered growth in the period from 2000 to 2011, with its share of FDI increasing from 1.5% to more than 13%. Before 2011, the Magadan region received a relatively small amount of FDI (less than 1%) but an increase in foreign investment from Cyprus, Ireland and China in 2011[3] placed it in the top three regions. The Evreyskaya (Jewish) autonomous region also

1 Unified Interdepartmental Statistical Information System
2 Including investment from offshore countries.
3 http://dvkapital.ru/regionnow/magadanskaja-oblast_16.05.2012_4340_inostrannye-investitsii-v-ekonomiku-magadanskoj-oblasti-v-2011-g-sostavili-270-mln.html

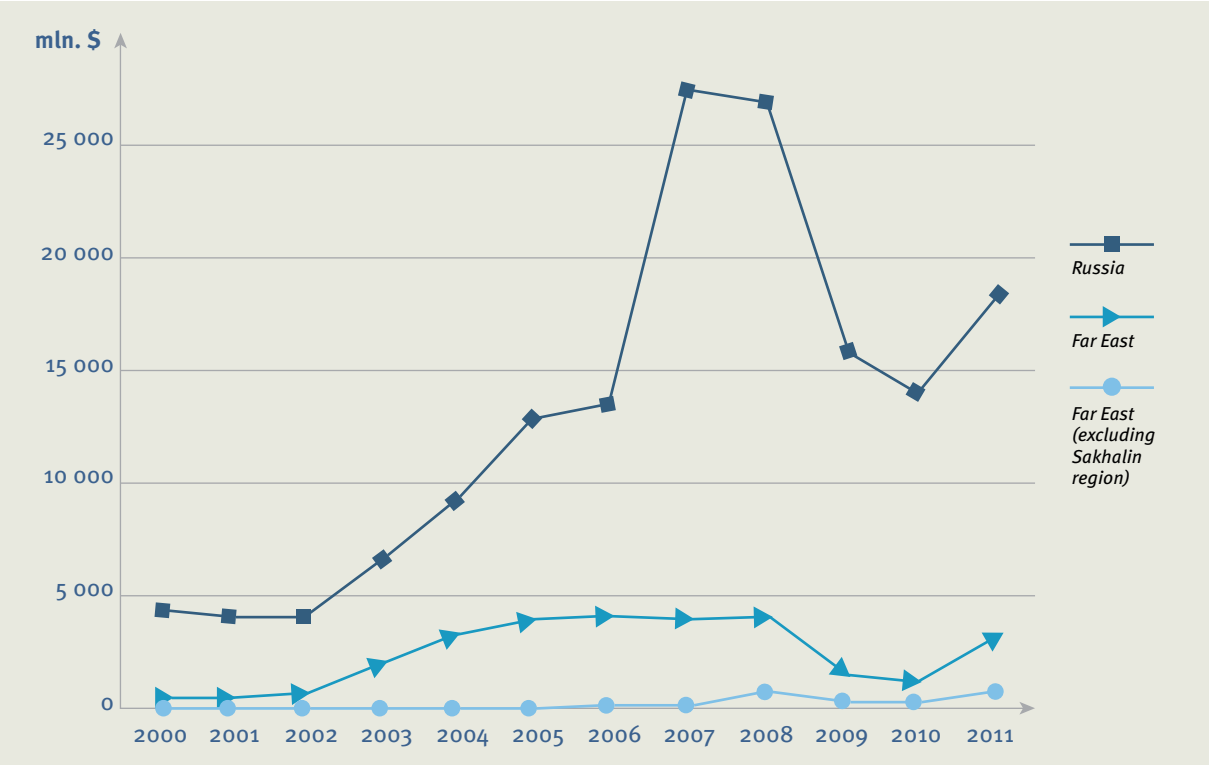
reported a substantial growth of investment activities in the same period; however, the share of the Evreyskaya autonomous region in total FDI is still insignificant (no more than 1.5%). The Kamchatka territory and the Republic of Sakha (Yakutia) have registered faltering growth. It is notable that Yakutia is the second biggest recipient of foreign investment after the Sakhalin region, but the bulk of it is portfolio investment.

FDI is unevenly distributed in the Far East, with the Sakhalin region accounting for 70%

The massive growth of FDI in the Sakhalin region in 2000-2004 was connected with the development of Sakhalin 1, a major international oil and gas project. As a result, in 2005, the Sakhalin region accounted for 96% of all FDI in the Far East. However, the share of the Sakhalin region in the inflow of FDI began to diminish starting in 2008 and dropped to 70% by 2011. Still, the Sakhalin region is the unquestioned leader in FEFD and is the most attractive region for investors, mainly from the Netherlands, Japan, the USA and India.

The dynamics of foreign direct investment in the Far East and Russia in general are comparable and move in the same direction. The period from 2000 to 2005 saw a substantial increase in foreign investment in the Far East. Growth in the region was driven by the extractive industry, transportation, communications and trade.

Figure 1.2. Dynamics of foreign direct investments in the Far East and Russia



Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012".

Table 1.1. Structure of foreign direct investments in the regions of the Far East (2000–2011), % [4]

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Far Eastern Federal District	100	100	100	100	100	100	100	100	100	100	100	100
Republic of Sakha (Yakutia)	0.20	0.88	1.37	1.09	0.22	0.64	0.85	0.80	0.61	0.81	0.21	0.73
Kamchatka territory	0.03	0.18	0.00	0.00	0.00	0.00	0.42	0.38	3.12	1.24	0.65	0.46
Primorsky territory	10.01	14.36	3.57	2.03	1.79	0.21	0.31	0.28	14.97	2.11	4.40	1.69
Khabarovsk territory	5.91	1.94	0.34	0.17	0.38	0.28	0.32	2.22	1.47	2.25	5.09	2.89
Amur region	1.49	0.04	0.72	0.75	1.25	2.42	2.75	3.03	2.74	13.97	17.98	13.35
Magadan region	1.57	0.89	0.00	0.00	0.00	0.00	0.11	0.29	0.10	0.31	0.00	8.45
Sakhalin region	80.78	81.71	93.87	95.93	96.34	96.41	95.22	92.96	76.73	79.11	68.19	69.89
Evreyskaya autonomous region	0.02	0.00	0.06	0.03	0.01	0.05	0.02	0.03	0.26	0.20	1.38	0.67
Chukotka autonomous district	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.09*	1.86

*Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012". * There were no statistics kept on foreign investment in Chukotka prior to 2010.*

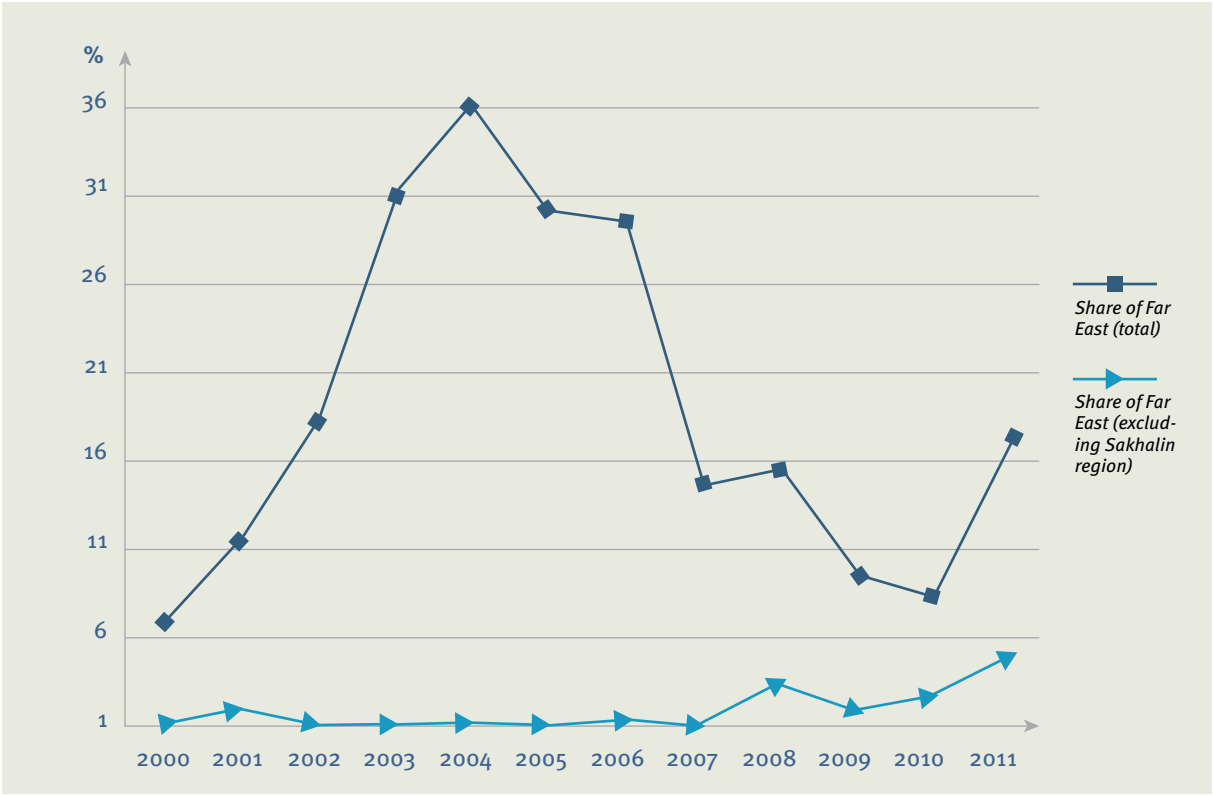
Looking at the dynamics of the Far East's share of total foreign direct investment in Russia, the share showed robust growth between 2000 and 2006 (from 6% to 30–36%). However, it was followed by a slump, whereby its share hovered around 17% in 2011. Yet if one excludes from the FEFD list the biggest recipient of foreign investment, the Sakhalin region, the dynamics of the share of investments becomes totally different. The other regions accumulate much less foreign investment (a mere 1–2% of the total volume in 2000-2007). Finally, in the period between 2008 and 2011, the share of investments in the Far East (outside the Sakhalin region) increased to almost 6%.

4 It should be noted that a large share of investment (50% in some years) comes from offshore countries. Russian statistics do not provide data on investor countries broken down by region, so we were unable to make an adjustment for investments that are essentially returning Russian capital and not new foreign investments. In the period from 2007 to 2011, the share of offshore countries in FDI in Russia hovered around 40-50%. In 2009, that share dropped to 30%, apparently due to the world economic recession and lack of incentives for re-investing Russian capital concentrated in offshore countries. 2012 saw the biggest fall in the share of offshore countries in FDI (to 17%). The fall may be the result of the policy of the Government and the Finance Ministry, which proposed taxing the offshore subsidiaries of Russian companies.

mln.$	2007	2008	2009	2010	2011	2012
Investments (total)	56,996	74,783	36,583	43,168	55,084	51,416
Investments (offshore)	25,398	37,442	11,110	18,589	26,041	8,878
Share of offshore	45%	50%	30%	43%	47%	17%

Source: Central Bank of Russia.

Figure 1.3 Dynamics of the Far Eastern Federal District's share in the total amount of foreign direct investments in the Russian Federation

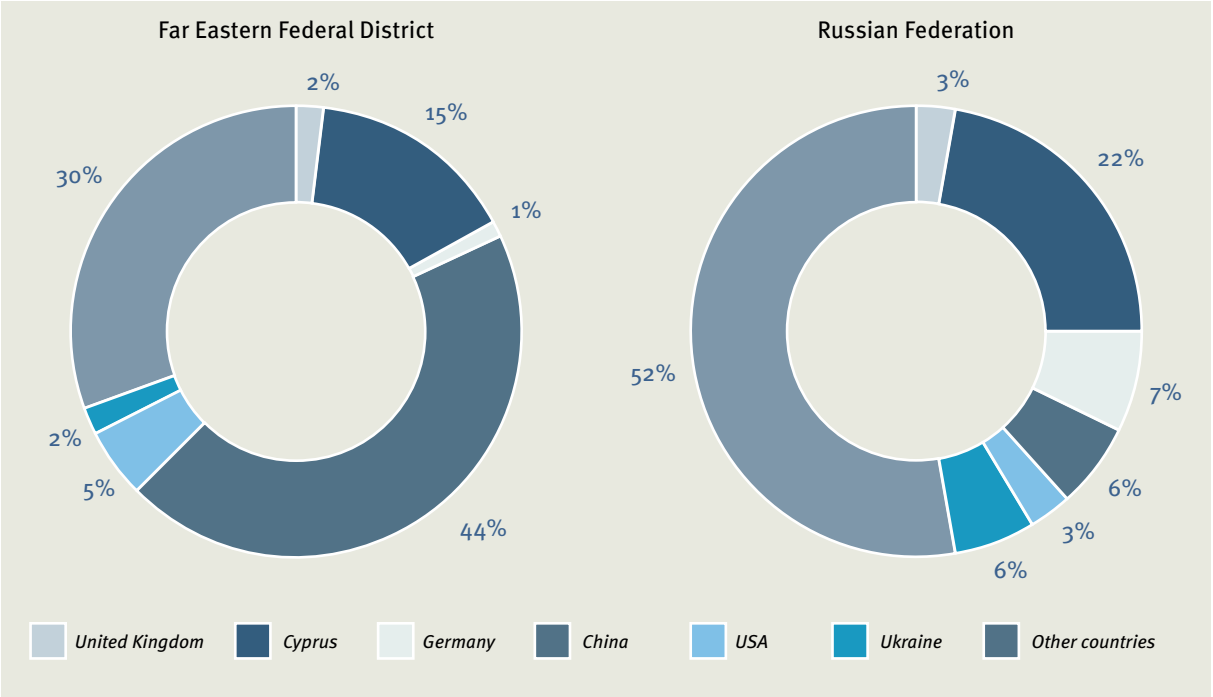


Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012".

According to Rosstat data, in 2011 the Far Eastern Federal District had more than 1,000 enterprises with foreign capital, of which 396 (37%) were in the Primorsky territory. The Kamchatka territory and the Chukotka autonomous district account for a very small share of foreign enterprises (18 and 2 respectively). In the latter case, this small volume of FDI in absolute terms does not mean that such enterprises make a small contribution to the region's economy. On the contrary, the Chukotka autonomous district ranks second in terms of per capita volume of foreign investment, and the turnover of foreign enterprises accounts for a large part of the turnover of the whole autonomous district (more than 50%). The Sakhalin region, which received about 70% of all foreign direct investment in the federal district, had 156 foreign enterprises, making it the third largest in the Far East in terms of the number of international companies.

The relative share of foreign investment by country in the Far East differs from that in Russia as a whole. Chinese firms account for 44% of all enterprises with foreign capital in the Far East, which is due to the proximity of China to the Far Eastern region. Germany, which has the second largest number of enterprises in Russia, has very few enterprises in the Far East (about 1%).

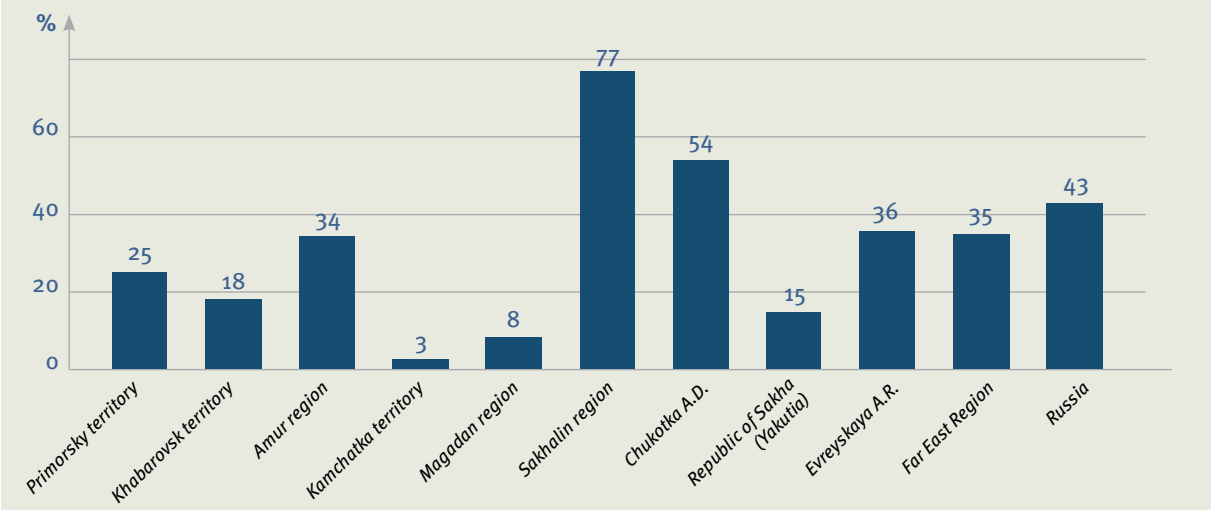
Figure 1.4 Number of foreign enterprises in the Far East region and Russia by country of origin, 2011



Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012".

The activities of foreign enterprises in the region make a substantial contribution to the local economy: in the majority of FEFD regions, the share of the turnover of foreign companies in the total gross regional product exceeds 25%. The Sakhalin region leads (77%) in this respect, and the Chukotka autonomous district is in second place with 54%. However, in the other regions of the FEFD, that share is below the national level, which shows that the Far East generally lags behind Russia in attracting foreigners to invest or to do business in the region.

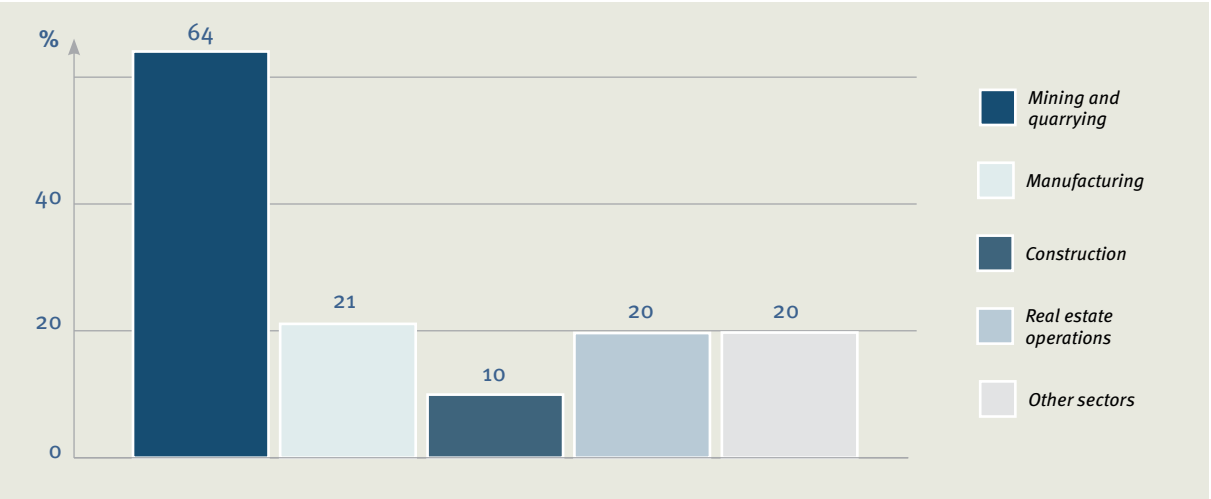
Figure 1.5 Share of turnover of foreign enterprises in the total turnover by region, 2011



Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012".

As previously stated, the bulk of foreign investment in the Far East goes into the extractive industry. As a result, foreign companies account for the biggest share of enterprise turnover (64%). And in spite of the small amount of investment in the manufacturing industry, the turnover of foreign enterprises in this sphere accounts for more than a fifth of the total turnover, as much as in the real estate sector. This underscores the fact that foreign investment and, consequently, the presence of foreign enterprises in the Far East, exerts a considerable influence on the economy of the district as a whole and the key production sectors.

Figure 1.6 Share of foreign turnover in total turnover in the Far East by industry, 2011



Source: Rosstat, data from UISIS.

Because low population density is a distinctive feature of the Far Eastern region, analysis of the per capita volume of investments — the indicator best reflecting the impact of investment on the economy and welfare of the region — is of special interest. A comparison of that indicator for FEFD regions reveals the huge lead of the Sakhalin region in terms of foreign direct investment: it is many times larger than the corresponding indicators for the Far East as a whole, and for its constituent entities in particular. In addition to the significant injections of foreign money in Sakhalin, this result is also related to the relatively low population density in the Sakhalin region (fifth in terms of population in the FEFD).

Other leading regions in terms of foreign investment on a per capita basis are the Chukotka autonomous district and the Amur and Magadan regions, which, as has been shown above, only recently received substantial amounts of foreign investment. In the case of the Chukotka autonomous district, the relatively high level of per capita investment is due to the severe living conditions and climate, which account for its small population, while the presence of an important gold mining project in the area provides a substantial inflow of foreign investment. Foreign investment per capita is lowest in the Khabarovsk territory, the Evreyskaya autonomous region and especially the Kamchatka territory.

In terms of per capita FDI, half of the Far Eastern regions are significantly ahead of the national indicator, while the other half lags far behind

In terms of FDI per capita, the Far East is 2.5 times ahead of the average figure for the entire Russian Federation. This is due to the size of the major extractive projects that attract foreign investments and the low population density. On the other hand, as most of FDI is accumulated in the Sakhalin region, FDI per capita excluding that region is much lower.

Table 1.2 Foreign direct investment per capita in the Far Eastern Federal District, 2012

Territory	FDI, USD	Population (thousand)
Russian Federation	130.2	143,056
Far Eastern Federal District	347.6	6,266
Far Eastern Federal District (excluding Sakhalin region)	233.6	5,769.9
Sakhalin region	1,673.7	496.1
Chukotka autonomous district	963.3	50.7
Amur region	684.6	825.1
Magadan region	517.3	155.5
Primorsky territory	205.8	1,952
Republic of Sakha (Yakutia)	118.4	957
Evreyskaya autonomous region	103.8	175.4
Khabarovsk territory	94.4	1,342.7
Kamchatka territory	6.4	320.9

Source: Rosstat, "Regions of Russia. Socio-economic indicators, 2012".

CHAPTER 2

INVESTMENT ATTRACTIVENESS OF THE FAR EAST

2 | INVESTMENT ATTRACTIVENESS OF THE FAR EAST

Sectors that attract foreign investors

The interests of foreign investors in the Far East region are determined by the natural attributes of the geography, and principally, the geology of the Region. As in the rest of the world, prospective mineral deposits are becoming ever more scarce. Almost all undeveloped resource deposits are located in areas that are difficult to access and have practically no infrastructure. In addition, foreign investments in the extractive industry are still burdened by non-geographic or geological factors, and this holds true for absolutely all the Far East regions.

The potential of the Far East to attract investments is limited both for the extractive and manufacturing industries

Some experts also believe that the advantages of the Far East in terms of developing natural resources are dwindling.

> *"The resource base that has been proven and evaluated was created in the USSR. Today, Russia no longer has this advantage, and the number of explored fields is running out." (From interviews with experts)*

Potential investors in the manufacturing industry face a different set of constraints. Because of the low population density and remoteness from the European part of Russia, the size of the internal market in the Far East is very small, while transportation costs are exceedingly high. Thus, manufacturing, with the exception of precious metals and gem cutting, only makes sense if it involves production for export. However, given the lack of necessary transportation and logistical infrastructure, and the scarcity of specialized labor, the export possibilities from many Far Eastern regions are limited.

Production costs in the Far East are higher than in neighboring countries

Main partners

All the experts interviewed agree that the main potential partners for the Russian Far East are the Asia Pacific countries (South Korea, China and Japan[5]) or major transnational corporations (mainly specializing in the extraction of subsoil resources). European and North American investors are less frequently mentioned as potential investors.

However, compared with the Asia Pacific developing countries, the Far East has no competitive advantages in terms of labor cost or the availability of sufficiently qualified specialists. Production costs for all major costs (wages, transport and utilities) are, in the opinion of foreign investors, significantly higher in the Russian Far East than in neighboring countries. Therefore, under present conditions, it is unlikely that the Far East will be able to attract major investments into the manufacturing industry, and it will be extremely difficult to compete with such countries as China and South Korea.

> *"The cost of labor and infrastructure (for example, electricity) is higher than in the neighboring countries, for example, China. This deters foreign investors from going to the Far East." (From interviews with foreign companies)*

At the same time, in the opinion of some officials, Asian companies are more willing to localize production in the Far East, especially in the southern parts of the region, than investors from other countries.

Political and economic risks

Foreign investors already operating in the country consider Russia to be a jurisdiction with low political risk. However, Russia's negative image in terms of doing business is a key factor that deters potential foreign investors.

Because the main foreign investments in the Far East are in the extractive industries, aside from the higher labor, fuel and transportation costs, other economic risks inside the country have less impact on the activities of foreign

5 The development of economic ties with Japan is constrained by lingering political issues.

companies. Far more important for resource companies are the risks associated with global commodity prices.

Foreign investors already operating here consider Russia (including the Far East) to be a country with low political and economic risks

The companies that have come to the Far East are more tolerant of possible risks; they have adapted themselves to the Russian market. However, potential new investors, especially in the developed countries, are very guarded about doing business in Russia generally and in the Far East in particular.

"Those companies which have not yet gone in are of course scared of not knowing Russian realities, complicated laws, the tax system, bureaucracy, the tricky bureaucratic and corruption-related issues. It is harder to lure new investors." (From interviews with experts)

"Since 2008, Russia has seriously undermined its investment image by appearing to close the doors to foreign mining investors ‹...› Russia's image is rather unattractive, making it quite challenging for us to attract money to invest in our project." (From interviews with foreign companies)

However, the established image of Russia deters new foreign direct investment

The main factor that may have a negative impact on an investor's decision to start a business in the Far East is the perception of fickle and flawed legislation. Unpredictable changes in this sphere can turn profitable enterprises into unprofitable ones. In the extractive industry, it reduces opportunities for investments and may cause enterprises to terminate the development of resources earlier (see Chapter 5).

"The main political and economic risks stem from the absence of rules of the game." (From interviews with regional officials)

Fear of nationalization may also be seen as a political risk, though not in the same sense as in countries with unstable political situations where there is the risk of a possible abrupt change of government (as for example, in some Latin American countries). In Russia, potential investors are more concerned about the risk of drastic or abrupt and ill-thought-out changes of legislation. To help protect against political risks of this nature, representatives of some foreign companies have shown an interest in attracting state investment in their projects at the regional level.

"The negative experience of some foreign investors scares away other potential investors." (From interviews with foreign companies)

The survey revealed that some enterprises in the services and manufacturing spheres have had negative experiences with Russian partners and regard this unreliability as a further economic risk, which creates an additional incentive to reorient their production towards export.

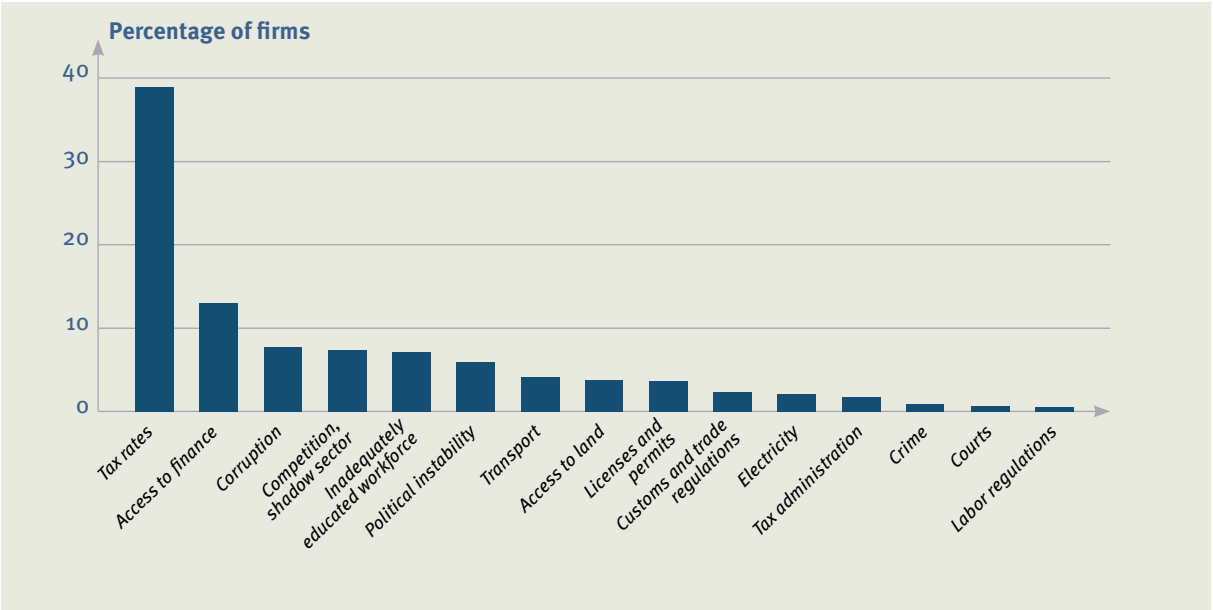
Rating of obstacles to doing business

Russian and foreign enterprises differ in assessing the importance of various components of the business climate for the activities of their enterprises. Figures 2.1 and 2.2 rate the main obstacles to doing business on the basis of the Business Environment and Enterprise Performance Survey conducted in 37 Russian regions (including some regions in the Far East). The five main obstacles for Russian enterprises are: the tax rate[6]; access to financing; corruption; competition with the shadow sector; and insufficient employee qualification. For foreign enterprises, the tax burden, ac-

6 In interviews with enterprise CEOs, tax rates are invariably named as the most important barrier to doing business, regardless of the country and the level of the tax burden.

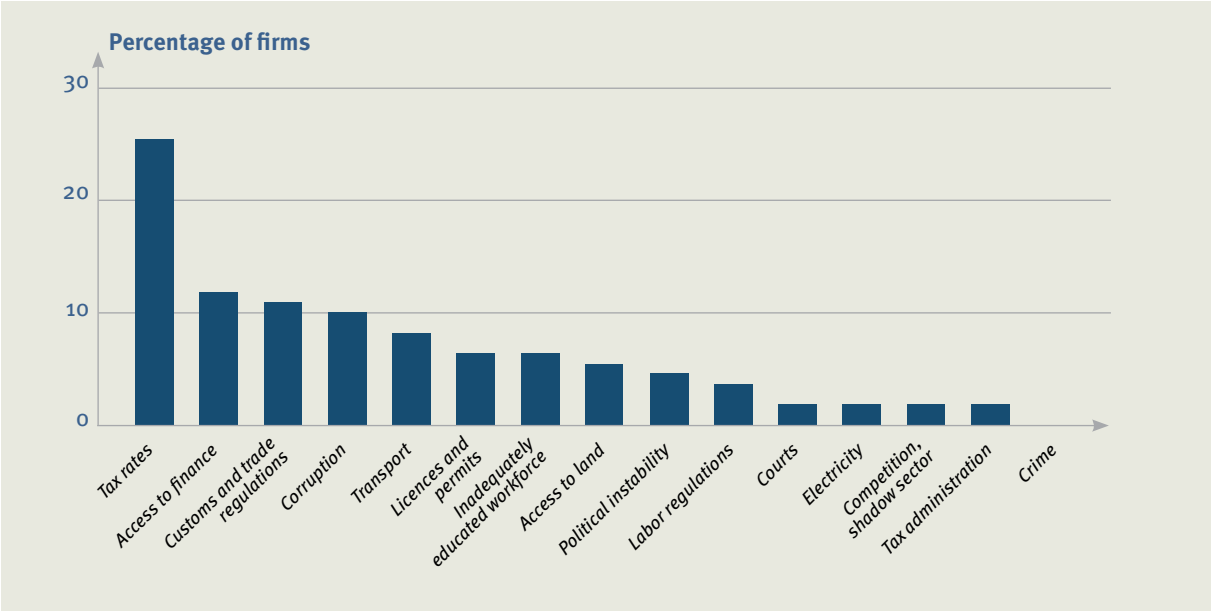
cess to financing, and corruption are also among the five main obstacles to doing business, but unlike the Russian enterprises, they add customs rules and transportation problems. Specifically, foreign companies cite tax rates as the main obstacle to doing business much less frequently than Russian enterprises (25% and 39% respectively).

Figure 2.1 Main obstacles to business (percentage of firms identifying the problem as the main obstacle) — domestic companies, 2012



Source: Business Environment and Enterprise Performance Survey, 2012.

Figure 2.2 Main obstacles to business (percentage of firms identifying the problem as the main obstacle) — foreign companies, 2012



Source: Business Environment and Enterprise Performance Survey, 2012.

The results of our survey also show that the majority of experts believe that the lack of infrastructure and, in some regions, adverse climate, are decisive factors that limit the flow of FDI into the Far East. These factors dwarf all others. According to the representatives of large integrated industrial holding companies, these factors also explain why their enterprises open only basic production facilities in the Far East, while in other countries, they develop their business in diverse areas ranging from the extractive industry through to related services.

Other experts say that over-regulation of economic activities is also a major obstacle in attracting foreign capital.

"The business climate is a heavily regulated environment, very dependent on legislation and the decisions of various agencies and individuals. This makes the system vulnerable and dependent on subjective factors" (From interviews with experts)

In the Far East, unpredictable growth in the tariffs of natural monopolies can also be regarded as an obstacle to doing business. Regional officials in practically all the regions, as well as the heads of foreign firms, agree that the price of electricity is holding back the development of business in their region. Foreign investors also note the high prices for intermediate goods as a factor that undermines the competitiveness of production in the Far East regions.

"There is a powerful manufacturing industry in the Chinese border areas, but there are no manufacturing industries on the Russian side. ‹...› Confusing rules of the game in price formation scare off both foreign and Russian investors ‹...› The conditions are such that only big investors come, while others cannot cope with the problems." (From interviews with regional officials)

"Production costs (for intermediate goods, fuel and lubricants, etc.) are 20% higher in the Far East than in other countries (compared with the Asia Pacific region)." (From interviews with foreign companies)

Enterprises that need to raise more capital to develop their business also identified the undeveloped financial sector as a key barrier to growth. However, this problem is not specific to the Far East and is common to Russia in general. In the Business Environment and Enterprise Performance Survey in 2012, both Russian and foreign enterprises identified that problem as the second most important. Some of the enterprises surveyed, which started out as fully Russian and then brought in foreign investors, claim that there are additional problems with attracting Russian capital to investment projects in the Far East. They say that today Russian capital, even in the extractive industry, seeks to invest outside Russia rather than in the Far East region of the country.

Econometric analysis was carried out to reveal the differences in the impact of elements of the business climate on the advent of foreign companies to the Far East and to other Russian regions. Proceeding from the data contained within the Business Environment and Enterprise Performance Survey, average indices of obstacles to doing business were calculated for every region. Using these indices and the information on the entry of foreign enterprises from the RUSLANA database, we have assessed how these indices influenced the entry of foreign firms to various regions in 2008–2010.

The business climate in the Far East is worse than in other Russian regions, which has a negative impact on the entry of foreign companies

The results of an econometric analysis (see Table 2.1) show that the Far East is indeed different from the other Russian regions in terms of potential to attract foreign investors. As in other Russian regions, problems with customs and trade regulations and access to financing have a negative impact on the entry of foreign companies to the Far East. But in the Far East, problems with access to financing are more of an obstacle to the entry of foreign companies than in other regions. Another difference from other regions is that in the Far East, problems connected with labor legislation, insufficient

level of skills, crime, unsatisfactory performance of the judicial system, and problems with obtaining licenses and permits, exert a negative impact on the entry of foreign investors. The significance of license and permitting issues is primarily due to the fact that the main investments in the FEFD go into the extractive industries, where government oversight is more stringent than in other sectors.

Table 2.1 The impact of obstacles to doing business on the entry of foreign enterprises to Russian regions in 2008-2010[7]

Main obstacles to doing business	Obstacle index coefficient sign	Obstacle index coefficient sign multiplied by the Far East variable
Electricity	0	0
Telecommunications	0	0
Transport	0	0
Customs and trade regulations	-**	0
Access to land	0	0
Crime, theft and disorder	0	-*
Access to finance	-*	-*
Tax administration	0	0
Business licensing and permits	0	-*
Political instability	0	0
Corruption	0	0
Courts	0	-*
Labor regulations	0	-*
Inadequately educated workforce	0	-*

Note: 0 — coefficient is statistically not significant ** — coefficient is significant at the level of 5%, * — coefficient is significant at the level of 10%.

Source: Own estimates based on the RUSLANA and the Business Environment and Enterprise Performance Survey databases, 2012.

7 See regression results in Appendix 1.

CHAPTER 3

IMPACT OF FDI ON REGIONAL BUDGET REVENUES

3 | IMPACT OF FDI ON REGIONAL BUDGET REVENUES

The budgets of practically all the Far East regions are subsidized by the federal budget. From 2000 until 2012, the FEFD budget reported a surplus in only a three-year period (2007–2009). After the 2008 crisis, when investments shrank substantially in Russia generally, and in the Far East in particular, budget revenues fell. Meanwhile, budgets adopted to meet social commitments had increased during the preceding period of economic growth. As a result, the Far East again had to be subsidized, and in 2012, the dependence on federal financing increased compared with 2010. As of 2012, the overwhelming majority of FEFD regions registered a deficit. Only the budgets of the Sakhalin region and the Evreyskaya autonomous region had a surplus (see Table 3.1).

At present, the budgets of practically all the FEFD regions are subsidized

Table 3.1 Balances of the budgets of FEFD regions in selected years, million rubles

	Balance of regional budgets				
	2000	2004	2008	2010	2012
Far Eastern Federal District	-1,237	-8,503	6,787	-11,819	-25,154
Sakhalin region	148	-1,004	8,701	-9,133	1,132
Evreyskaya autonomous region	35	114	-120	298	10
Magadan region	-192	-220	211	1,072	-310
Kamchatka territory	268	-974	-2,076	1,967	-419
Republic of Sakha (Yakutia)	650	-3,454	-3,723	3,762	-3,596
Primorsky territory	-640	15	3,160	-9,497	-4,469
Chukotka autonomous district	-3	2,490	944	-3,486	-5,076
Khabarovsk territory	-868	-4,963	-1,462	3,546	-5,856
Amur region	-634	-507	1,153	-347	-6,570

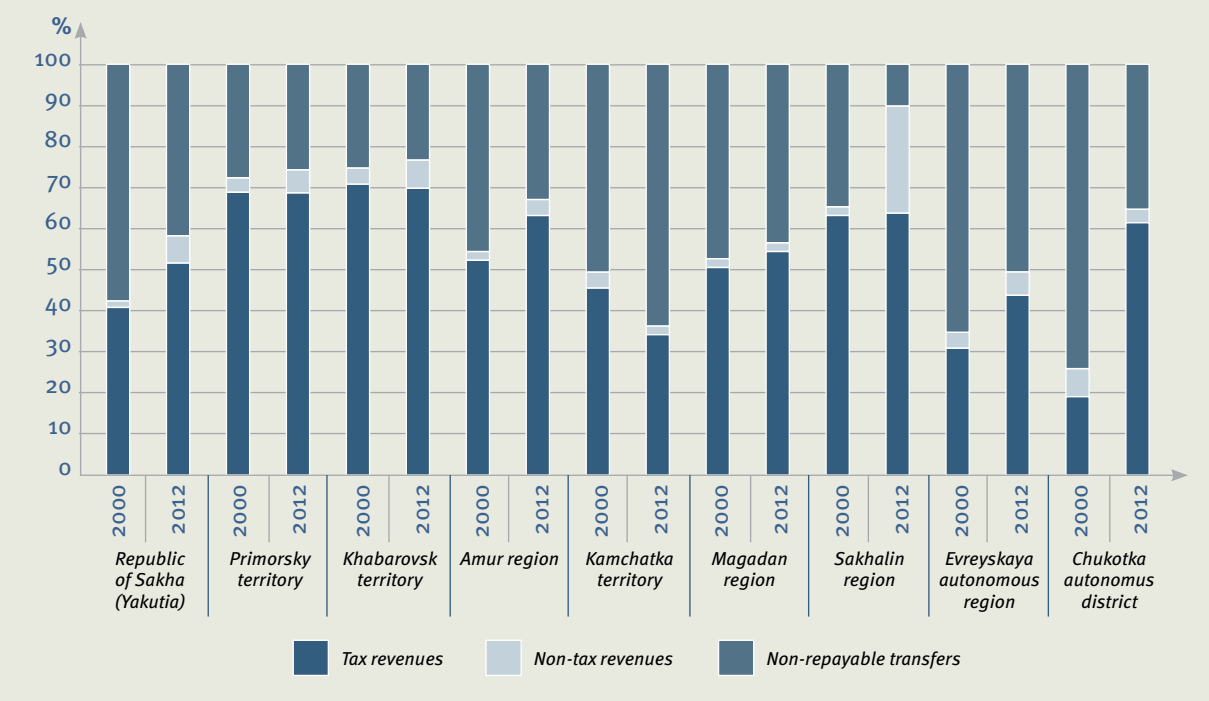
Source: Own calculations based on Federal Treasury data.

Another aspect of the dependence of the Far East regions on the federal government is the high share of federal transfers in the structure of regional budgets (see Fig. 3.1). However, in the period between 2000 and 2012, some regions substantially diminished that share, which dropped from 35% to 11% in the Sakhalin region, and from 74% to 36% in Chukotka. Both regions have a high level of foreign direct investments per capita, although the absolute volumes of investments in these regions differ greatly.

The structure of tax revenues reveals significant differences among the various regions (see Fig. 3.2). In general, profit tax and personal income tax account for more than 70% of tax revenues in all the regions. However, in three regions — the Sakhalin region, the Chukotka autonomous district and the Republic of Sakha (Yakutia) — the share of profit tax is uncharacteristically high. This structure of tax revenues results from the presence of very large extractive industry enterprises, which pay a large amount in tax, duties, and levies for the use of subsoil resources.

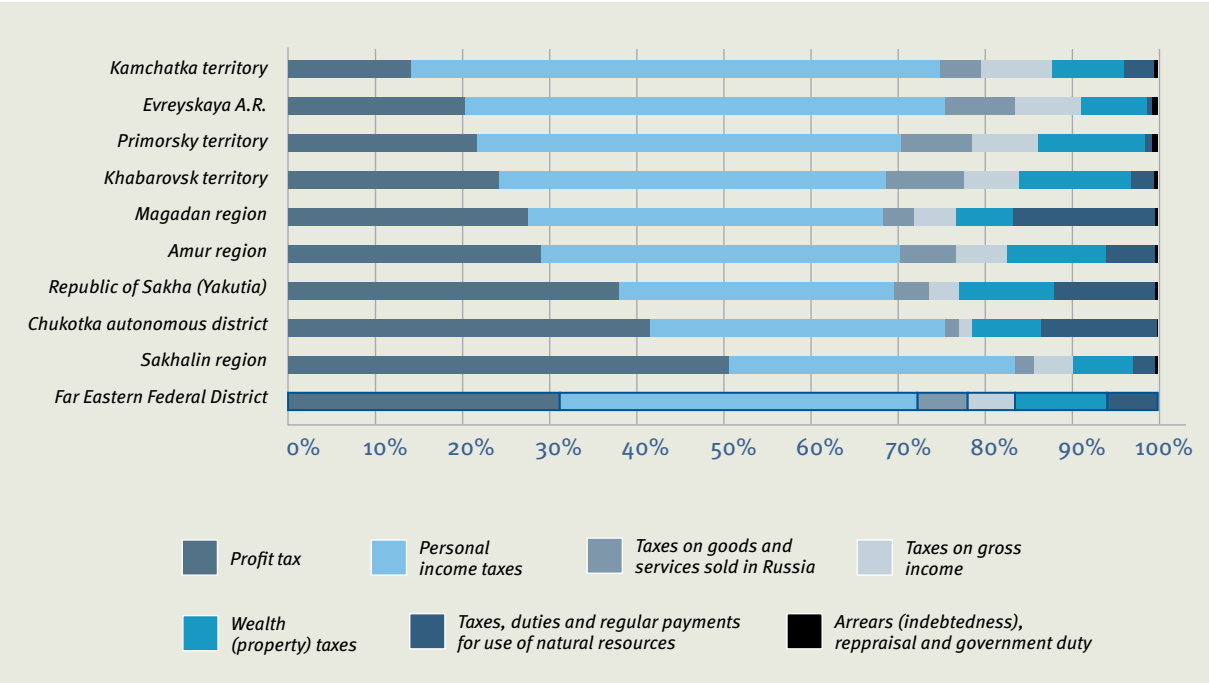
To ensure the long-term development of the Far East economy, and especially to attract foreign direct investment, large and expensive infrastructure projects need to be organized and financed. Considering the low level of development of the Far East regions at present, it would be extremely difficult, if not impossible, for the regions to develop these projects without significant federal and private investment. Tax revenues from foreign enterprises (particularly in the extractive industries) can provide a substantial portion of the funds required for these essential projects, as well as for maintaining local social programs, in addition to the primary support from the federal government.

Figure 3.1 Structure of budget revenues in 2000 and 2012 in the Far Eastern Federal District



Source: Own calculations based on Federal Treasury data.

Figure 3.2. Structure of tax revenues in the regions of the Far Eastern Federal District, 2012



Source: Own calculations based on Federal Treasury data.

In economically depressed regions, budget revenues from taxes paid by foreign companies may account for between 1/5 and 1/3 of total budget revenues. Thus, foreign investments in these regions may considerably diminish the need for subsidies from the federal center. In more developed regions, the impact of tax payments by foreign companies does not influence the balance of regional budgets quite so much.

"The appearance of even one big foreign company can make a great difference to the revenues of regional budgets. One example is the Kupol gold mine in Chukotka. If the Kimkano-Sutarsky Ore Dressing Plant in the Evreyskaya autonomous region is launched, the Evreyskaya autonomous region may become self-sufficient; if at least one offshore oil and gas field is launched in the Magadan region, that would make a great difference to regional budget revenues." (From interviews with experts)

In economically depressed Far East regions, the entry of foreign investors in the extractive industries may make a great difference and increase budget revenues

CHAPTER 4

LABOR FORCE AND HUMAN RESOURCES POLICY

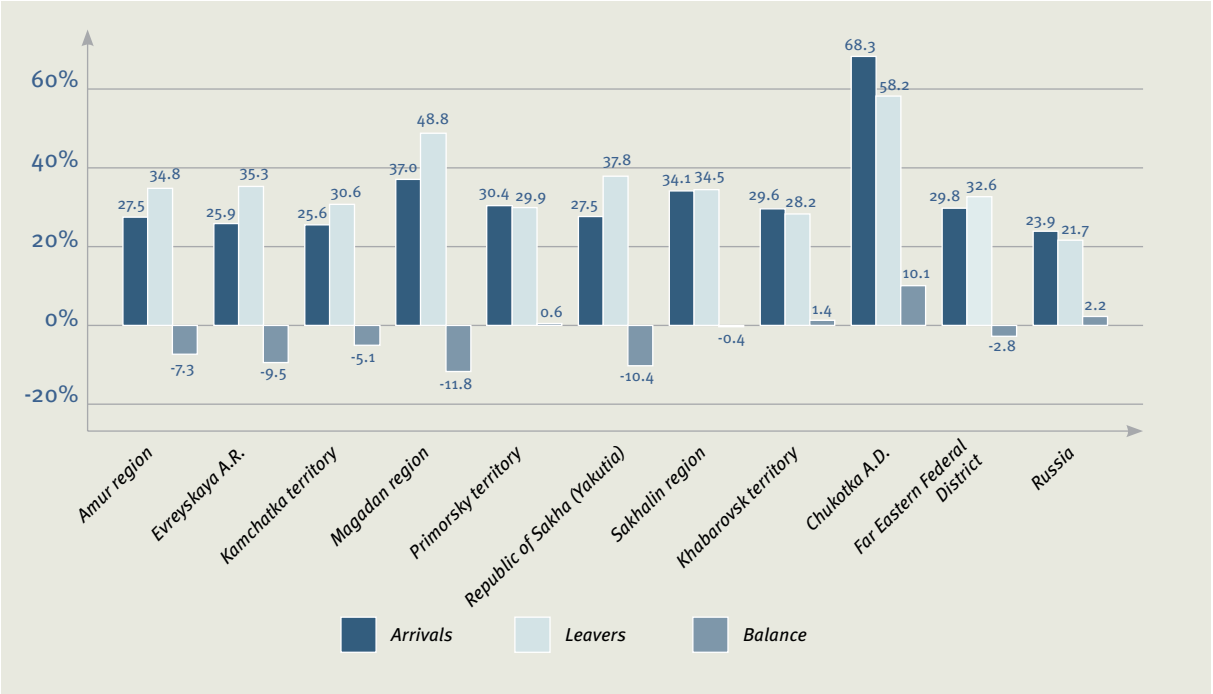
4 | LABOR FORCE AND HUMAN RESOURCES POLICY

The Far East is very short of labor resources

Demographic trends in Russia (stagnant birth rates, high mortality and low life expectancies) directly affect the availability of skilled labor across the country. The labor shortage is particularly acute in the Far East, where out-migration has caused the region to lose significant numbers of residents over the past two decades. This fact severely jeopardizes efforts to accelerate economic development in the region. In fact, the only parts of the FEFD that show a positive inflow of migrants are the Primorsky and Khabarovsk territories and the Chukotka autonomous district[8].

Experts calculate that an additional 2–3 million residents (an increase of 30–40% over current population levels) would be required to power a significant economic revival in the Far East. However, there is very little in the economic or social environment in the Far East to attract new inhabitants with job skills.

Figure 4.1 Arrivals and leavers (for temporary or permanent residency) per 1,000 people, Far Eastern Federal District, 2011



Source: Rosstat, Demographic Yearbook 2012.

The difficult situation for current residents was described by some respondents as follows:

> *"There is no housing, house mortgage loans are expensive, food is more expensive and of poor quality, the choice is limited, the climate is worse than elsewhere and there is isolation. Recreation facilities are limited." (From interviews with foreign experts)*

Experts note that it is the youngest, most energetic and better-educated people who leave the region:

8 *The positive balance of overall migration in the Sakhalin region, the Primorsky territory and the Chukotka autonomous district is the result of temporary arrivals. Meanwhile the number of permanent residents is diminishing rapidly.*

"As a rule, those who leave feel that they could do more, that is, they are ambitious, educated people ‹...› who have potential. And who are young." (From interviews with regional officials)

The labor shortage is apparent in all segments of the regional labor market, not only among skilled laborers. Migrants from Central Asia, as well as from China and Korea, are rapidly filling the shortage of unskilled labor. Many of them seek to stay in the region:

"There are those who come to the region and want to stay. Most of them come from Central Asia. As a rule these are low-skilled, low-level personnel who fill worker's jobs. ‹...› They are motivated because they get better conditions compared with the living standards in their countries. Sometimes low-skilled workers come from neighboring countries, like China and North Korea." (From interviews with regional officials)

The shortage of qualified technicians (so-called "blue collar workers") is described as follows:

"It is hard to find qualified technicians. The blue collars, as they used to be called, were the stratum formed in the Soviet times at vocational trade schools and technical schools. The demand for such specialists, skilled turners, fitters is very high." (From interviews with experts)

In addition, there is a significant shortage of highly qualified personnel, both managerial and production-oriented:

"The goal set for the Far East is to accelerate development. A high rate of growth is envisaged. To implement these projects, an additional 2-3 million people are needed. ‹...› It should be a market of highly skilled manpower and not the low-skilled migrants from Central Asia. Transport, energy, space, shipbuilding, aviation and aircraft building are all high-paid jobs that require high skills." (From interviews with experts)

One representative of a foreign mining company, noting the fairly good quality of highly skilled local personnel (geologists), believes that there are not enough of them to expand production. As a temporary measure, investors bring workers from the European part of Russia:

"We are definitely satisfied with the level of skills of those we recruit from Magadan. ‹...› For us Magadan is the main source of labor. But because of plans for further development of the mining sector ‹...› there is certainly a labor shortage in the Far East regions. ‹...› Now we are recruiting people from the European part of Russia. That is how we deal with the problem in the short term." (From interviews with foreign companies)

A long-term solution is intensive cooperation between companies and higher education institutions, which requires additional capital and management attention:

"There are very few young people, and they are young and inexperienced. ‹...› We try to hire able and young people, but it takes a lot of time for them to learn the ropes and to be useful." (From interviews with foreign companies)

Enterprises also face the problem of high employee turnover:

"There are those who come on a rotation basis to earn money. They come from Ukraine, Moldova. We know that there is a company ‹...› where the turnover figures are incredible. They do not have a permanent body of personnel. The personnel is renewed almost 80% every year." (From interviews with experts)

In spite of difficulties with local personnel, foreign investors tend to recruit local labor resources

The company representatives interviewed noted that it is more convenient to work with local personnel, and the

shortage of personnel with required skill levels can be successfully addressed by investing in in-house training:

"In my opinion, it is always better to work with local personnel. This is easier, cheaper and more effective. But there are positions for which there are very few Russian specialists with the required level of skills, so we have to hire somebody from Australia, if only for a time. Then we put him in charge of a couple of people who have experience and education and in time they can replace him." (From interviews with foreign companies)

Representatives of the enterprises surveyed almost all indicated that they seek to keep the numbers of expatriate specialists and managers to a minimum:

"More than 98% of our employees are Russian citizens ‹...› The remaining 2% or perhaps even less, almost certainly less, are foreign nationals from various countries, such as Canada, South Africa or Kazakhstan. In general the percentage of foreign employees in production is minimal." (From interviews with foreign companies)

As concerns the training of managerial personnel, training local specialists with a view to replacing foreign employees is a widespread practice. This is a useful strategy, because Russian specialists know the local specifics and environment better, including Russian legislation.

"As for the managerial personnel ‹...› foreign investors first recruit their people from abroad, but they fairly quickly and successfully form a stratum of managers from among the local personnel or personnel that can be found in the Russian Federation and who reach the Far East. There are no great problems there." (From interviews with experts)

From our research we note that while enterprises from developed countries readily recruit local labor, companies from developing countries tend to bring their own and less costly unskilled labor, which means the investor's arrival has a less pronounced impact on the economy.

With a shortage of labor, there is competition for specialists, with foreign enterprises winning more often than not. According to the data of a representative sociological study, foreign enterprises hire more highly skilled labor [9].

As shown in Table 4.1, the share of employees with higher education at foreign enterprises is higher than at Russian enterprises as a whole. Moreover, this is also true for Russian state enterprises where the share of employees with higher education is traditionally high, due to state involvement in the highly skilled requirements of the education and healthcare sectors.

Table 4.1 Distribution of employees by education and ownership, 2011

Education	Type of ownership		
	State	Private	Foreign
Secondary general education or less	11%	15%	14%
Primary professional	26%	36%	25%
Secondary professional	26%	22%	21%
Higher professional	37%	27%	40%

Source: Own calculations on the basis of RLMS-HSE, 2011.

9 The conclusion has been made for the country as a whole on the basis of the annual representative study Russian Longitudinal Monitoring Study of the health and economic welfare of the population (RLMS-HSE).

Econometric analysis supports the contention that employees at foreign-owned enterprises have a higher level of education. Using Multiple Logistic Regression to assess the probability of a person being employed by a foreign enterprise depending on the parameters of his/her human capital, our analysis shows that higher education is an important requirement in securing employment in a foreign company[10].

Higher education also significantly increases the chances of being employed in the government sector. However, in comparison with the government sector, foreign companies employ highly skilled labor in more innovative and faster-growing sectors of the economy. Table 4.2 lists sectors that employ 70% of workers with higher education at government-owned and foreign enterprises. In the case of foreign enterprises, they are trade, the consumer goods and food industries, the financial sector, transportation and communications and oil and gas[11].

Table 4.2 Sectoral breakdown of employment of people with higher education by state-owned and foreign enterprises

TOP 5 INDUSTRIES	
STATE ENTERPRISES	FOREIGN ENTERPRISES
Education	Trade, consumer services
Army, Interior Ministry	Consumer goods and food industries
Management bodies	Finance
Healthcare	Transport and communication
Science and culture	Oil and gas industry

Source: Own calculations based on RLMS-HSE data, 2007–2011.

The preceding analysis raises the question: why do foreign investors win the competition for highly skilled labor? On one level, the quantitative and qualitative analysis presented in this study shows that on the whole, foreign enterprises pay higher wages. However, the difference in wage rates is not sufficiently high to explain the entire situation. Other factors include the overall social package, better working and living conditions, and different approaches to management—labor relations, all of which account for the preference qualified workers demonstrate for employment in foreign companies.

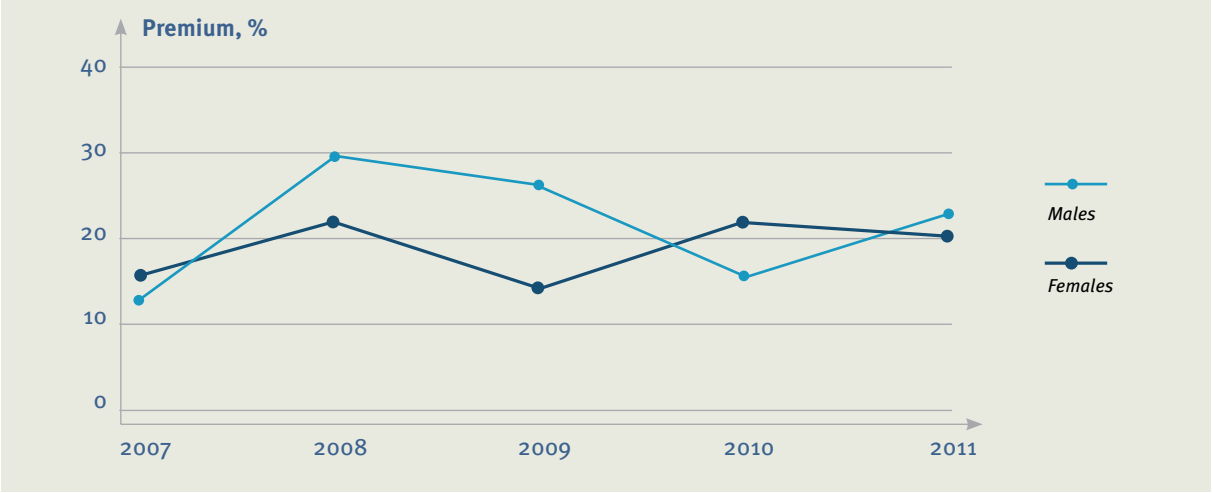
Employees of foreign companies earn more. Thus, the activities of foreign investors contribute to the welfare of citizens and to reducing poverty.

Furthermore, the growth of incomes stimulates production by increasing the purchasing power of the population and increasing the share of savings that are usually accumulated in financial institutions and are invested in the region's economy.

An econometric analysis based on Russian household data (using the Heckman procedure to assess the wage equation) has revealed that given other equal conditions, the employees of companies with foreign capital earn 13–30% more than the employees of private Russian enterprises[12]. The percentage varies depending on the gender of the employee and the duration of observation (see Fig. 4.2).

10 The results of econometric analysis are presented in more detail in Appendix 2.
11 The sectoral structure of employment of workers with higher education is presented in more detail in Appendix 3.
12 When comparing the wages, we controlled for the worker's education, length of service, industry and some regional characteristics, i.e. the comparison assumed that the above factors were equal. The results of the econometric analysis are presented in more detail in Appendix 4.

Figure 4.2 Premium for working for a foreign firm (in comparison with domestic firms): males and females, 2007—2011



Source: Own estimations based on RLMS-HSE data, 2007–2011.

Experts and regional officials interviewed in our survey, while noting that wages at foreign enterprises are competitive, claimed that on the whole the level of wages at foreign and Russian enterprises was comparable. Moreover, given the competition for scarce qualified personnel, many Russian companies (especially in the extractive sectors) have begun to improve their compensation packages:

> *"Saving on labor and hiring somebody who is weaker, or losing somebody who is good because you do not pay him enough is loss-making in the long run. Therefore we pay more than other industries. But not more than the Russian companies." (From interviews with foreign companies)*

Given the shortage of labor, non-monetary incentives for employees take on added importance. Foreign companies offer their employees a rich social package

This study analyzed the factor of the social package offered to employees. The econometric instrument used was the Binary Choice Probit Model[13]. We controlled for the worker's education, length of service and the industry, as well as some regional characteristics and the type of enterprise ownership[14].

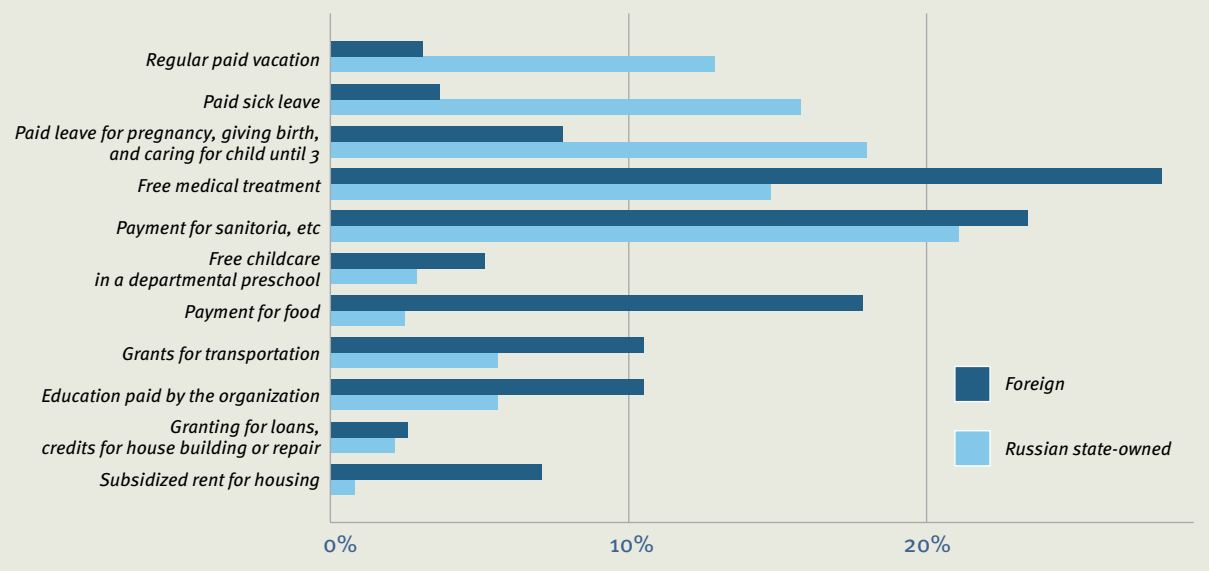
Our research reveals that given equal other factors, employees of foreign enterprises are more likely to receive attractive social packages than employees of private Russian companies. We analyzed the social benefits offered by three types of enterprises: Russian private, Russian state-owned and foreign, using Russian private enterprises as a basis for comparison. Figure 4.3 shows the difference in the probability of employees of state-owned and foreign enterprises obtaining non-monetary benefits as compared with the employees of private Russian companies. For example, if a worker is employed by a foreign firm, he is 18% more likely to get free meals than a worker with the same characteristics employed at a Russian private company.

It is also interesting to note that foreign companies provide their employees with a range of social benefits —

13 Probit analysis is a specialized regression model that is used to analyze the relationship between a binary dependent variable (in our model it is the availability of a specific type of social benefit for an employee) and various independent variables, such as regional and individual characteristics.
14 The details of the econometric analysis are presented in Appendix 6. Appendix 5 shows the percentage of workers who enjoy social benefits depending on the type of enterprise ownership.

such as free meals, covering transportation costs and housing rent — even more frequently than Russian state-owned enterprises. Foreign companies are also more likely to pay for training and medical services for their employees than private and state-owned Russian companies. Taken together, this evidence supports the contention that foreign capital contributes to building human capital in the regions of the Far East.

Figure 4.3 Increase in the probability of fringe benefits by the ownership type of enterprises (as compared with Russian private companies), 2010



Source: Own estimations based on RLMS-HSE data.

Opinions expressed by the experts interviewed support the results of our quantitative analysis. Non-monetary incentives (working conditions, safety, opportunities for further education such as education loans, low-cost loans for employees, etc.) are becoming decisive factors in competing for scarce labor.

As already mentioned, the emphasis placed on occupational health and safety at foreign enterprises is a key factor:

> *"Occupational safety is a very important segment. In coal mines, for example, discipline is very important. ‹…› Big Western international companies take a very responsible attitude because they have a tradition based on meeting the requirements of their countries. They apply these standards here in Russia ‹…› These big companies are in the public eye. Naturally, many of them are traded on international exchanges. Naturally, they have to report to their investors." (From interviews with experts)*

Given the harsh climate, the quality of life at the site in the extractive sector is very important for rotation workers:

> *"There is competition in terms of the quality of life on the site. That is, what the accommodation and food is like." (From interviews with foreign companies)*

Foreign investors apply stricter occupational safety and labor protection standards

Government officials and foreign investors both report that foreign companies in the extractive sector apply more rigorous standards of occupational safety than are required under Russian law and applied by Russian firms.

> *"An investor who spends millions is not going to save on basic safety elements, the environment,*

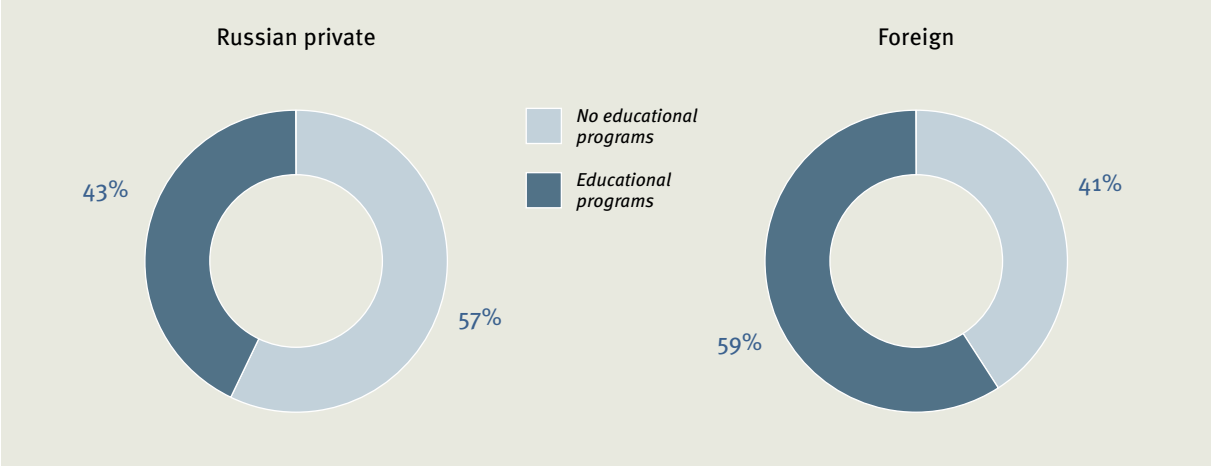
and people, and thus expose himself to the danger of being stripped of his license, or of being heavily fined by Rostekhnadzor. Or being put on trial on account of the workers who have suffered through the fault of the enterprise." (From interviews with foreign companies)

Foreign enterprises believe that the requirements under Russian law sometimes are formal and do not always match the actual requirements set in the industry; therefore, they apply the occupational safety rules of their own countries, in addition to the Russian rules.

Enterprises with foreign capital invest more frequently in building up the human capital of their employees

According to the Business Environment and Enterprise Performance Survey, in 2010, 59% of foreign enterprises were running training programs for their employees, compared to 43% of Russian enterprises (only private companies were considered in this survey).

Figure 4.4 Educational programs by enterprise ownership type, 2010



Source: Own estimations based on BEEPS, 2012.

At the same time, it must be noted that because domestic and foreign enterprises differ in terms of size and character of production operations, simple comparison of averages may distort this assessment. We have therefore used Probit econometric analysis to reveal the impact of the type of ownership on the probability of the enterprise having training programs for its employees. The factors that determined the probability of an enterprise running training programs included the type of ownership (2 categories), the size of the enterprise (3 categories), the type of industry (31 categories) and the gross regional product.

This analysis has shown that given other equal conditions, enterprises with foreign capital are 50% more likely to run training programs than private Russian enterprises[15].

The experts interviewed also note the marked tendency of foreign enterprises to invest in human capital. For example, one enterprise offered education loans to its employees on the condition that they stayed to work at the enterprise:

"I can say with absolute authority that our education budget is bigger than that of all our competitors, both federal and local. And we have the concept of "specialized or targeted loans". An

15 The detailed results of the econometric analysis are presented in Appendix 7.

employee can take out an educational loan and pay it back in installments partly in cash, partly in work hours, and partly with the time that he has already served at the enterprise. If I need that person, he can get an MBA or other degree at half the price, but then he is obliged to work here for 3 years." (From interviews with foreign companies)

Local officials and experts believe that foreign companies are more stable financially, which enables them to invest more in personnel training, although Russian enterprises are also aware of the importance of investing in the human capital of their employees:

"Serious foreign investors who come here have more resources for this because their financial position is usually better and they are more stable business entities than many local Russian regional companies. But I know — we are in contact with some leading local regional companies, which are aware of the problem and do not spare the expense and invest in personnel development, training and retention. Leading local companies are aware of that." (From interviews with foreign companies)

Seeking to address the problem of the shortage of qualified personnel, foreign investors actively cooperate with higher education establishments, and set up secondary vocational school partnerships to train the technicians they need.

For instance, one foreign company has established cooperative relationships with higher education institutions that train technical specialists in geology and mining:

"We actively cooperate with higher education institutions that train personnel to meet the required level of skills for our mining operations. One could mention the program we are running jointly with Yakut University, and we also have projects with educational establishments in Magadan and Chukotka. We interact with Moscow State University's Geology Department. In other words, we understand that personnel development in the mining industry is a task in which the state should play the leading role, but in which the users of subsoil resources are also interested. The average lifespan of a mine before it is depleted is 8 years or more. Therefore, if the subsoil resources user begins to interact with education institutions to train personnel at the start of the mine's life, such personnel can complete their training and start work at this location." (From interviews with foreign companies)

In the Amur region, investors have set up their own institution at a local vocational technical school (PTU) for training the technical personnel they need, and over time, have solved the personnel problem:

"We have some very positive experience; our companies work in the field of metallurgy and gold, and when they came here ‹…› when they saw that the region does not have such specialists, they created on the basis of a PTU their own primary and secondary vocational training institution which trains the workforce specifically for its own needs. Well, not strictly for its own needs, but for the metallurgical industry in general. In this way they solved the problem completely. The guys see the prospects, the guys gain experience, practice on the job and eventually stay to work there. This is great". (From interviews with regional officials)

Staff rotation must be encouraged in regions with a harsh climate

The more remote the region, the more frequently businessmen and officials say that it is necessary to use the rotation

method and not form a permanent population. Regional officials cite the social problems in neglected communities left over from Soviet times. The situation is different in Khabarovsk and Vladivostok, where officials see potential for bringing in labor, educating young people, training specialists and developing the local human capital.

"We should use the rotation method. If we bring families to the site, that creates a potential social problem after the deposit is depleted. Likewise, there is no need to bring workers with their families to implement infrastructure projects — they do their job and leave. To service the facility takes one-tenth of the number who worked on the construction site." (From interviews with regional officials)

People want to live in places where the climate is good. Setting up permanent communities in remote areas creates potential social problems after the deposit or mine is closed.

"The bottom line is that people come to live where the living is comfortable, and they come to earn where living is not comfortable." (From interviews with regional officials)

"The problem of retaining the labor force remains, even where the wages are high. People earn some money and leave because the climate is bad and living conditions are poor." (From interviews with experts)

Additionally, providing social support in such areas is costly, and consumer costs are much higher, which leads to lower living standards:

"The low quality of life means high prices, poor quality medical services and poor quality education and childcare." (From interviews with experts)

This causes highly skilled specialists to complete their work contracts and leave, while low skilled ones stay, resulting in spiraling social problems.

Employees of foreign enterprises spend their money where their families live. Undeveloped services and recreation opportunities limit consumption in the Far East.

In the opinion of the heads of foreign enterprises, their employees spend their earnings in the region if they live there with their families (i.e. if they are permanent residents in the region). Otherwise, they take the bulk of their earnings out of the region. This is also true of foreign employees in management positions (however, the effect of this on regional spending is low as the number of these people is very limited).

"The employees of foreign enterprises are more likely than not to spend their money outside the region. I can give a rough assessment, I think it is 20 to 80%, that is, he spends the bare minimum to buy the basic necessities and takes away the rest because people come here to make some savings." (From interviews with regional officials)

"Senior managers and skilled workers see the Far East as a temporary place of work, so it is unlikely that they spend a lot of money here." (From interviews with experts)

Spending locally is limited by the rudimentary state of the services and leisure facilities in the Far East.

"Besides, the region is poorly developed and there is nowhere to spend your money. Going abroad to receive paid medical services is common practice." (From interviews with experts)

CHAPTER 5
STATE REGULATION

5 | STATE REGULATION

The quality of state regulation consists of many elements, including transparent legislation, effective and transparent tax rules and the efficient work of various government services, among others. The perceived quality of state regulation in any given jurisdiction will determine a foreign investor's plans to invest, especially in the extractive sectors. An analysis of the interviews with representatives of foreign companies revealed the following significant problems in this area for the Far East:

- Taxes: complicated administration and heavy load on accounting, tax rates (mentioned by some companies).
- Customs: high rates and inconsistent application deter would-be investors (although gradual introduction of WTO rules will address this). Moreover, customs administration suffers from inadequate infrastructure and technology.
- Laws: unpredictable changes in legislation, inconsistencies (mainly in subordinate or implementing laws and regulations).
- Technical regulation and relations with government agencies: problems with securing licenses to exploit subsoil resources; unpredictable behavior of government bodies; corruption-related risks.
- Political risks (companies are wary of the risk of nationalization).

Taxes and tax administration

Opinions on the level of taxes and the need for tax breaks vary between company managers and among regional officials. The main complaints are not so much about tax rates as about problems with tax administration. There is strong agreement amongst foreign companies that social tax rates are too high.

Some respondents from foreign enterprises consider the Russian tax system to be simple (especially compared with the tax systems in countries such as South Korea). Other enterprises complain that Russia has the most complicated taxation system, that some taxes are high, and that Russia has no clear system of tax benefits or incentives, especially as compared with China, Malaysia and Cambodia.

Varying perceptions on the issue of taxation depend on the respective industry sector of the specific enterprise (extractive or manufacturing) and on the stage of the project. Those respondents representing early-stage manufacturing companies and extractive industry projects say that tax breaks are needed for new enterprises and complain about the high level of the social tax. Individuals representing extractive industry projects that have already started operation appear to be less concerned about the issue of taxes and tax benefits.

When discussing the system of tax benefits, officials and foreign investors agree that given an unfavorable investment climate and high cost of doing business, it makes sense to introduce tax benefits for new enterprises. They say that such measures would be attractive for and welcomed by both foreign and Russian enterprises.

"Tax breaks are not needed to attract foreign investors. But they should be given time to get to their feet considering the production cycle." (From interviews with regional officials)

Tax incentives to make the Far East more attractive to investment

At the end of 2012, Russian President Vladimir Putin called for the authorities to create not just favorable but special legislative conditions for business in the Far East. One result of this was the signing on 30 September 2013 of Federal Law 267, which introduces new tax incentives to encourage investment in the Far Eastern Federal District and also in other constituent territories of the Russian Federation.

The law introduces a new taxpayer category ("regional investment project participant"), for which federal profit tax will be set at 0% for a period of ten years beginning when the participant first receives revenue from the project. The law also stipulates a reduction in regional profit tax of up to 10% for the first five years beginning when the participant first receives revenue from the project and at least 10% for the subsequent five years.

A company can be classed as an "investment project participant" if it meets certain criteria (registered in the region in which the investment project is being implemented, no separate subdivisions in other regions, a specific legal status, etc.). Announced capital investment should be at least 50 million rubles for projects implemented within 3 years of the company being included in the Register of Regional Investment Project Participants or 500 million rubles for capital investments carried out within five years of registration.

Furthermore, a lower coefficient will be applied to the established mineral extraction tax (MET) rate when calculating MET depending on the region (the coefficient can range from 0 to 1).

Investors certainly see this law as a significant positive step from the Russian government towards attracting further investment in the region. Nevertheless, questions remain, particularly with regards to criteria for the new taxpayer category: can investors that began implementing their projects in the period immediately before the law came into force (1 January 2014) count on these government incentives? It is the investment community's view that it would be justified and reasonable if this were to be the case.

Customs payments and the operation of the customs administration

Although the survey did not include a specific question about customs duties and customs administration, virtually all the representatives of companies surveyed mentioned these issues. Additionally, the respondents provided examples of the challenges that they faced in working with customs in the Far East.

Foreign investor representatives place customs tariffs and administration amongst the key problems they encounter, which could result in a negative impact on the total volume of investments and the introduction of new technologies

In the manufacturing sector, changes in customs duties can be decisive in determining the profitability of any facility. Manufacturing industries in the Far East are oriented towards export to the Asia Pacific region where competition is very stiff, so that any increase of production costs may make the difference between a profit-making and a loss-making enterprise.

> *"[Regarding] custom duties, if we buy equipment from abroad, we pay an extra 40% of the cost of that equipment. We do not produce this type of equipment in Russia, so we have to incur these costs." (From interviews with foreign companies)*

According to some foreign investors interviewed, poor administration of customs services could be regarded as a major brake on the import of new technology. This can further inhibit innovation. Another important barrier is the deficient customs service infrastructure (lack of terminals at many ports, see Chapter 6). At the same time, studies of innovation and international trade show that copying imported technology is key for the transfer of knowledge and technology (see Kiriyama (2012), Liu and Buck (2007)).

Technical regulation: licenses for geological prospecting and the use of subsoil resources

According to some foreign investors, the number of agencies that regulate extraction is excessive; their decisions can often be controversial, and the obligatory "expertiza" is often overpriced

The majority of respondents believe that the government should not make technical decisions on the development of subsoil resources. Investors (enterprises) have enough incentives to make the right decisions because they assume the risks inherent in mineral extraction projects (such a system is used in Canada, for example). Russia is in a period of transition from the Soviet system, in which the state risked its money when deciding to exploit deposits, to the mixed / market economic model, in which such risks are assumed by private firms. According to respondents, the current legislation has not yet departed from the old system and embraced new market-based principles, which is why many state bodies and agencies do work which is not essential and could be regarded as less relevant in a market economy. As a negative consequence of this over-regulation, firms are required to prepare and submit an excessive number of documents for Rosnedra, the State Commission for Subsoil Resources, and other agencies.

"State agencies give the go-ahead on technical issues that should not be within their competence. They should be decided by the companies that assume the financial risks. The state structures slow down the production process, which affects the profitability of the project, and may cause the investor to decide to withdraw from the market." (From interviews with foreign companies)

"Rosnedra, its regional entities, that is Yakutnedra, Dalnedra, Magadannedra, and the State Commission for Subsoil Resources, play a role that does not match present-day realities…." (From interviews with foreign companies)

Both investors and regional officials believe that it is necessary to reduce the number of state bodies that control these activities and bring the inspection of subsoil exploration and development activities under a single umbrella.

"There is a consensus that there is excessive regulation ‹…› that it is not harmonized between sectors of the economy. These regulations should be streamlined and simplified… The investor need not have to run from office to office. The fewer such offices the better." (From interviews with regional officials)

Furthermore, it is necessary to pursue a policy aimed at harmonizing the Russian standards in various fields (environment, occupational safety, geological prospecting, license issuance, etc.) with the best world standards, in order to make regulatory mechanisms more transparent, predictable and understandable for foreign investors.

"Operational equipment and technologies are over-regulated. The employee operating a machine must have a certificate for every machine. Obtaining a certificate is a formality. [Foreign companies] use other occupational safety standards that are adopted in developed countries because they consider them to be functional rather than formal." (From interviews with foreign companies)

The state bodies with which decisions have to be cleared often have no specialists on the relevant questions. Prices charged for such services are often exorbitant, particularly for small and medium-sized investors. For example, the price of a state expert examination on any particular extractive project may run into hundreds of thousands of dollars, depending on the size of the project, and the total price of obtaining a permit for extraction of subsoil resources may run into millions of dollars.

Another problem frequently encountered by foreign investors in the extractive sector is the discrepancy between Russian and international expert laboratory findings. Some official Russian requirements to document disclosure contradict commercial confidentiality principles, and there is a risk that sensitive information may leak from state agencies to competitors.

Obtaining and extending licenses for the use of subsoil resources may take an unreasonably long time

A basic challenge for foreign investors is the long duration and complexity of obtaining and extending licenses for the use of subsoil resources.

Foreign companies often buy Russian enterprises that already hold licenses in order to avoid the overly long and difficult procedure of applying for licenses.

"We did not have to obtain a permit for extraction because we had bought a Russian company that already had a permit. On the new deposit we had to work with the Anti-Monopoly Service to obtain approval from the Government Commission for Control of Foreign Investments, as this deposit is one of "federal significance" (or "strategic"). This process took approximately 8 months. If a foreign investor had started from scratch, it could well take much longer." (From interviews with foreign companies)

There were also some voices in favor of the notification-based principle of issuing licenses for geological prospecting. Russian standards and regulations in the extractive sectors vary significantly from those applied by other resource-rich countries, and these differences can hold back foreign investments:

"In the rest of the world, only a few years pass from discovery to the start of exploitation. Here it takes decades. Foreigners here manage to launch production faster, within 8 years, but that is still too long by world standards." (From interviews with experts)

Legislation

The key problem for investors is unpredictable changes of legislation, which lends itself to varying interpretations and which can sometimes be applied retroactively

All foreign investors interviewed indicated that the number one problem they face in the Far East (and in Russia as a whole) is the unpredictability of applicable laws and regulations, and the possible variation of interpretations of some laws and supporting legislation.

"Changes of some regulatory acts are not matched by changes of other acts; new laws may contradict the Civil Code and so forth. Abrupt and ill-thought-out changes in legislation are worrisome. New laws contradict previous laws." (From interviews with foreign companies)

Local officials also admit the existence of this problem:

"Changing legislation ‹...› this is really a big problem, a very big problem not only for foreigners but for us as well. There have also been changes in the fisheries sector, in the forestry industry that hit many enterprises." (From interviews with regional officials)

Investors are particularly concerned with the retroactive application of some laws:

"Some legislative acts may have retroactive force, which is impossible in other jurisdictions (given a stable political situation)." (From interviews with foreign companies)

"Unstable and flawed legislation and unpredictable changes may render investments unprofitable." (From interviews with experts)

It should be noted, however, that contradictions in legislation mainly manifest themselves in lack of coordination between supporting legislative acts in different sectors of economic activity. Foreign investors have not indicated that they are concerned by any contradictions between the main regional and federal laws.

The law on strategic mineral deposits

In the opinion of foreign investors in the extractive industry, the law on strategic deposits[16] is not written thoroughly enough and can be applied retroactively, which causes the largest number of complaints and deters new investment

The potential retroactive application of the law is of particular concern to foreign investors. Additionally, there is the potential for ambiguous application of the law because of many inconsistencies with existing legislation, including the Civil Code. Foreign investors are particularly concerned that in Russia, contrary to widespread international practice, the first discoverer may not necessarily have the chance to obtain a production license.

"The law on strategic deposits — too many organizations and agencies that do not specialize in the field are involved." (From interviews with foreign companies)

"Laws that contradict each other. One has to pass a huge number of instances that often do not have adequate understanding of the extractive industry and could pass contradictory resolutions and in some cases cannot agree among themselves." (From interviews with foreign companies)

"All of the major extractive companies have left Russia after the law on strategic deposits was passed." (From interviews with foreign companies)

Experience has shown that since the introduction of the new law in 2008, many junior exploration and larger mining companies have left Russia, as the junior exploration companies have been unable to raise sufficient capital to continue. This is partly due to an incomplete understanding of the law and regulations (by financing agencies and banks) but also because of the contradictory, vague and ambiguous nature of the regulations. There is a widespread apprehension among western companies that the law increases the risk of nationalization.

Relationships between investors and state bodies

The main concern of the state should be to obtain fair compensation for the use of subsoil resources and to minimize environmental damage connected with the extraction of subsoil resources. Decisions on granting licenses for deposits are made at the federal level (especially strategic deposits) and regional authorities have a limited say on these issues. The relationships that investors have with the various levels of government administration also vary considerably.

Relationships between investors and the regional authorities

Where there are many foreign investors, the regional authorities make no distinctions between foreign and Russian investors; but where there are few, they try to create favorable conditions, although in general there are not many mechanisms for that (as the key decisions are made at the federal level)

16 Law 57-FZ, the Strategic Sector Laws (SSL), enacted in March 2008.

The representatives of regional executive bodies in the regions with a large presence of foreign companies do not draw a distinction between foreign and Russian-owned enterprises. For them, it is important that jobs are created, high wages and taxes are paid, and infrastructure is developed.

In the regions where foreign investments are scarce, the regional authorities pin greater hopes on the potential positive spillover effects of the presence of foreign investors (mainly in the development of infrastructure) and are ready to offer them preferential treatment.

On the whole, the regions do not have many instruments to compete for foreign investments:

> *"The regional authorities try to work with investors actively. They have some programs and working groups for working with foreign investors and making their region more attractive. But they simply do not have enough clout; they do not make decisions because they do not have the authority to take independent action. The regions have little autonomy, which means that there is little competition amongst them." (From interviews with foreign companies)*

Often regional authorities seek cooperation from foreign investors in addressing social issues

Despite having relatively little capacity to provide material incentives to foreign investors, many regions seek to impose additional socio-economic requirements on investors. Respondents representing two different regional administrations indicated that they would like to have the right to demand that foreign investors create jobs and hire local personnel, citing the experience of which they are aware in other countries.

Generally, foreign investors see their main mission as paying their fair share of social taxes (which they view as fairly high). They tend to react cautiously to the demands of some regional authorities who seek additional (some respondents called them "excessive") financial and logistical support for what the local authorities insist are critical social or economic projects. Nevertheless, as the interviews have revealed, major investors are always in one way or another involved in the region's social life and charitable projects and try to provide assistance to the local population and minority indigenous people, in particular (see Chapter 10).

Perception of political risks

Political stability and continuity and consistency of economic policy are exceedingly important for major investors that plan long-term projects. Some investor respondents perceive that this is not guaranteed in Russia, which leads to increased apprehension about potential nationalization as a political risk:

> *"Political risks — fear of nationalization — tend to narrow the horizon of investments as enterprises seek to complete the development of fields as quickly as possible (at Sakhalin 1 the peak of extraction was reached in 2 years at most). The more you accelerate extraction at a newly opened site, the less oil you will recover from it." (From interviews with experts)*

The ambiguity of legislation and the inconsistency of application of regulations are the main reasons cited for investors' concern about the risk of nationalization.

Corruption

Foreign companies are staunch opponents of corruption

Foreign businessmen from developed countries expressed complete intolerance of all forms of corruption. Their countries have tougher anti-corruption laws, which they apply to the work of companies from their home jurisdiction in other countries. The potential risks of incur-

ring criminal and civil penalties for the companies and executives involved provide a strong incentive for foreign investors to abstain from corrupt practices. This strong motivation can be seen as a positive element in the national campaign against corruption in Russia.

"Corruption — the personal interests of officials — speeds things up. Foreigners do not pay bribes, big companies do not give bribes because they cherish their reputation." (From interviews with experts)

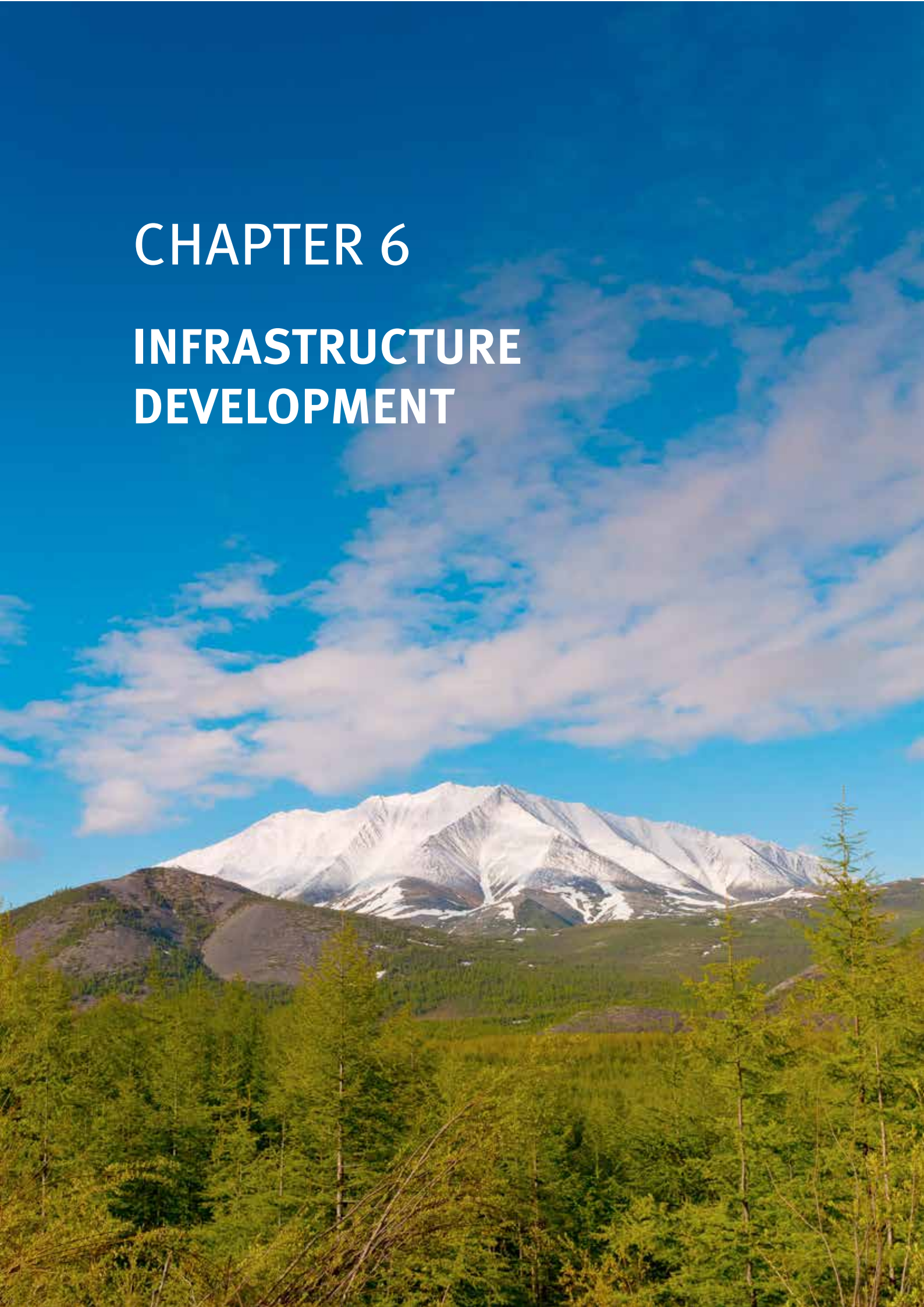
There is very little corruption at the regional and local level, while at the federal level corruption risks could arise from the tightly controlled procedure of obtaining licenses and ambiguous law on strategic deposits

Representatives of foreign enterprises interviewed believe that corruption at the regional level in the Far East is minimal. Although almost all respondents claim they frequently encounter attempts of petty extortion by local bureaucrats, such incidents do not pose important obstacles because consistent behavior in rejecting such demands produces positive results. This is partly due to the fact that the most important issues (especially concerning the use of subsoil resources) are regulated at the federal level.

No respondents expressed concerns about possible corrupt behavior of federal officials in granting licenses. Although it was widely believed that such corruption existed during the 1990s and earlier in this century, the feeling is that the situation is much improved. Nevertheless, the perception that corruption is widespread in Russia is still difficult to dispel and continues to inhibit new investment.

CHAPTER 6

INFRASTRUCTURE DEVELOPMENT



6 | INFRASTRUCTURE DEVELOPMENT

Quality of infrastructure is an important component of any jurisdiction's investment climate. However, for the Far East it is critically important

"The existence of a developed infrastructure reduces the payback period of projects and makes the region more attractive for investment." (From interviews with experts)

In the Far East, where climate is a particular challenge (with temperatures as low as -50°C in winter) and many mineral deposits are located in remote areas, uninterrupted functioning of the transportation system and power supply is vital.

The key problems in the Far East are insufficient development of transport and costly power

Our interviews with local experts and foreign business representatives have revealed that the main infrastructure problems in the Far East are the absence of railways in much of the region, and overloaded railways where they exist at all; the lack of short-range aviation; the unsatisfactory state of marine ports; and the high cost of energy. Some commented as follows:

"The most important problem in the development of infrastructure is that it is totally absent."

"The condition of airports is appalling."

"The capacity of railways is fully exhausted." (From interviews with experts)

Transportation

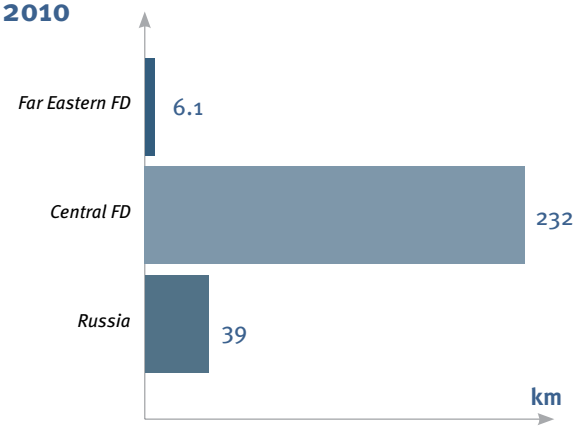
The efficiency and effectiveness of the transportation system in the Far East has a pronounced seasonal character. In winter, a lot of overland cargo is carried on winter (ice) roads that are re-built each year with the onset of winter, or on frozen riverbeds. Marine transport also plays an important role, but is restricted by climatic conditions as well. During the rest of the year, only aviation remains as a reliable form of transportation. However, air transport is also insufficiently developed (especially as regards short-range aviation) and is exceptionally costly. The high cost of transportation in the Far East (coupled with costly energy) inhibits the creation of manufacturing industries aimed at meeting demand in other Russian regions or for export, given the very high cost structure.

Table 6.1 Number of seaports in Russia in 2012

	Number of ports	Of them non-freezing
Russia	63	19
Far East	28	7

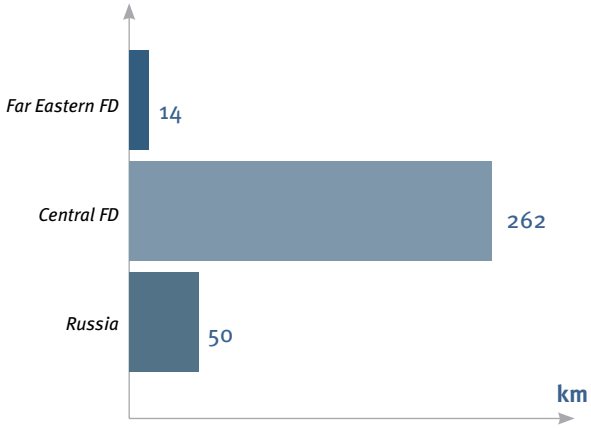
Source: Federal agency of sea and river transport. Register of seaports (http://www.morflot.ru/reestr_mp/).

Figure 6.1 Density of public asphalt-paved automobile roads per 1,000 square km, 2010



Source: Rosstat. Central statistical database, http://cbsd.gks.ru/

Figure 6.2 Density of public railways per 1,000 square km, 2011



Source: Rosstat. Transport and communications in Russia 2012, http://www.gks.ru/bgd/regl/B12_5563/Main.htm

Automobile and railway transport

The emergence of new projects in the extractive industries in some regions of the Far East is quite limited by railway capacity. According to expert assessments, the main railways in the Far East — the Trans-Siberian Railway and the Baikal-Amur Railway — are overloaded and would not be able to handle additional loads if business activity in the Far East were to increase. A further problem is that these two railways run parallel to each other with essentially no connections between them. Both local officials and foreign representatives (especially of manufacturing companies) also cite the high tariffs charged for commercial rail transport. Some regional officials also noted their difficulty in urging the Russian Government Railway Company (RZD) to make expansion in the Far East a priority.

"Our road network is undeveloped. We have only directions, but no roads." (From interviews with regional officials)

... But when planning the development of railway transport, the economic effect must be carefully assessed

In the opinion of some officials, railways should be built where business needs them so that cost-effectiveness is the key measure. This is a classic conundrum, in that the high capital cost of railway construction makes building additional rail lines prohibitive based on speculation that railways can attract industrial activity, and vice versa.

The entry of foreign investors has a generally positive impact on the development of land transport. Foreign companies build roads (most frequently winter roads)

The entry of foreign investors, in addition to providing revenues for regional and local budgets which may in one way or another be used to improve infrastructure, also exerts a direct impact on development because foreign enterprises build roads to meet their own needs.

"All types of infrastructure are absent. What we have, we provide ourselves. The regions of course are ready to cooperate, but as a rule they are cash-strapped." (From interviews with foreign companies)

Officials in many regions note that foreign investors are favorably distinguished by their readiness to assume responsibility for developing infrastructure. According to some local officials, Russian companies often tend to ask the state to finance the building of the roads needed for their projects.

"Unlike Russian companies, foreign companies are prepared to do all this themselves and they do not ask us for money for infrastructure, they are ready to do everything themselves, to build all the infrastructure at once and to start working." (From interviews with regional officials)

Also, in the opinion of some officials, the building technologies used by foreign companies are better and

cheaper than the methods used by Russian construction companies. For example, foreign companies bring their own ideas regarding the quality of roads.

"While a Russian expects and understands by transport accessibility the existence of a gravel road and not simply a dirt road, foreign citizens expect an asphalt surface without potholes." (From interviews with regional officials)

Some foreign enterprises build roads (mainly winter roads) that are between 300 and 700 km long and that are extensively used by the local population and local businesses.

Road construction by companies involves overcoming bureaucratic barriers

In the opinion of some foreign investors, the quality of pre-existing roads can adversely affect and even harm company-owned vehicles. When building their own roads, foreign enterprises find that this area of construction is heavily regulated. For example, the head of one company says that he is unable to build a road because he must first make a topographic map of the terrain, which is something foreign enterprises are forbidden to do under law.

Air transport and the development of short-range aviation

High air fares pose an additional barrier to attracting skilled manpower

Very high prices of air tickets aggravate the problem of attracting skilled labor, limit the opportunities of labor migration, and effectively increase the physical remoteness of natural resource projects in particular:

"I could cite another typical example concerning transport, you can fly from Blagoveshchensk to Moscow. Or you can fly Blagoveshchensk — Heihe — Beijing — Moscow and it would be cheaper." (From interviews with regional officials)

Foreign companies help to develop and promote short-range aviation

Foreign enterprises actively contribute to the development of short-range aviation for their own needs. They repair abandoned runways, extend and modernize them for use by more advanced aircraft, and even build airports from scratch. As a rule, this work is generally done without state participation, although companies must comply with very strict technical and other government requirements.

Many respondents commented that there can be fruitful cooperation between business and the state in this sphere. This is because in addition to serving the business, privately-run aviation may potentially help address important social objectives. On the whole, the results of the interviews show that there is sufficient convergence of views on this question to warrant a separate study of the obstacles that hinder the development of short-range aviation in remote Russian regions.

Marine Ports

The development of ports is held back by the apparent lack of incentives for owners

Improvements in the area of port development are held back by the lack of proper incentives for port owners, experts believe. In the opinion of the experts interviewed, marine ports are sometimes owned by organizations that do not invest money in their development and prevent foreign enterprises from carrying out modernization, even though the latter have the expertise and access to modern building technologies and are willing and able to contribute to the improvement of some ports.

Given the short period of navigation, lack of customs terminals at many ports is a serious problem

Another serious problem is that sea ports often have no customs terminals, which substantially slows down the development of foreign trade and the import of new equipment (see Chapter 5). The problem is compounded by the short period of navigation in the northern areas. The risk that the cargo will not reach a port with a customs terminal in time, or reach the destination via a seasonal road before the season ends, may be the key factor in deciding against launching or developing an investment project.

Telecommunications

Although there has been some recent improvement in the availability and speed of Internet services, respondents observed that access is often described as unsatisfactory. The companies providing communication services are few, which leads to inflated prices for services:

> *"Internet connection services cost a great deal, and today no enterprise can operate normally without the Internet." (From interviews with foreign companies)*

Power supply

The availability and cost of electrical and thermal power varies greatly throughout the Far Eastern Federal District.

Ore processing plants consume large amounts of energy, and therefore, power shortages can make the production of subsoil resources uneconomical. The development of an improved power supply calls for building new capacity and modernizing power transmission lines, which have also suffered from under-investment in the past. As a result, raw materials (along with taxes and jobs) go to other regions of Russia and even other countries.

> *"The construction of ore processing plants requires amounts of electrical energy that we cannot at present provide in principle. They are setting up public-private partnerships, and some foreign companies are ready to take part. If this project is not pursued, ore enrichment and the jobs that are created in the process will move to another region." (From interviews with regional officials)*

Cooperation between business and the state in the field of infrastructure: current status and prospects

Given the degree of underdevelopment of infrastructure in the Far East, neither an individual region, nor the Federal Government can hope to address the critical needs alone. On the other hand, local officials are under no illusion that individual investors will be willing, or able, to solve infrastructure problems by themselves.

This naturally leads to a discussion of the potential role of public-private partnerships (PPP). However, numerous examples from around the world have demonstrated that in the development of infrastructure, business and the state may have different goals, different risks, and different planning horizons, which makes such projects very difficult indeed. For business, the planning horizon is clearly linked with the projects' payback period or life cycle, while the state naturally takes a longer and broader view, and is concerned about the overall development of the region.

What is the optimal degree of state participation? In making a decision on state participation in infrastructure projects, one should draw a clear distinction between infrastructure needed solely for a specific business project, and infrastructure that addresses local social requirements and is a social good, while having the additional indirect effect of attracting new investors.

Regional authorities often believe that building infrastructure for the extractive industry in sparsely populated regions is the sole responsibility of business

Excessive costs related to the development of essential transportation infrastructure in permafrost areas is often seen by officials as unnecessary spending of considerable amounts of budget revenue. In regions with low population density where business activity is concentrated mainly in the extractive industry, many regional officials insist that infrastructure should be developed only with an eye to specific projects, with state participation at a minimum.

"The main instrument of developing infrastructure is not getting in the way of foreign investors who are building it." (From interviews with regional officials)

"In developing infrastructure the main hopes are pinned on foreign investors." (From interviews with regional officials)

In other countries with similar climatic and geographic attributes, such as Canada, national and sub-national governments do invest in the construction and maintenance of roads in remote areas. The Russian authorities also invest considerable resources in this type of infrastructure construction, although winter roads may not cover the entire geographical spectrum of business interests. Regarding power generation, foreign investors are quite accustomed to energy self-sufficiency through autonomous diesel electric generation in remote parts of other jurisdictions where power transmission lines are not built because they are too costly. The situation is similar to that of Russia.

And big investors share this view

Major investors in the extractive sector believe that they can cope with most infrastructure problems themselves. This is especially true of remote territories that are difficult to access. Clearly, foreign investors are convinced that they alone can best determine the risks and evaluate the costs of stand-alone and self-sufficient projects. As a consequence, regions have found it difficult to encourage foreign investors in extractive projects in the Far East to participate financially in expensive power generation projects that will have little or no positive impact on the profitability of their projects.

But for smaller investors, the barrier may turn out to be insurmountable

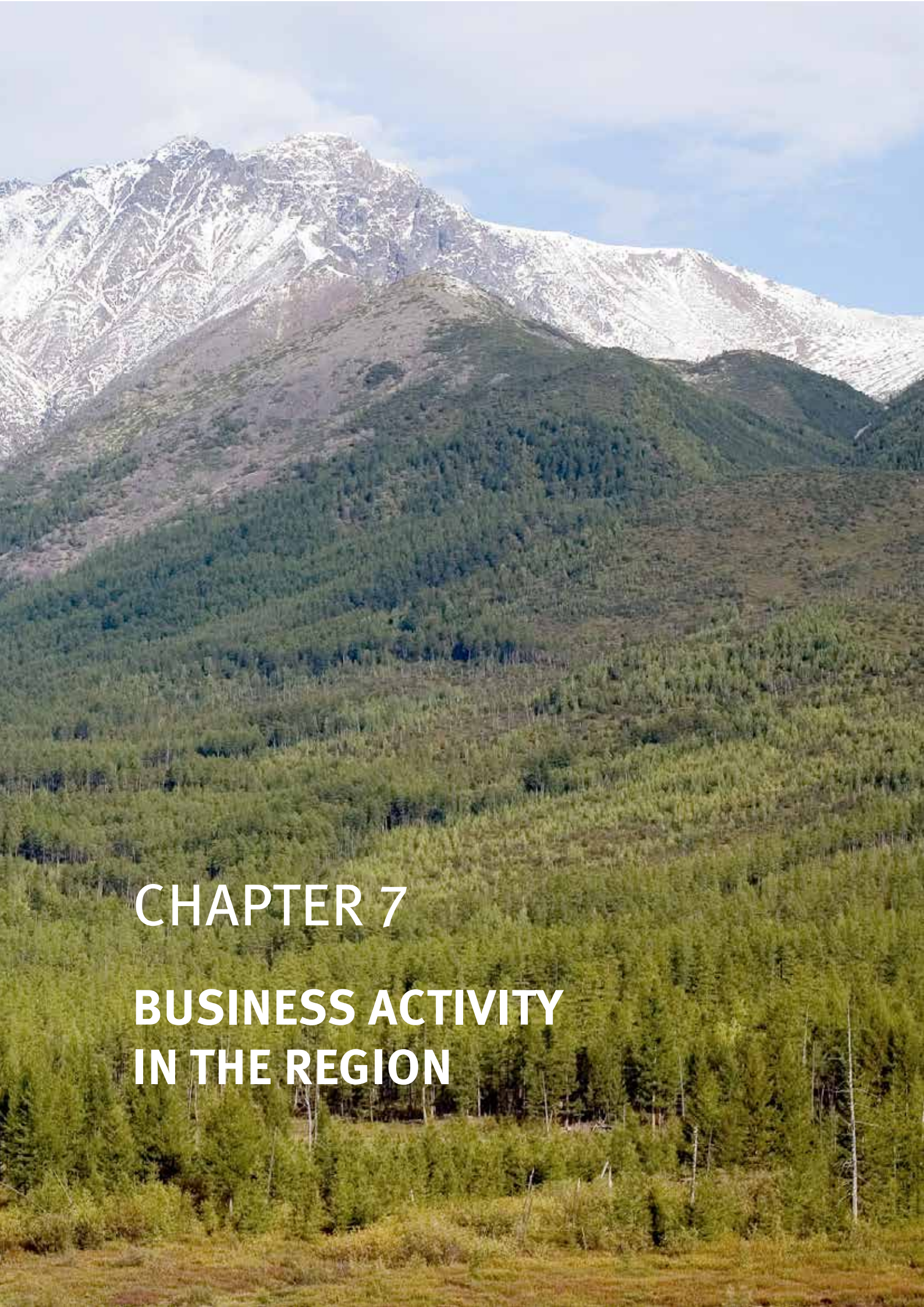
If a greater proportion of the high cost of building infrastructure is shifted onto foreign investors, only very large firms might be willing to enter the market to develop large deposits. Smaller projects that cannot develop self-sufficiency in power supply are more likely to prove uneconomic in this scenario. Regional governments need to take into account this aspect of the challenges in developing additional infrastructure and attracting investment.

However, there is a trend towards joint development of infrastructure by the state and business in the manufacturing industry

In the manufacturing sector, there is a shared belief expressed by representatives of foreign companies and regional and local officials that they must cooperate in developing shared infrastructure projects. However, PPP in the sphere of infrastructure is not yet working in most regions (with the exception of Sakhalin). Most often, respondents argued that this was because of inadequate legislation governing such partnerships. However, a regulatory legal framework for the creation of PPP in infrastructure development is currently being developed.

The risks and potential problems for PPP: reliant on political and economic stability

A further problem in the development of PPP is the dependence of such projects on the political situation, as a change of regional governor or government may bring about a revision of the terms of contracts. Another important risk that needs to be taken into account is the foreign economic situation and fluctuations of world commodity prices. If prices are unfavorable in global commodity markets, and the profitability of their own projects is under threat, companies may decide against continuing joint construction of infrastructure.



CHAPTER 7

BUSINESS ACTIVITY IN THE REGION

7 | BUSINESS ACTIVITY IN THE REGION

Small business

The current conditions in the Russian economy for the development of small and medium-sized businesses are not entirely optimal. Observers often cite the lack of economic stability, poor access to credit, the high level of economic crime and the lack of appropriate government guarantees[17]. Experts describe the situation in the Far East as worse than in the country at large due to the specific conditions in the region[18].

Challenges for small and medium-sized businesses in the Far East include:

- The lack of a large internal market
- Low density and constant outflow of the population
- Low purchasing power of households
- Harsh and sometimes extreme climatic conditions
- Underdeveloped production and social infrastructure
- Remoteness from economically-developed Russian regions
- Difficulty of obtaining financing or bank loans
- Need to pay compensation and northern "hardship pay" to workers stipulated under the Labor Code of the RF
- High taxes and utilities tariffs.

The three most important factors, as revealed by the survey of the problems of small business in the Khabarovsk territory[19], turned out to be the problems of high taxes, low purchasing power and high cost of the services of monopolies, rent and bank interest rates. As for mandatory benefits for workers which employers are obliged to provide under the Labor Code, respondents note that previously these benefits were paid out of the state budget, without any burden on the business in question. Some business owners even resorted to hiring workers illegally and paying wages under the table[20].

Compounding this list of challenges, another problem specific to the region — as revealed in the findings of the Sulakshin Scientific Political Thought and Ideology Center (TsNPMI) (2012) — is the keen interest displayed by neighboring countries, in particular China, whose businesses are displacing Russian companies from border territories, and whose manpower is preferred by employers to local citizens or migrants from the CIS countries.

Conditions for the development of small business in the Far East are unfavorable

In contrast to these challenges, the entry of foreign investment in the FEFD stimulates the development of small and medium-sized businesses and contributes to improving the economic situation in the region as a whole. The presence of foreign companies stimulates the creation of local enterprises that supply goods and services to foreign companies. Examples of these areas of activity include public catering, construction materials, office cleaning, security, advertising and automotive transport.

"The entry of a foreign investor gives an additional impetus to the development of small and medium-sized business in the region. This is first and foremost the market of services, the market of supplies and semi-processed goods and working clothes or catering and other services." (From interviews with experts)

"Foreign investors usually try to get rid of non-core production and services. Therefore they buy everything from local companies: transport, communications, fuel, services and food." (From interviews with regional officials)

17 http://www.kommersant.ru/doc/2203719
18 For example, Sulakshin Scientific Political Thought and Ideology Center http://rusrand.ru/ideas/dalniy-vostok-kak-nereshyonnaya-problema-rossii, Far Eastern Consulting Centre http://dkcenter.ru/analitics/detail.php?id=132, Sociological Survey of the Problems of Small Business in the Khabarovsk Territory http://www.financetheory.ru/fins-550-1.html
19 http://www.financetheory.ru/fins-550-1.html
20 In the opinion of Olga Zhilonkina, director of OOO Mir company and ANO Gorodskoi Fontan, http://dvkapital.ru/specialfeatures/dfo_21.01.2013_4942_v-poiskakh-srednego-klassa-na-dalnem-vostoke.html

Such "supporting" local companies may accompany the activities of extractive and manufacturing foreign enterprises, and there is a lot of room for their development considering the current state of the FEFD market.

But the entry of foreign companies helps to overcome institutional constraints for the development of small business

With greater competition, the emerging service and supply companies can help to overcome their lack of experience and the generally poorer quality of their offerings as compared with the usual (external) suppliers. Some foreign investors believe that local producers in other countries display more initiative as compared with the Russian Far East:

> *"No small enterprises for producing spare parts have sprung up, as has usually been the case in other countries." (From interviews with foreign companies)*

Yet local firms that produce intermediate goods for foreign companies may additionally find demand outside the extractive sector in the manufacturing industry, where the share of foreign investors in the FEFD is not high.

Another benefit of foreign investment in the FEFD is that the workers of foreign enterprises, and the production facilities that cater for their needs, are often local citizens who spend their earnings in the region. This creates additional demand and stimulates the development of small and medium-sized consumer business, which generate additional expenditure and employment, thus producing a multiplier effect:

> *"The personnel in the companies catering to a big extractive industry is approximately equal in size to those engaged in the foreign enterprise (1,200 and 1,500)." (From interviews with foreign companies)*

> *"I would say that every member of our staff creates 2-3 jobs because we are only at the stage of geological prospecting, not production. At the production stage, the ratio would be 1:10." (From interviews with foreign companies)*

While such multiplier effects might be limited in more remote parts of the Far East, in projects closer to population centers, the effects can be substantial. For example, in the Primorsky territory, one can expect to see all three effects of the activities of foreign enterprises: the formation of small businesses providing services; businesses providing intermediate goods; and the multiplier effect of creating additional demand. By contrast, in the Chukotka autonomous district, the effect of foreign investment is more closely restricted to the development of services around foreign investors. Thus, the potential for the development of small business varies from region to region.

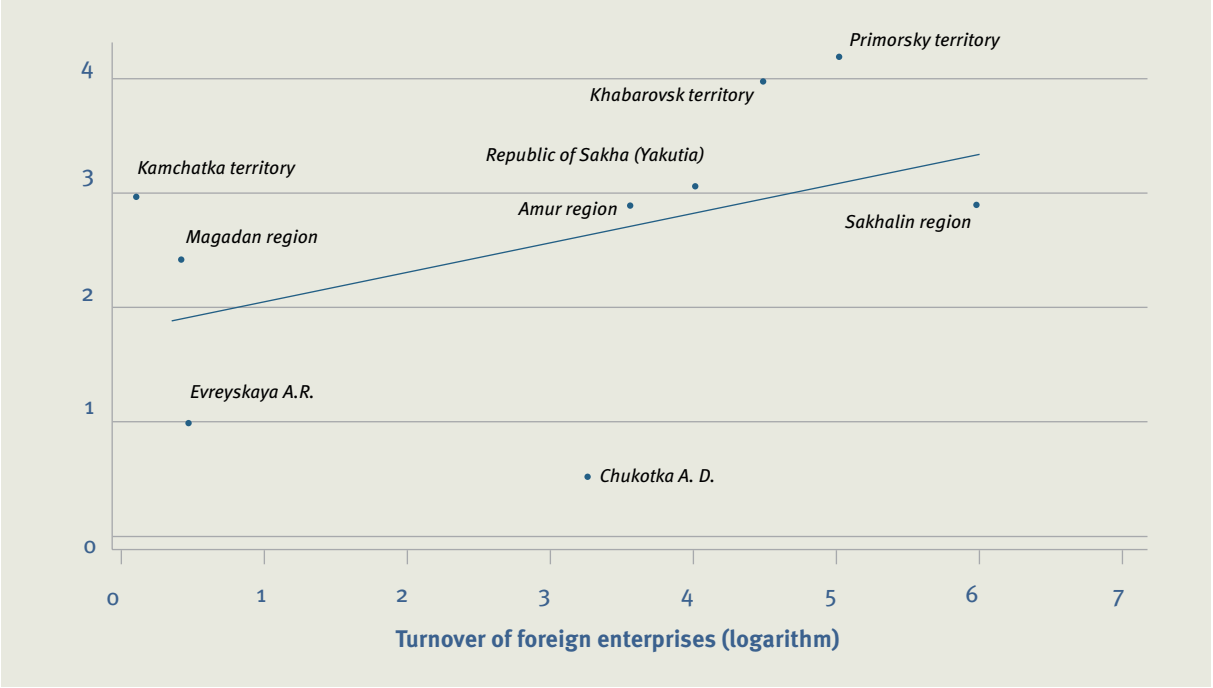
The positive development of small business around foreign companies in the Far East can be demonstrated by comparing the turnover of foreign enterprises and the turnover of small enterprises in trade and services (both foreign and domestic). Fig 7.1 reveals a positive correlation between these two types of turnover. The history of the development of local companies along with FDI illustrates the correlation:

> *"In 2007 we came to villages whose populations were drinking themselves to death. These villages recovered before our eyes. Now almost every family has a car in its courtyard, the people are more active and have a chance to go on holiday abroad. ‹...› Shops have been built, catering points which serve our workers. The building of the plant ‹...› resulted in the appearance of a large number of transport companies in the region which set about developing the logistics. That entailed supplies of large quantities of equipment, raw and other materials ‹...› Small enterprises engaged in the services mushroomed." (From interviews with foreign companies)*

The activities of foreign enterprises, in addition to stimulating local business, also exert a positive impact in

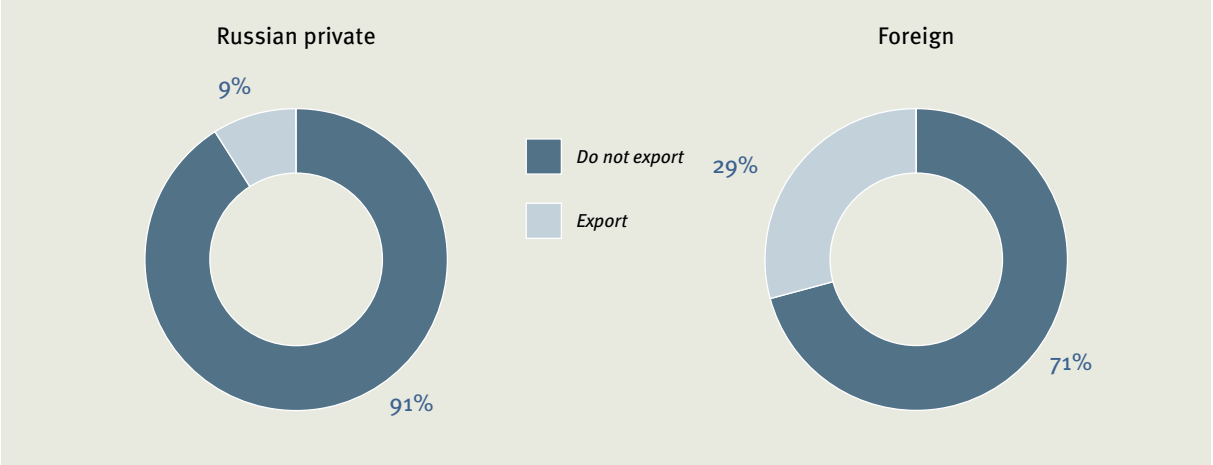
the extractive industry by attracting additional FDI to the service sector. An empirical study of factors that influence the distribution of foreign direct investments in Russian regions by Gonchar and Marek (2013) has shown that the presence of mineral resources in a region attracts foreign investments not only in the extractive industry but also in the services sphere. Thus, investments in the service sector accompany the development of subsoil resources in mineral-rich regions, and do not replace "extractive" investments.

Figure 7.1. Turnover of small business in the sectors of trade and services (wholesale and retail trade, transport) and the turnover of foreign enterprises in the Far Eastern Federal District in 2010 (on a logarithmic scale)



Source: Rosstat, data from UISIS.

Figure 7.2 Share of exporters among firms by ownership type, 2012



Source: BEEPS, 2012.

Foreign trade activities

Foreign companies also influence the region's involvement in foreign trade.

Foreign companies are more export-oriented

The results of the Business Environment and Enterprise Performance Survey show that enterprises with foreign capital are more likely to sell their products abroad. Among the Russian private enterprises, only 9% of firms export their goods, as compared to 29% of foreign companies (see Fig. 7.2).

This thesis is borne out by regression analysis. Probit econometric analysis was used to reveal the effect of the type of enterprise ownership on the likelihood of export activities. The factors that determine the probability of export were the type of enterprise ownership (2 categories), the size of the enterprise (3 categories), the sector (31 categories) and the gross regional product. Analysis has shown that given other equal conditions, enterprises with foreign capital are three times more likely to export their products than a private Russian enterprise [21].

In addition to the direct effect of involving a region in foreign trade, the export activities of foreign companies may also have an indirect effect by helping Russian firms break into foreign markets. For example, domestic enterprises may obtain access to the information multinational companies have on foreign markets by observing their export activities. Domestic companies may also begin to borrow the production and managerial experience of multinationals, which may help them to compete more successfully in foreign markets. However, the caveat is that this effect arises more frequently in the manufacturing and services spheres rather than in the extractive industries. Consequently, in the Far East the effect may be more apparent with the further development of foreign trade, an increase of foreign investments, and diversification of the structure of FDI towards manufacturing.

21 The results of the econometric analysis are presented in detail in Appendix 8.

CHAPTER 8

INNOVATION

8 | INNOVATION

Macroeconomic models of the impact caused by foreign direct investment and international corporations show the long-term growth factor that attracts new technologies to the country (see Grossman and Helpman (1991), Lucas (1988) and Romer (1990)). When a foreign firm decides to organize production in another country, it usually holds that the firm possesses more advanced production technologies or innovative management methods. Without such technological or management advantages, it will not have a competitive edge over the national enterprises, which typically are more familiar with the preferences of local consumers, the functioning of local business and the character of relations with the authorities (see Blomstrom and Sjoholm (1999)).

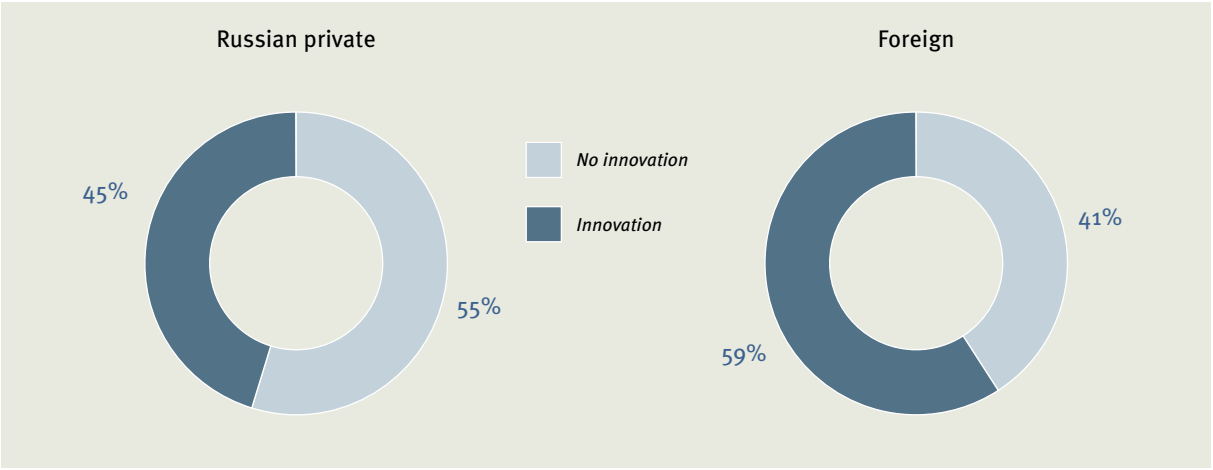
"The Far East is a new region unknown to foreign companies. Therefore the first to enter are big companies that are world leaders in technology." (From interviews with regional officials)

Foreign enterprises are more frequently involved in innovative activities than Russian ones

Our analysis shows that in Russia as a whole, companies with foreign capital are more often involved in innovative activities compared with private Russian companies. Statistics show that 45% of Russian companies have been introducing innovations over the three years preceding the survey. The figure for foreign companies is 59% (see Fig. 8.1). "Innovations" in our survey refer to product, process, organizational and marketing innovations, as well as research and development.

"[Foreign investors] have managerial methods that are more universal and are more closely related to production management. They modernize their equipment very quickly because if in our business you fall behind world standards, that already spells additional costs. Therefore they invest heavily in innovation and modern equipment." (From interviews with foreign companies)

Figure 8.1 Innovation activity of companies by ownership type, 2012

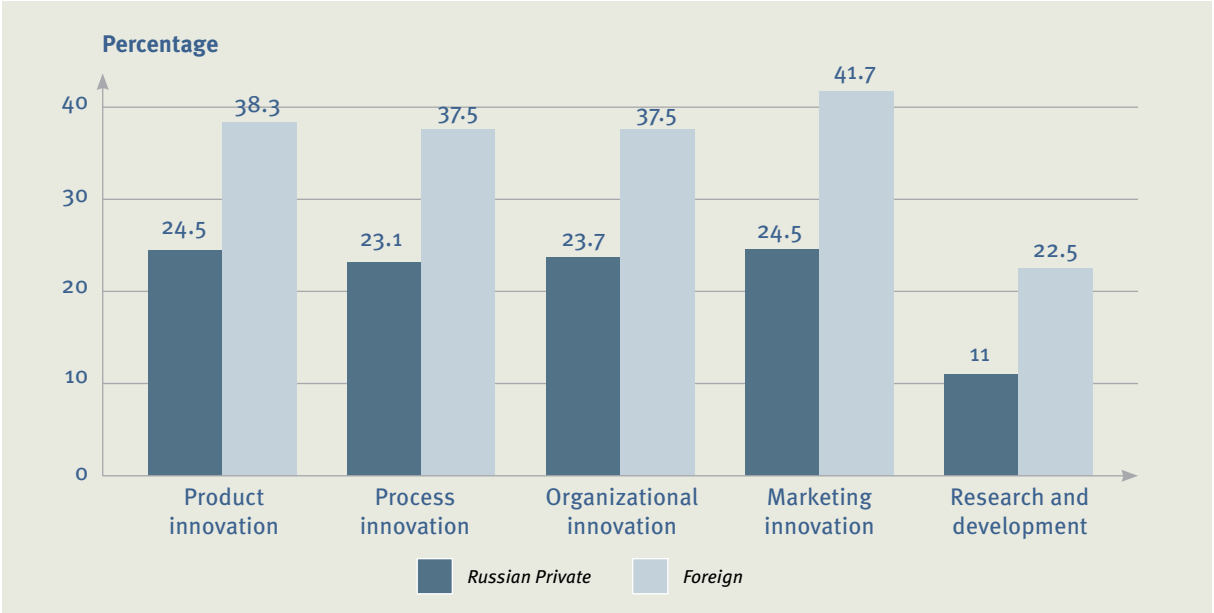


Source: BEEPS, 2012.

The structure of innovative activities by type is similar for Russian and foreign companies (see Fig. 8.2). However, the share of enterprises involved in innovative activities is substantially higher among foreign enterprises than among Russian companies. As for the main types of innovation (products, organization, processes and marketing innovations), the indicator of involvement in innovative activities for enterprises with foreign capital is 1.5–1.7 times higher than for Russian enterprises. Statistics also show that foreign enterprises invest in R&D

twice as frequently, with one in every five enterprises with foreign capital spending on research and development, compared with one in ten Russian enterprises that have conducted R&D.

Figure 8.2 Innovation activities of companies by ownership and innovation type, 2012



Source: BEEPS, 2012.

As indicated above, Russian and foreign enterprises have disparate structures in terms of the size and character of activities, therefore, simple comparisons of averages may yield distorted results. A Probit econometric analysis was carried out to reveal the effect of the type of enterprise ownership on the likelihood of innovative activities. The factors that determined the probability of an enterprise engaging in innovations were the type of enterprise ownership (2 categories), enterprise size (3 categories), sector (31 categories) and gross regional product.

The analysis has shown that, given other equal conditions, enterprises with foreign capital were 19% more likely to introduce innovations than private Russian enterprises[22].

The foreign enterprises that work in the Far East are as a rule:

- Big (because small enterprises cannot finance the building of infrastructure);
- Export oriented (because there is virtually no domestic market);
- Working in remote territories and in harsh climates.

All these factors indicate that foreign enterprises have more advanced production technologies, both in the manufacturing industry and often in the extractive industries in the field of mining subsoil resources. Manufacturing companies have to be competitive in world markets, which requires the use of modern technologies. Extractive companies operate in the world commodity markets and are forced to use technologies that cut costs in order to gain a competitive edge on their competitors.

"Foreign investors above all bring modern approaches to running production, modern equipment, modern environmental standards and occupational safety standards." (From interviews with experts)

In the Far East, extractive companies use more innovative technologies

22 The results of the regressive analysis are presented in detail in Appendix 9.

According to those experts interviewed, in the Far East it is extractive and not manufacturing companies that use more innovative technologies. Because a majority of the companies that come to the Far East are major extractive companies, they have the financial resources to afford the use of advanced technologies as well as the necessary human capital required to apply these technologies. The number of mineral deposits where simple exploration and extraction methods can be used is shrinking in Russia, as in other parts of the world. Therefore, extractive industries have to use more advanced technologies to solve complicated problems associated with finding, defining and extracting subsoil resources. For example, on Sakhalin Island the development of offshore gas fields involved resolving complex technical tasks that required teams of many international professionals.

Foreign investors acknowledge that Russian mineral extractive industry enterprises are also trying to use more advanced technologies. Looking at big Russian enterprises, some respondents observed:

"Extractive companies sell their products at world prices, therefore they stand to gain from using new technologies in order to cut their costs. That is true both of foreign and Russian companies. It would be wrong to say that Russian extractive companies do not use new technologies, but major foreign companies often have more experience working in diverse conditions and therefore tend to use more advanced technologies." (From interviews with foreign companies)

"The technologies used in Russia are more advanced than in other countries because the production conditions are more complicated (permafrost that thaws, etc.)." (From interviews with foreign companies)

Our survey covered some enterprises that were initially Russian-owned but later attracted foreign investments. The heads of all these enterprises have said that one of the main reasons why foreign investors were invited to invest in these Russian companies (in addition to attracting financing for production development) was to gain access to new technologies and management methods.

The influence of foreign enterprises on innovation in the mineral extractive sector of the Far East has also been demonstrated in the introduction of foreign geological laboratories that have come to Russia to provide local geochemical and metallurgical testing services. With some notable exceptions where soil and rock samples must still be exported for further analysis abroad, the Far East now boasts a number of world-class geology laboratories.

"The analytical equipment appeared only thanks to the foreigners. They are the ones who bring expensive equipment and new technologies to Russia." (From interviews with experts)

Through the efforts of foreign investors in the area of specialist training and development (as described in section 4), emphasis on innovation and new technologies is being put into practice in the various educational programs they have initiated and sponsored. In addition, there have been instances when foreign enterprises took part in joint projects to finance academic research (for example on Sakhalin), according to regional officials.

FDI and innovation at Russian enterprises

In addition to its direct impact, the entry of foreign investment stimulates the investment activities of Russian enterprises (in the same region). Foreign enterprises may influence the innovative activities of Russian enterprises through several channels:

- Intensified competition makes Russian enterprises use more advanced production methods;
- Domestic enterprises can copy the goods and services brought in by foreign enterprises, as well as their production and management methods;

- Domestic enterprises become suppliers of goods or services for foreign enterprises and have to use new technologies and management methods in order to meet the requirements and standards of foreign companies;
- Workforce mobility, i.e. the transfer of trained workers from a foreign to a Russian company, results in the transfer of know-how and skills to domestic production.

"It makes more sense to attract foreign investors because in addition to money they bring along the culture of production and the culture of doing business ‹...› they influence not only the process of extraction, however progressive, that they use, but culture in general — how to organize warehouses, supplies and deliveries. How to build roads; they set an example of how to build roads and so on. How to do business, how to do the paper work." (From interviews with regional officials)

The entry of foreign companies stimulates innovation by Russian enterprises

Our study involved econometric analysis of the impact of the volume of foreign investments in the region on the activities of private Russian enterprises. A Probit econometric analysis was carried out to reveal the effect of the inflow of foreign investments on the probability of innovative activities. The factors that determined the probability of the introduction of innovations at an enterprise were the volume of foreign investments in the region, enterprise size (3 categories), the sector (31 categories) and gross regional product. The indicator of the volume of foreign investments in the region was built as the logarithm of the volume of foreign investments in the region to gross regional product.

Econometric analysis has revealed a positive correlation between the volume of foreign investments in the regions and the innovative activities of Russian companies (see Table 8.1).

Table 8.1. Impact of FDI in the region on innovation by Russian enterprises[23]

Type of innovation	Sign of the coefficient by the FDI share in the region
Product innovation	+***
Process innovation	+***
Organizational innovation	o
Marketing innovation	+***
R&D innovation	+***

Note: o — the coefficient is not statistically significant,
*** — the coefficient is significant at the level of 1%.

Source: Own estimations based on the RUSLANA database and the Business Environment and Enterprise Performance Survey, 2012.

However, it should be borne in mind that the economy's potential to absorb the positive impact of foreign investments depends on internal conditions, which vary greatly from region to region in Russia. The ability to adopt new production methods depends on the level of human capital in the country, and the likelihood of becoming a supplier of intermediate goods for a foreign firm depends on the effectiveness of the domestic enterprise. Thus, the quality and availability of human capital, management skills and the development level of the social and economic infrastructure are the prime determinants of whether the innovations that foreign investors bring to the region can have a lasting effect.

In the opinion of some experts interviewed, one of the key factors that slows down the absorption of the new technologies in the Far East is the lack of skilled manpower.

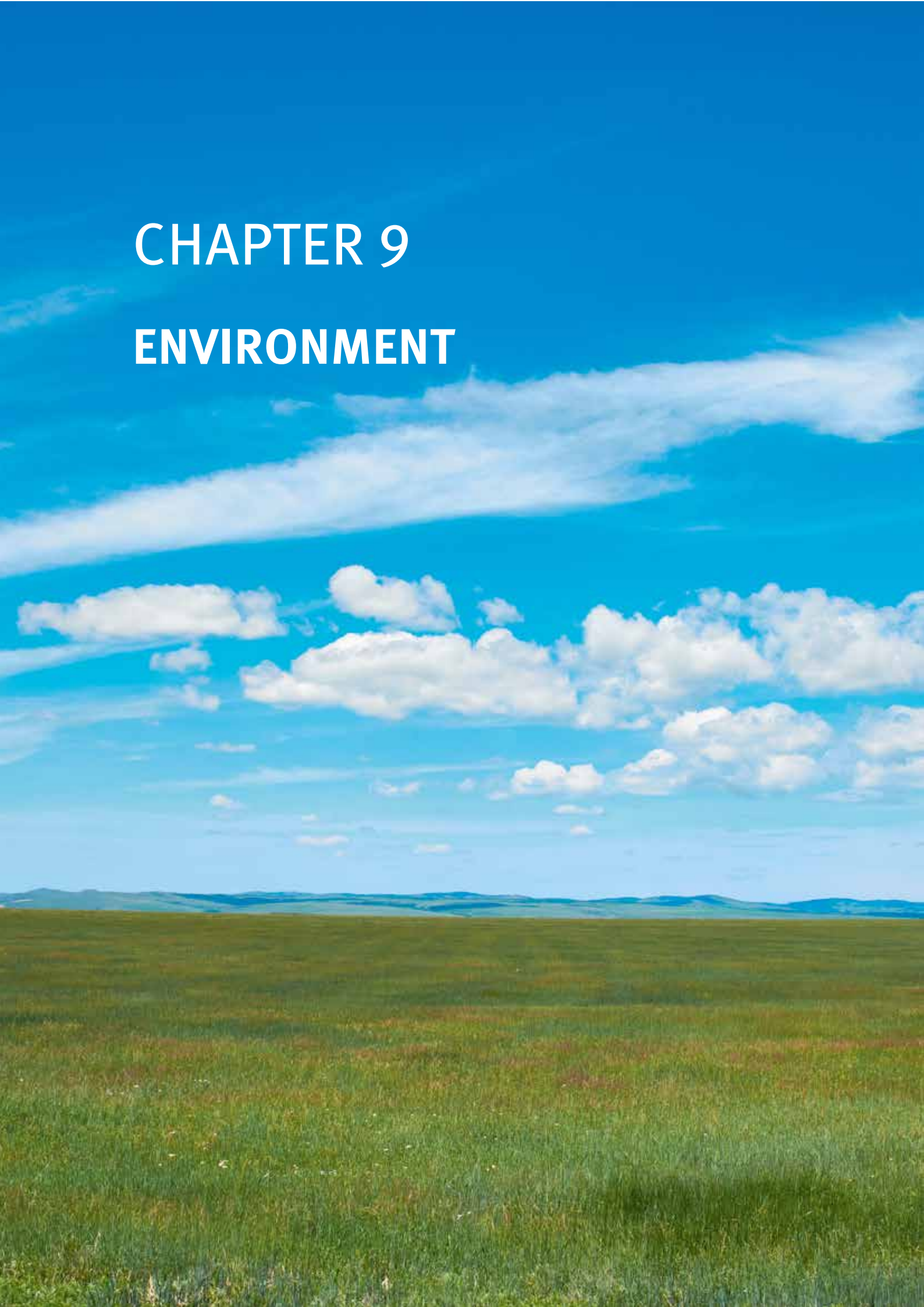
23 The results of the econometric analysis are presented in detail in Appendix 10.

“There is a lack of personnel for the development of high technologies.”

“Investments in R&D: I don’t think anything practical will emerge.” (From interviews with regional officials)

While the use of more advanced technologies in the extractive industry in the Far East is justified, high-tech manufacturers are not attracted to the Region. This observation holds for Russia in general, but the problem is particularly acute in the Far East. Both the enterprises and the experts say that investments in high-tech production processes are close to zero.

“We do not have many such companies, I mean the companies that introduce new technologies are few and far between.” (From interviews with regional officials)



CHAPTER 9

ENVIRONMENT

9 | ENVIRONMENT

A significant number of the environmental problems in the Far East are connected with the mineral and metal production activities in the region. As a result, many of the coastlines in the Ussuri and Amur harbors are polluted with heavy metals because many enterprises in the extractive and chemical industries dump their untreated waste directly into the public drainage system (this is the main source of sea pollution). A shortage of purification equipment at ports, as well as large quantities of outdated and worn-out ships and equipment that frequently lead to leakages and industrial accidents at refineries and other industrial facilities, are not conducive to improving the environment in those parts of the Far East that contain these facilities.

According to a report by the Sulakshin Center, Far Eastern ecosystems are more vulnerable to ecological disasters than other Russian regions. Moreover, the current extensive and unbalanced use of natural resources undermines the potential development of renewable natural resources[24].

Given this situation, the environmental consequences of FDI in the Far East are hard to predict. In theory, the advent of foreign direct investments in the region may result in several contradictory environmental effects: on the one hand, foreign enterprises often have technologies that pollute the environment much less than Russian enterprises (i.e. the "pollution haloes" hypothesis). On the other hand, many international examples demonstrate that some foreign investors seek out countries that set looser environmental requirements, and the governments of some developing countries take advantage of this by setting low environmental standards and regulatory practices. As such, certain foreign companies cut their production costs (i.e., the "industrial flight" hypothesis). In addition, such companies impose an extra load on the already overstrained local environment.

Russian environmental laws are essentially as tough as Western standards

As for the compliance of Russian environmental protection laws with the norms of other developed countries, there is a consensus among local officials and foreign business representatives that Russian laws are essentially as tough as Western standards:

> *"Present-day environmental legislation is such that it fully meets all the requirements: projects, re-cultivation and remediation and the requirement for clearance and approvals with all the supervisory bodies. In my opinion it is sufficient, probably even excessive." (From interviews with regional officials)*

> *"Environmental protection laws in Russia are as good as those in other countries (for example, the US or Australia). The problems that remain have been inherited from the Soviet times." (From interviews with foreign companies)*

Additional regulatory requirements are sometimes imposed on foreign enterprises, often as a result of subjective requirements set by some regional authorities. Officials in some regions freely admit that foreign companies are controlled more tightly than Russian ones, although environmental standards are the same for everyone. Foreign investors confirm this fact.

> *"Regulatory agencies in the environmental field are more exacting with regards to Western companies." (From interviews with foreign companies)*

At the same time, foreign companies note that the environmental and other standards do not always correspond to the real problems within the sector. In the opinion of some foreign investors, Russian government structures often present formal requirements without carrying out real environmental tests.

> *"The standards applied often do not correspond to the situation in the industry and the region ‹…›, but enterprises still have to obtain the necessary licenses and certificates. The standards should directly reflect the situation in the sec-*

24 *http://rusrand.ru/ideas/dalniy-vostok-kak-nereshyonnaya-problema-rossii*

tor. Failing that, they lead to unreasonable extra costs: the standards must correspond to the aims of environmental protection." (From interviews with foreign companies)

Foreign companies are usually bound by their domestic and international environmental standards of conduct, as well as Russian statutory requirements. According to representatives of foreign companies, investors from developed countries often use environmental standards and obtain certificates from these countries that can in some ways be more demanding than in Russia.

"The company uses additional national or international environmental standards which are sometimes more stringent or severe than in the Russian Federation. Some of these are even voluntary. For example, our company is the only one in Russia that has obtained a full certificate to ensure the safe handling and usage of cyanide during the entire production cycle — covering storage, transportation, usage, disposal and destruction." (From interviews with foreign companies)

Additionally, foreign investors obtain loans from Western banks and international financial institutions, which often include environmental requirements in the contract. As a result, in the opinion of regional officials and enterprises, foreign companies tend to comply with environmental standards more readily than Russian companies. It is also important to mention that foreign companies from developed countries often use more advanced production technologies (see Chapter 8) that are less polluting.

The same holds true for the adequate business and other insurance coverage that foreign companies purchase as a matter of obligation and good business practice.

The mineral extraction industry warrants special mention, as according to foreign company representatives, the cost of conservation, re-cultivation and remediation of mineral deposits and mines is included in their business plans from the outset. This has not always been the case in Russia's Far East, especially going back to Soviet times.

Foreign companies (especially those from developed countries), whether public or private, are keenly interested in maintaining their good reputation, and good environmental stewardship is an essential ingredient to good corporate reputation. This is especially evident in foreign public companies, where a poor environmental record can have a direct negative impact on the company's share price.

CHAPTER 10

CORPORATE SOCIAL RESPONSIBILITY

10 | CORPORATE SOCIAL RESPONSIBILITY

The social problems in the Far East have been covered in earlier sections of this report, and in this section we offer a summary of the approaches towards corporate social responsibility adopted by foreign investors in the Region.

The presence of a foreign investor in a particular region has a positive impact on regional budget revenues, making it possible to address some social problems. However, some regions (especially remote and sparsely populated ones) are also tempted to involve foreign investors in charitable activities designed to tackle local social issues.

The involvement of foreign investors in charitable activities aimed at regional social development is not always voluntary

In some regions, the authorities conclude contracts with investors (not only foreign, but also Russian) stipulating the involvement expected from the investor in the socio-economic development of the region, including financial and other contributions to social projects. In some cases, these additional costs are significant. As described by one respondent:

> *"If you obtained a permit — overcoming the additional conditions set by the regional authorities — you have to build a computer class and so forth. This is especially true for foreigners." (From interviews with experts)*

For larger enterprises, taking part in such projects may be a matter of maintaining a positive image, and they are generally ready to contribute financially to social programs (although it is not always certain that participation is voluntary). For medium-sized and small enterprises, however, this is an additional burden that may deter them from entry. Opinions on this issue vary considerably, although some regional officials can sympathize with the additional requirements placed on small and medium-sized companies:

> *"The main social problems are education and healthcare, which are not within the sphere of foreign direct investments." (From interviews with regional officials)*

> *"They are forced to do it. They should do their own business. Organize an auction, collect taxes and get money in other ways that are predictable for business. There needs to be redistribution at the federal level. This should be done through taxes." (From interviews with experts)*

> *"Business should do what it is obliged to do under the law. It must comply with labor legislation, occupational safety rules, pay taxes and that is all, it does not owe anything to anyone… The question arises because of the unbalanced tax system because the local government bodies get a very small share of the taxes that are not enough to provide the services that the municipal authorities have to provide. Therefore they are passing the buck." (From interviews with regional officials)*

> *"The best way an enterprise can contribute to the social development of a region is well-paid jobs. This is the best thing that they can and must do. The rest is the responsibility of officials." (From interviews with regional officials)*

Overall, while situations are not all the same, the more foreign investments a region has, the more moderate the demands presented to foreign investors. In economically depressed regions, more social demands are typically presented to foreign companies.

The experience of foreign companies is very important for building harmonious relationships between business (including Russian business), the population and the authorities

At the same time, the experience that foreign companies have acquired in various countries of establishing contacts with the local population and government is very useful for building harmonious relationships between business (including Russian business), the population and the authorities. As a rule, business disburses money and organizes special programs for addressing social problems at the local (municipal) level in order to establish long-term and trusting relations with all stakeholders, which is good for the companies in the long run. Indeed, in the opinion of experts, foreign companies in the Far East take a more comprehensive approach to sustainable development. The objective for many foreign companies is to practice sustainable development so as to enhance comfort and safety and ensure good conditions over the long term for all those involved in or impacted by the project, including indigenous local peoples. Their approach to the solution of social problems is often more comprehensive and less formalistic than is usual in Russian practice.

"Foreign business people have a different mindset, therefore it would be useful if, in addition to financial support, they were members of boards of trustees and helped to organize social projects." (From interviews with regional officials)

"The effect would materialize if enterprises come here to stay." (From interviews with experts)

The picture that emerges from interviews with foreign investors and officials in various regions of the Far East is that foreign companies in one way or another are involved in all aspects of social life in the region: they pay the cost of healthcare (in addition to the medical insurance of their employees), provide transport for hospitals and polyclinics, help socially vulnerable groups acquire housing, provide equipment and repair schools and kindergartens and organize transportation for children.

"Business has a social responsibility before society. The company takes part in various local programs. In the villages where we work which are inhabited by small [groups of] indigenous Northern peoples, our company takes part in building bakeries, the repair and restoration of schools and kindergartens and provides transport to bring children to school and hospital. We buy the necessary technology." (From interviews with foreign companies)

The degree to which smaller foreign companies can be involved in social projects is limited, given their size and scarce capital.

Support of indigenous peoples of the North: charitable programs aimed at preserving and developing traditions, creating jobs and training programs

The companies that come to the Far East regions are typically larger extractive companies that by the nature of their activities disturb the environment and may affect territories inhabited by indigenous peoples. Therefore, most regional authorities believe it is only fair for such companies to contribute to the social development of the region:

"In principle, foreign companies are not supposed to solve the region's social problems. But big companies are actively involved in charitable social projects (including housing). However, the government has set the condition that they assume part of the problems in those communities where their production is located." (From interviews with regional officials)

The development of areas inhabited by the minority indigenous peoples of the North may significantly affect and, in some cases, radically change their traditional way of life. Major foreign enterprises typically seek to maximize the benefits of these projects for indigenous peoples by providing employment opportunities, and by taking part in programs aimed at preserving and developing the traditions of indigenous peoples of the North.

Many foreign enterprises spend considerable time and resources to employ representatives of indigenous peoples at their enterprises. Given the prevailing lack of specialist skills or higher education, roles for the indigenous population are most often confined to auxiliary services (such as catering staff, cleaners, etc.). The efforts of many companies in this respect are held back by the lack of necessary skills among the indigenous population. There are some instances of successful investment by foreign companies in special training programs for indigenous peoples and these are welcomed by local and regional officials.

> *"We employ some workers from indigenous groups. In fact, employing them at our facilities is one of the priorities in our company's employment policy. Officially, we have more than 40 special programs ‹...›, which include training for people who have never had the opportunity to work at such an advanced enterprise." (From interviews with foreign companies)*

In some instances, large enterprises in the Far East have created special foundations to support the indigenous peoples of the North and have developed programs to train them in various specialties and in basic training necessary to start and run a small business.

CONCLUSION

Statistics and the results of interviews indicate that the investment potential of the Far East regions is not fully tapped. Foreign investors already present in the Region, while pleased with their success, continue to offer constructive recommendations for further development. Other companies from abroad appear to be extremely cautious about investing in the Region.

Our analysis, based on a survey of foreign investors, experts and representatives of regional government bodies, shows the following to be the main obstacles to doing business in the Far East:

- Undeveloped transportation infrastructure
- Shortage of skilled labor
- Limited access to power supplies and high cost of power.

These factors significantly increase the cost of production and transportation in the Far East compared with producers in neighboring countries, and make investments in many types of economic activity unprofitable.

Another important obstacle that deters foreign companies from coming to the Far East is, according to the survey, high administrative risks due to unpredictable changes of legislation. This is an issue affecting the investment reputation of Russia generally. It is especially manifest in the subsoil resource sector, where the share of foreign investment in the Far East regions is particularly high (although the actual number of successful investments is very low).

At the same time, the living standards in many areas of the Far East are below those of other Russian regions, and the entry of foreign investors has had a positive impact on the social and economic development of the region. In addition to the direct impact of payments into regional budgets and new job creation, foreign investment has beneficial spillover effects connected with the development of small and medium-sized businesses providing services to foreign firms, the upgrading of human capital (through training and social benefits for employees) and the introduction of new technologies and production management methods. The involvement of foreign companies in social programs is an additional benefit that foreign investment can bring to the Far East.

The challenge of tackling the regulatory, environmental, institutional, logistical and economic barriers to the further development of the Far East is immense. It is hoped that this report can help to inform the discussion and introduce statistical and anecdotal evidence to demonstrate that efforts and initiatives to stimulate more foreign investment in the region can only help in this worthy challenge.

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APPENDICES

APPENDICES

Appendix 1. Influence of different business barriers on the entry of foreign companies into

Variables	(1)	(2)	(3)	(4)	(5)
	Dependent variable: 1, if the entry of the foreign firm into the				
LN (POPULATION)	0.321***	0.314***	0.319***	0.310***	0.390***
	(0.074)	(0.070)	(0.073)	(0.074)	(0.115)
LN (DISTANCE TO MOSCOW)	-0.127***	-0.125***	-0.129***	-0.128***	-0.147***
	(0.014)	(0.015)	(0.014)	(0.014)	(0.024)
LN (GRP PER CAPITA)	0.475***	0.472***	0.488***	0.538***	0.610***
	(0.121)	(0.121)	(0.118)	(0.131)	(0.201)
SHARE OF POPULATION WITH HIGHER EDUCATION	0.025***	0.025***	0.025***	0.022**	0.027**
	(0.009)	(0.008)	(0.009)	(0.009)	(0.011)
UNIT LABOR COST	1.850***	1.815***	1.889***	2.124***	2.384***
	(0.586)	(0.593)	(0.581)	(0.649)	(0.891)
DUMMY FOR OIL AND GAS	-0.007	-0.008	-0.004	-0.036	-0.052
	(0.059)	(0.057)	(0.059)	(0.064)	(0.083)
DUMMY FOR FAR EAST REGIONS	0.054	-0.004	0.044	0.413	-0.314
	(0.242)	(0.212)	(0.233)	(0.463)	(0.863)
REGIONAL INDICES FOR OBSTACLES FOR DOING BUSINESS (BASED ON BEEPS DATA)					
ELECTRICITY	-0.022				
	(0.052)				
ELECTRICITY DUMMY FOR FAR EAST REGIONS	-0.355				
	(0.225)				
ACCESS TO TELECOMMUNICATIONS		-0.019			
		(0.048)			
ACCESS TO TELECOMMUNICATIONS DUMMY FOR FAR EAST REGIONS		-0.329			
		(0.215)			
TRANSPORT			-0.021		
			(0.053)		
TRANSPORT DUMMY FOR FAR EAST REGIONS			-0.342		
			(0.211)		
CUSTOMS AND TRADE REGULATIONS				0.160**	
				(0.077)	
CUSTOMS AND TRADE REGULATIONS DUMMY FOR FAR EAST REGIONS				-1.047	
				(0.646)	
ACCESS TO LAND					0.107
					(0.096)
ACCESS TO LAND DUMMY FOR FAR EAST REGIONS					-0.143
					(0.654)
CRIME, THEFT AND DISORDER					

the regional markets of the Russian Federation

(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
region was observed, and o otherwise								
0.336***	0.313***	0.331***	0.307***	0.343***	0.348***	0.308***	0.294***	0.314***
(0.080)	(0.068)	(0.081)	(0.071)	(0.083)	(0.089)	(0.070)	(0.070)	(0.073)
-0.128***	-0.122***	-0.132***	-0.128***	-0.133***	-0.137***	-0.128***	-0.130***	-0.128***
(0.014)	(0.013)	(0.015)	(0.015)	(0.015)	(0.022)	(0.014)	(0.014)	(0.014)
0.491***	0.450***	0.486***	0.494***	0.546***	0.527***	0.486***	0.509***	0.481***
(0.121)	(0.109)	(0.121)	(0.123)	(0.152)	(0.158)	(0.121)	(0.119)	(0.119)
0.025***	0.024***	0.025***	0.024***	0.026***	0.026***	0.024***	0.024***	0.024***
(0.009)	(0.008)	(0.009)	(0.008)	(0.010)	(0.010)	(0.008)	(0.008)	(0.008)
1.863***	1.579***	1.846***	1.877***	2.158***	2.163***	1.854***	1.925***	1.842***
(0.594)	(0.539)	(0.590)	(0.605)	(0.718)	(0.798)	(0.580)	(0.574)	(0.575)
-0.003	-0.004	0.005	0.002	-0.018	-0.007	-0.001	0.004	-0.002
(0.060)	(0.056)	(0.060)	(0.058)	(0.065)	(0.068)	(0.057)	(0.058)	(0.058)
0.180	1.689*	14.214	1.111	-0.981	-0.602	0.841	0.722	0.291
(0.293)	(1.025)	(27.108)	(0.732)	(1.435)	(1.671)	(0.547)	(0.511)	(0.302)
-0.073								
(0.066)								

Variables	(1)	(2)	(3)	(4)	(5)
	Dependent variable: 1, if the entry of the foreign firm into the				
CRIME, THEFT AND DISORDER DUMMY					
FOR FAR EAST REGIONS					
ACCESS TO FINANCE					
ACCESS TO FINANCE DUMMY					
FOR FAR EAST REGIONS					
TAX ADMINISTRATION					
TAX ADMINISTRATION DUMMY					
FOR FAR EAST REGIONS					
BUSINESS LICENSING AND PERMITS					
BUSINESS LICENSING AND PERMITS DUMMY					
FOR FAR EAST REGIONS					
POLITICAL INSTABILITY					
POLITICAL INSTABILITY DUMMY					
FOR FAR EAST REGIONS					
CORRUPTION					
CORRUPTION DUMMY FOR FAR EAST REGIONS					
COURTS					
COURTS DUMMY FOR FAR EAST REGIONS					
LABOR REGULATIONS					
LABOR REGULATIONS DUMMY					
FOR FAR EAST REGIONS					
INADEQUATELY EDUCATED WORKFORCE					
INADEQUATELY EDUCATED WORKFORCE					
DUMMY FOR FAR EAST REGIONS					
NUMBER OF OBSERVATIONS	63,603	63,603	63,603	63,603	63,603
NUMBER OF FIRMS	1,719	1,719	1,719	1,719	1,719
NUMBER OF REGIONS	37	37	37	37	37

Note: Nested logit estimation. Standard errors in parentheses; *** coefficient significant at level of 1%, ** at level of 5%, * at level of 10%.

Source: Own estimations based on RUSLANA and BEEPS 2012 databases.

(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
region was observed, and 0 otherwise								
-0.692*								
(0.419)								
	-0.108*							
	(0.062)							
	-1.648*							
	(0.907)							
		-0.063						
		(0.065)						
		-24.265						
		(45.569)						
			0.005					
			(0.060)					
			-1.741*					
			(0.990)					
				0.086				
				(0.093)				
				0.486				
				(1.149)				
					0.042			
					(0.080)			
					0.187			
					(1.393)			
						-0.008		
						(0.069)		
						-2.728*		
						(1.437)		
							0.069	
							(0.074)	
							-1.946*	
							(1.030)	
								-0.016
								(0.054)
								-0.601*
								(0.331)
63,603	63,603	63,603	63,603	63,603	63,603	63,603	63,603	63,603
1,719	1,719	1,719	1,719	1,719	1,719	1,719	1,719	1,719
37	37	37	37	37	37	37	37	37

Appendix 2. Employment factors in enterprises with different types of ownership

Factors	Estimates
PROPERTY TYPE: STATE	
AGE	0.029***
	[12.43]
GENDER (1 —FEMALE; 0 —MALE)	0.447***
	[9.07]
PRIMARY PROFESSIONAL	-0.098
	[1.21]
SECONDARY PROFESSIONAL	0.380***
	[4.54]
HIGHER PROFESSIONAL	0.696***
	[8.62]
CITY	-0.907***
	[16.03]
GROSS REGIONAL PRODUCT	-0.000**
	[2.30]
CONSTANT	-0.978***
	[8.15]
NUMBER OF OBSERVATIONS	2912
PROPERTY TYPE: FOREIGN	
AGE	-0.010
	[1.56]
GENDER (1 —FEMALE; 0 —MALE)	-0.891
	[0.70]
PRIMARY PROFESSIONAL	-0.253
	[1.22]
SECONDARY PROFESSIONAL	0.030
	[0.14]
HIGHER PROFESSIONAL	0.440**
	[2.27]
CITY	-0.054
	[0.31]
GROSS REGIONAL PRODUCT	0.002***
	[5.48]
CONSTANT	- 2.795***
	[920]
NUMBER OF OBSERVATIONS	7895

Method of assessment - multiple logit regression. The reference category is employment in a private Russian company. The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance

Source: Own calculations based on an RLMS database, 2011.

Appendix 3. Sectoral structure of employment of workers with higher education by type of enterprise ownership

	STATE	PRIVATE	FOREIGN
CONSUMER GOODS AND FOOD INDUSTRIES	0.8%	6.5%	16.2%
CIVIL MECHANICAL ENGINEERING	1.9%	3.9%	4.5%
MIC	3.2%	1.0%	0.0%
OIL AND GAS INDUSTRY	2.2%	4.9%	10.8%
OTHER HEAVY INDUSTRY	0.7%	4.1%	2.7%
CONSTRUCTION	2.8%	12.8%	3.6%
TRANSPORT AND COMMUNICATIONS	5.6%	8.3%	10.8%
AGRICULTURE	2.2%	1.9%	0.0%
ADMINISTRATION	11.0%	0.6%	0.0%
EDUCATION	29.2%	1.8%	0.0%
SCIENCE AND CULTURE	6.3%	3.4%	2.7%
PUBLIC HEALTH	10.2%	4.1%	4.5%
ARMY, INTERIOR MINISTRY	12.7%	2.1%	0.9%
TRADE, CONSUMER SERVICES	1.8%	33.2%	25.2%
FINANCE	5.1%	6.4%	13.5%
ENERGY INDUSTRY	2.1%	2.8%	4.5%
HCS	2.5%	2.2%	0.0%

Source: Own calculations based on an RLMS database, 2011.

Appendix 4. Wage equation with control on the property type of enterprises, 2007

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
AGE	0.048***	-0.004	0.031***	0.013***
	[6.08]	[1.39]	[3.40]	[4.97]
AGE*AGE	-0.001***		-0.000***	
	[6.62]		[3.26]	
EDUCATION				
PRIMARY PROFESSIONAL	-0.051	0.454***	-0.013	0.400***
	[1.34]	[6.54]	[0.31]	[5.49]
SECONDARY PROFESSIONAL	0.025	0.567***	0.164***	0.668***
	[0.57]	[6.29]	[3.58]	[9.14]
HIGHER PROFESSIONAL	0.282***	0.444***	0.417***	0.853***
	[6.66]	[5.26]	[8.39]	[11.00]
PROPERTY TYPE				
FOREIGN	0.145**		0.118*	
	[2.43]		[1.81]	
STATE	-0.134***		-0.202***	
	[5.12]		[6.49]	
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	-0.024		0.070	
	[0.42]		[1.52]	
CIVIL MECHANICAL ENGINEERING	0.042		0.116*	
	[0.70]		[1.80]	
MIC	0.044		0.084	
	[0.55]		[1.00]	
OIL AND GAS INDUSTRY	0.381***		0.685***	
	[5.76]		[7.62]	
OTHER HEAVY INDUSTRY	0.115*		0.152**	
	[1.88]		[1.96]	
CONSTRUCTION	0.166***		0.248***	
	[3.84]		[4.00]	
TRANSPORT AND COMMUNICATIONS	0.153***		0.157***	
	[3.31]		[3.10]	
AGRICULTURE	-0.753***		-0.313***	
	[12.86]		[4.62]	

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
ADMINISTRATION	-0.182*		0.125*	
	[1.73]		[1.84]	
EDUCATION	-0.486***		-0.173***	
	[6.22]		[3.91]	
SCIENCE AND CULTURE	-0.239***		-0.215***	
	[2.79]		[3.15]	
PUBLIC HEALTH	-0.257***		-0.081*	
	[3.19]		[1.80]	
ARMY, INTERIOR MINISTRY	-0.103*		0.053	
	[1.93]		[0.76]	
FINANCE	0.225**		0.168**	
	[2.07]		[2.47]	
ENERGY INDUSTRY	0.122		0.169*	
	[1.53]		[1.82]	
HCS	-0.160***		-0.162**	
	[2.70]		[2.43]	
CITY	0.083***	0.373***	0.086***	0.368***
	[2.87]	[6.88]	[3.12]	[7.35]
GROSS REGIONAL PRODUCT	0.000***		0.000***	
	[6.06]		[10.11]	
MARRIED		0.642***		-0.209***
		[9.45]		[3.86]
NUMBER OF CHILDREN UNDER 7 IN THE HOUSEHOLD		0.002		-0.300***
		[0.04]		[6.50]
NUMBER OF CHILDREN AGED 7 TO 18 IN THE HOUSEHOLD		-0.097**		-0.045
		[2.53]		[1.30]
HOUSEHOLD INCOME (PER CAPITA)		-0.014***		-0.009**
		[4.43]		[2.07]
REGIONAL UNEMPLOYMENT		-0.072***		-0.047***
		[9.40]		[6.69]
CONSTANT	8.340***	0.270**	8.022***	-0.024
	[50.39]	[2.20]	[43.62]	[0.19]
NUMBER OF OBSERVATIONS	2912	2912	3259	3259

The absolute value of z-statistics is in the parentheses. * 10% level of significance;** 5% level of significance; *** 1% level of significance.

Appendix 4. (Continuation.) Wage equation with control on the property type of enterprises, 2008

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
AGE	0.056***	-0.004	0.026***	0.010***
	[7.11]	[1.28]	[2.62]	[3.78]
AGE*AGE	-0.001***		-0.000***	
	[7.36]		[2.63]	
EDUCATION				
PRIMARY PROFESSIONAL	-0.020	0.298***	-0.100**	0.300***
	[0.57]	[4.19]	[2.12]	[3.99]
SECONDARY PROFESSIONAL	0.080*	0.498***	-0.007	0.500***
	[1.90]	[5.25]	[0.14]	[6.63]
HIGHER PROFESSIONAL	0.351***	0.354***	0.289***	0.699***
	[8.63]	[4.09]	[5.98]	[8.86]
PROPERTY TYPE				
FOREIGN	0.200***		0.261***	
	[3.40]		[3.64]	
STATE	-0.149***		-0.195***	
	[5.64]		[5.71]	
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	0.025		0.029	
	[0.45]		[0.59]	
CIVIL MECHANICAL ENGINEERING	-0.022		-0.020	
	[0.35]		[0.26]	
MIC	0.029		-0.039	
	[0.34]		[0.39]	
OIL AND GAS INDUSTRY	0.301***		0.409***	
	[4.78]		[4.52]	
OTHER HEAVY INDUSTRY	0.072		-0.041	
	[1.28]		[0.49]	
CONSTRUCTION	0.141***		0.159**	
	[3.33]		[2.38]	
TRANSPORT AND COMMUNICATIONS	0.157***		0.029	
	[3.47]		[0.51]	
AGRICULTURE	-0.664***		-0.329***	
	[12.07]		[4.47]	

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
ADMINISTRATION	-0.051		-0.149**	
	[0.54]		[2.05]	
EDUCATION	-0.404***		-0.254***	
	[5.27]		[5.18]	
SCIENCE AND CULTURE	-0.096		-0.246***	
	[1.31]		[3.53]	
PUBLIC HEALTH	-0.329***		-0.113**	
	[3.72]		[2.27]	
ARMY, INTERIOR MINISTRY	-0.040		0.014	
	[0.78]		[0.17]	
FINANCE	0.240**		0.150**	
	[2.35]		[2.07]	
ENERGY INDUSTRY	0.052		0.121	
	[0.68]		[1.13]	
HCS	-0.174***		-0.128*	
	[2.92]		[1.65]	
CITY	0.082***	0.346***	0.067**	0.334***
	[2.92]	[6.12]	[2.22]	[6.58]
GROSS REGIONAL PRODUCT	0.001***		0.001***	
	[7.17]		[9.12]	
MARRIED		0.607***		-0.101**
		[8.96]		[2.06]
NUMBER OF CHILDREN UNDER 7 IN THE HOUSEHOLD		0.014		-0.219***
		[0.27]		[5.45]
NUMBER OF CHILDREN AGED 7 TO 18 IN THE HOUSEHOLD		-0.039		0.005
		[1.00]		[0.15]
HOUSEHOLD INCOME (PER CAPITA)		-0.001		-0.000
		[0.95]		[0.41]
REGIONAL UNEMPLOYMENT		-0.100***		-0.073***
		[12.30]		[10.51]
CONSTANT	8.366***	0.685***	8.620***	0.338***
	[54.86]	[5.40]	[46.84]	[2.69]
NUMBER OF OBSERVATIONS	2953	2953	3219	3219

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Appendix 4. (Continuation.) Wage equation with control on the property type of enterprises, 2009

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
AGE	0.071***	-0.000	0.028***	0.012***
	[8.93]	[0.12]	[2.80]	[4.72]
AGE*AGE	-0.001***		-0.000***	
	[9.05]		[2.87]	
EDUCATION				
PRIMARY PROFESSIONAL	0.000	0.420***	-0.112**	0.302***
	[0.00]	[5.93]	[2.41]	[4.15]
SECONDARY PROFESSIONAL	0.083*	0.541***	-0.011	0.551***
	[1.90]	[5.91]	[0.23]	[7.55]
HIGHER PROFESSIONAL	0.336***	0.489***	0.309***	0.664***
	[7.92]	[5.58]	[6.57]	[8.87]
PROPERTY TYPE				
FOREIGN	0.132**		0.233***	
	[2.30]		[3.50]	
STATE	-0.101***		-0.155***	
	[3.79]		[4.62]	
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	-0.098*		0.087*	
	[1.82]		[1.78]	
CIVIL MECHANICAL ENGINEERING	-0.168***		-0.080	
	[2.76]		[1.06]	
MIC	-0.097		0.074	
	[1.20]		[0.70]	
OIL AND GAS INDUSTRY	0.284***		0.416***	
	[4.81]		[4.77]	
OTHER HEAVY INDUSTRY	0.076		-0.028	
	[1.30]		[0.33]	
CONSTRUCTION	0.149***		0.166**	
	[3.55]		[2.44]	
TRANSPORT AND COMMUNICATIONS	0.096**		-0.026	
	[2.15]		[0.47]	
AGRICULTURE	-0.570***		-0.230***	
	[10.70]		[3.38]	

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
ADMINISTRATION	-0.096		0.112	
	[1.00]		[1.49]	
EDUCATION	-0.388***		-0.139***	
	[5.71]		[2.85]	
SCIENCE AND CULTURE	-0.192**		-0.187**	
	[2.26]		[2.55]	
PUBLIC HEALTH	-0.244***		-0.061	
	[2.93]		[1.25]	
ARMY, INTERIOR MINISTRY	-0.055		0.196***	
	[1.09]		[2.59]	
FINANCE	0.116		0.219***	
	[1.06]		[3.20]	
ENERGY INDUSTRY	0.056		-0.008	
	[0.75]		[0.07]	
HCS	-0.229***		-0.091	
	[3.86]		[1.21]	
CITY	0.068**	0.353***	0.042	0.230***
	[2.30]	[6.16]	[1.30]	[4.32]
GROSS REGIONAL PRODUCT	0.001***		0.001***	
	[6.21]		[7.60]	
MARRIED		0.477***		-0.013
		[8.08]		[0.29]
NUMBER OF CHILDREN UNDER 7 IN THE HOUSEHOLD		0.116**		-0.193***
		[2.43]		[5.56]
NUMBER OF CHILDREN AGED 7 TO 18 IN THE HOUSEHOLD		-0.126***		-0.035
		[3.33]		[1.15]
HOUSEHOLD INCOME (PER CAPITA)		-0.018***		-0.004*
		[5.77]		[1.78]
REGIONAL UNEMPLOYMENT		-0.068***		-0.055***
		[7.24]		[6.93]
CONSTANT	8.142***	0.524***	8.653***	0.216
	[51.98]	[3.57]	[48.28]	[1.64]
NUMBER OF OBSERVATIONS	2838	2838	3121	3121

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Appendix 4. (Continuation.) Wage equation with control on the property type of enterprises, 2010

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
AGE	0.042***	-0.005**	0.025***	0.016***
	[6.49]	[2.16]	[3.27]	[7.50]
AGE*AGE	-0.001***		-0.000***	
	[6.92]		[3.23]	
EDUCATION				
PRIMARY PROFESSIONAL	-0.018	0.462***	-0.115***	0.425***
	[0.59]	[7.78]	[3.20]	[6.90]
SECONDARY PROFESSIONAL	0.036	0.626***	-0.001	0.710***
	[1.01]	[8.35]	[0.03]	[11.59]
HIGHER PROFESSIONAL	0.271***	0.515***	0.263***	0.863***
	[7.71]	[7.10]	[7.33]	[13.77]
PROPERTY TYPE				
FOREIGN	0.200***		0.144**	
	[4.30]		[2.51]	
STATE	-0.048**		-0.168***	
	[2.16]		[6.14]	
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	0.012		0.019	
	[0.26]		[0.50]	
CIVIL MECHANICAL ENGINEERING	-0.043		-0.061	
	[0.83]		[0.95]	
MIC	0.019		0.167*	
	[0.29]		[1.93]	
OIL AND GAS INDUSTRY	0.296***		0.332***	
	[6.08]		[4.90]	
OTHER HEAVY INDUSTRY	0.086*		0.069	
	[1.85]		[1.09]	
CONSTRUCTION	0.201***		0.196***	
	[5.63]		[3.34]	
TRANSPORT AND COMMUNICATIONS	0.102***		0.144***	
	[2.77]		[3.25]	
AGRICULTURE	-0.429***		-0.252***	
	[9.56]		[4.97]	

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
ADMINISTRATION	-0.066		0.005	
	[0.89]		[0.10]	
EDUCATION	-0.474***		-0.183***	
	[8.44]		[4.70]	
SCIENCE AND CULTURE	-0.152**		-0.130**	
	[2.01]		[2.39]	
PUBLIC HEALTH	-0.269***		-0.043	
	[4.42]		[1.13]	
ARMY, INTERIOR MINISTRY	-0.048		0.181***	
	[1.11]		[2.91]	
FINANCE	0.155*		0.256***	
	[1.68]		[4.47]	
ENERGY INDUSTRY	0.012		0.103	
	[0.21]		[1.18]	
HCS	-0.215***		-0.130**	
	[4.43]		[2.16]	
CITY	0.091***	0.427***	0.070***	0.222***
	[3.91]	[9.14]	[3.03]	[5.05]
GROSS REGIONAL PRODUCT	0.001***		0.001***	
	[7.50]		[8.78]	
MARRIED		0.567***		-0.127***
		[11.55]		[3.17]
NUMBER OF CHILDREN UNDER 7 IN THE HOUSEHOLD		0.010		-0.242***
		[0.28]		[7.75]
NUMBER OF CHILDREN AGED 7 TO 18 IN THE HOUSEHOLD		-0.094***		0.018
		[3.00]		[0.64]
HOUSEHOLD INCOME (PER CAPITA)		-0.002*		-0.001
		[1.77]		[1.48]
REGIONAL UNEMPLOYMENT		-0.092***		-0.065***
		[9.78]		[7.58]
CONSTANT	8.720***	0.595***	8.669***	-0.001
	[68.20]	[5.04]	[59.99]	[0.01]
NUMBER OF OBSERVATIONS	4146	4146	4550	4550

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Appendix 4. (End.) Wage equation with control on the property type of enterprises, 2011

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
AGE	0.054***	-0.001	0.036***	0.013***
	[8.97]	[0.63]	[4.24]	[6.53]
AGE*AGE	-0.001***		-0.000***	
	[9.46]		[4.32]	
EDUCATION				
PRIMARY PROFESSIONAL	-0.032	0.377***	-0.174***	0.410***
	[1.16]	[6.70]	[4.35]	[6.98]
SECONDARY PROFESSIONAL	0.019	0.501***	-0.147***	0.586***
	[0.61]	[7.19]	[3.76]	[10.06]
HIGHER PROFESSIONAL	0.291***	0.364***	0.116***	0.750***
	[9.46]	[5.51]	[3.00]	[13.08]
PROPERTY TYPE				
FOREIGN	0.185***		0.207***	
	[4.19]		[3.58]	
STATE	-0.068***		-0.142***	
	[3.28]		[5.06]	
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	-0.054		0.111***	
	[1.34]		[2.72]	
CIVIL MECHANICAL ENGINEERING	0.062		0.026	
	[1.29]		[0.39]	
MIC	0.000		-0.092	
	[0.01]		[0.97]	
OIL AND GAS INDUSTRY	0.311***		0.385***	
	[7.01]		[4.72]	
OTHER HEAVY INDUSTRY	0.081**		0.082	
	[2.03]		[1.23]	
CONSTRUCTION	0.175***		0.176***	
	[5.61]		[3.11]	
TRANSPORT AND COMMUNICA-TIONS	0.149***		0.141***	
	[4.64]		[3.16]	
AGRICULTURE	-0.390***		-0.258***	
	[9.78]		[4.82]	

FACTORS	MALE		FEMALE	
	Wage equation	Selection equation	Wage equation	Selection equation
ADMINISTRATION	-0.185***		-0.023	
	[2.75]		[0.39]	
EDUCATION	-0.413***		-0.198***	
	[7.94]		[4.95]	
SCIENCE AND CULTURE	-0.206***		-0.102*	
	[3.27]		[1.88]	
PUBLIC HEALTH	-0.146**		-0.073*	
	[2.45]		[1.85]	
ARMY, INTERIOR MINISTRY	-0.016		0.108*	
	[0.43]		[1.66]	
FINANCE	0.174**		0.208***	
	[2.18]		[3.69]	
ENERGY INDUSTRY	-0.004		0.040	
	[0.09]		[0.47]	
HCS	-0.257***		-0.082	
	[5.70]		[1.26]	
CITY	0.047**	0.408***	0.024	0.180***
	[2.12]	[9.14]	[0.90]	[4.34]
GROSS REGIONAL PRODUCT	0.000***		0.001***	
	[7.37]		[7.75]	
MARRIED		0.481***		-0.101***
		[10.76]		[3.02]
NUMBER OF CHILDREN UNDER 7 IN THE HOUSEHOLD		0.070**		-0.232***
		[2.03]		[9.17]
NUMBER OF CHILDREN AGED 7 TO 18 IN THE HOUSEHOLD		-0.058**		0.029
		[2.00]		[1.22]
HOUSEHOLD INCOME (PER CAPITA)		-0.002**		-0.000
		[2.47]		[0.62]
REGIONAL UNEMPLOYMENT		-0.100***		-0.057***
		[10.75]		[7.41]
CONSTANT	8.742***	0.522***	8.887***	-0.020
	[74.42]	[4.78]	[57.20]	[0.19]
NUMBER OF OBSERVATIONS	4488	4488	4860	4860

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Appendix 5. Share of workers receiving social benefits by enterprise ownership type

SOCIAL BENEFITS	PROPERTY TYPE		
	STATE	PRIVATE	FOREIGN
REGULAR PAID VACATION	99%	82%	95%
SICK PAY	99%	78%	92%
COVERAGE FOR MATERNITY, CHILDBIRTH, CHILD CARE UP TO 3 YEARS	91%	66%	83%
PAYMENTS OF HEALTHCARE	30%	11%	39%
PAYMENTS OF SANATORIA, ETC.	36%	11%	35%
PLACEMENT IN DEPARTMENTAL PRESCHOOL; PRESCHOOL PAYMENTS	7%	1%	5%
FOOD PAYMENTS	10%	9%	31%
TRANSPORT PAYMENTS	13%	7%	17%
EDUCATION AT COMPANY EXPENSE	13%	7%	17%
PROVISION OF LOANS FOR CONSTRUCTION OR RENOVATION	5%	4%	8%
PAYMENTS OF HOUSING RENT	3%	1%	8%

Source: Own calculations based on an RLMS database, 2010.

Appendix 6. Factors of social benefits (results of binary probit model, marginal effects), 2010

FACTOR	SOCIAL BENEFITS			
	REGULAR PAID VACATION	SICK PAY	COVERAGE FOR MATERNITY, CHILDBIRTH, CHILD CARE UP TO 3 YEARS (INTER-RUPTION)	PAYMENTS OF HEALTHCARE
PROPERTY TYPE				
FOREIGN	0.031***	0.037***	0.078***	0.279***
	[4.01]	[3.91]	[3.68]	[9.54]
STATE	0.129***	0.158***	0.180***	0.148***
	[15.91]	[17.58]	[14.84]	[12.34]
AGE	0.000**	0	-0.001	0
	[2.00]	[1.59]	[1.42]	[0.35]
EDUCATION				
PRIMARY PROFESSIONAL	0.013**	0.015**	0.023	0.021
	[2.26]	[2.10]	[1.61]	[1.21]
SECONDARY PROFESSIONAL	0.025***	0.026***	0.054***	0.037**
	[4.34]	[3.59]	[3.65]	[2.07]
HIGHER PROFESSIONAL	0.041***	0.051***	0.097***	0.065***
	[7.17]	[7.34]	[6.72]	[3.75]
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	0.025***	0.036***	0.082***	0.118***
	[4.56]	[5.63]	[5.19]	[4.21]
CIVIL MECHANICAL ENGINEERING	0.040***	0.057***	0.117***	0.347***
	[5.46]	[6.66]	[5.48]	[9.33]
MIC	0.040***	0.056***	0.110***	0.339***
	[2.98]	[3.55]	[3.59]	[7.32]
OIL AND GAS INDUSTRY	0.037***	0.052***	0.133***	0.444***
	[4.99]	[6.03]	[6.57]	[12.55]
OTHER HEAVY INDUSTRY	0.042***	0.058***	0.149***	0.360***
	[6.26]	[7.50]	[8.04]	[10.37]
CONSTRUCTION	0.002	0.015**	-0.008	0.068***
	[0.38]	[2.07]	[0.46]	[2.59]
TRANSPORT AND COMMUNICATIONS	0.001	0.013*	0.018	0.213***
	[0.16]	[1.74]	[1.08]	[8.32]
AGRICULTURE	0.039***	0.056***	0.100***	0.111***
	[6.20]	[7.74]	[5.45]	[3.60]
ADMINISTRATION	-0.004	0.013	0.076***	0.060*
	[0.24]	[0.66]	[2.68]	[1.75]

FACTOR	SOCIAL BENEFITS			
	REGULAR PAID VACATION	SICK PAY	COVERAGE FOR MATERNITY, CHILDBIRTH, CHILD CARE UP TO 3 YEARS (INTER-RUPTION)	PAYMENTS OF HEALTHCARE
EDUCATION	0.017	0.025**	0.133***	0.051**
	[1.49]	[2.09]	[7.23]	[2.06]
SCIENCE AND CULTURE	0.003	0.011	0.029	0.051
	[0.25]	[0.78]	[1.09]	[1.55]
PUBLIC HEALTH	0.037***	0.045***	0.140***	0.274***
	[4.06]	[4.42]	[7.94]	[9.68]
ARMY, INTERIOR MINISTRY	0.018*	0.027**	0.004	0.445***
	[1.74]	[2.23]	[0.17]	[13.89]
FINANCE	0.030***	0.043***	0.098***	0.116***
	[2.70]	[3.44]	[3.75]	[3.06]
ENERGY INDUSTRY	0.030***	0.043***	0.100***	0.246***
	[2.83]	[3.49]	[3.71]	[5.86]
HCS	0.027***	0.044***	0.109***	0.033
	[3.26]	[4.61]	[5.28]	[1.02]
GRP	0.000*	0.000**	0	0
	[1.94]	[2.00]	[0.59]	[0.05]
NUMBER OF OBSERVATIONS	7536	7524	7132	7351

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Source: Own calculations based on an RLMS database, 2010.

Appendix 6. (Continuation.) Factors of social benefits (results of binary probit model, marginal effects), 2010

FACTOR	SOCIAL BENEFITS			
	PAYMENTS OF SANATORIA, ETC.	PLACEMENT IN DEPARTMENTAL PRESCHOOL; PRESCHOOL PAYMENTS	PAY FOR FOOD	TRANSPORT PAYMENTS
PROPERTY TYPE				
FOREIGN	0.234***	0.052***	0.179***	0.105***
	[7.63]	[3.65]	[8.41]	[5.17]
STATE	0.211***	0.029***	0.025***	0.056***
	[16.49]	[5.70]	[2.78]	[6.89]
AGE	-0.001	0	0	-0.001**
	[1.12]	[0.86]	[0.74]	[2.18]
EDUCATION				
PRIMARY PROFESSIONAL	0.042**	-0.008	-0.004	0.025**
	[2.27]	[1.25]	[0.33]	[2.04]
SECONDARY PROFESSIONAL	0.055***	0.001	-0.012	0.019
	[2.86]	[0.22]	[1.07]	[1.54]
HIGHER PROFESSIONAL	0.091***	0.002	-0.027**	0.034***
	[4.85]	[0.40]	[2.48]	[2.76]
INDUSTRY				
CONSUMER GOODS AND FOOD INDUSTRIES	0.141***	0.042**	0.102***	0.037**
	[4.45]	[2.22]	[5.79]	[2.05]
CIVIL MECHANICAL ENGINEERING	0.438***	0.095***	0.152***	-0.005
	[10.85]	[3.54]	[6.06]	[0.24]
MIC	0.434***	0.190***	0.127***	-0.02
	[8.82]	[5.13]	[4.01]	[0.72]
OIL AND GAS INDUSTRY	0.558***	0.145***	0.114***	0.232***
	[15.02]	[5.12]	[4.97]	[8.87]
OTHER HEAVY INDUSTRY	0.481***	0.073***	0.137***	0.013
	[13.03]	[3.08]	[6.01]	[0.63]
CONSTRUCTION	0.119***	0.053***	-0.038***	0.044***
	[3.97]	[2.81]	[2.64]	[2.60]
TRANSPORT AND COMMUNICATIONS	0.289***	0.081***	-0.038***	0.269***
	[10.05]	[4.18]	[2.85]	[13.22]
AGRICULTURE	0.184***	0.066***	0.068***	-0.004
	[5.32]	[2.99]	[3.46]	[0.19]

FACTOR	SOCIAL BENEFITS			
	PAYMENTS OF SANATORIA, ETC.	PLACEMENT IN DEPARTMENTAL PRESCHOOL; PRESCHOOL PAYMENTS	PAY FOR FOOD	TRANSPORT PAYMENTS
ADMINISTRATION	0.203***	0.056**	-0.068***	0.028
	[5.18]	[2.47]	[3.15]	[1.24]
EDUCATION	0.166***	0.125***	0.038**	-0.019
	[5.79]	[5.54]	[2.28]	[1.31]
SCIENCE AND CULTURE	0.111***	0.034*	-0.056***	-0.033*
	[2.96]	[1.65]	[2.81]	[1.68]
PUBLIC HEALTH	0.237***	0.058***	0.026	-0.027*
	[7.80]	[3.16]	[1.57]	[1.82]
ARMY, INTERIOR MINISTRY	0.447***	0.224***	0.025	0.155***
	[13.07]	[7.34]	[1.35]	[7.01]
FINANCE	0.172***	0.059**	-0.028	-0.023
	[4.08]	[2.39]	[1.21]	[1.00]
ENERGY INDUSTRY	0.397***	0.081***	-0.013	0.104***
	[8.86]	[2.91]	[0.53]	[3.63]
HCS	0.096***	0.031	-0.060***	-0.006
	[2.61]	[1.52]	[3.24]	[0.30]
GRP	-0.000**	0	0.000***	0.000***
	[2.33]	[1.09]	[2.69]	[4.47]
NUMBER OF OBSERVATIONS	7209	7244	7483	7461
The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.				

Source: Own calculations based on an RLMS database, 2010.

Appendix 6. (End.) Factors of social benefits (results of binary probit model, marginal effects), 2010

FACTOR	SOCIAL BENEFITS		
	EDUCATION AT COMPANY EXPENSE	PROVISION OF LOANS FOR CONSTRUCTION OR RENOVATION	PAYMENTS OF HOUSING RENT
PROPERTY TYPE			
FOREIGN	0.105***	0.026**	0.071***
	[5.17]	[2.14]	[6.09]
STATE	0.056***	0.022***	0.008**
	[6.89]	[4.13]	[2.26]
AGE	-0.001**	-0.000*	0
	[2.18]	[1.68]	[0.39]
EDUCATION			
PRIMARY PROFESSIONAL	0.025**	-0.005	0.003
	[2.04]	[0.79]	[0.51]
SECONDARY PROFESSIONAL	0.019	-0.007	0.005
	[1.54]	[0.99]	[0.86]
HIGHER PROFESSIONAL	0.034***	0.008	0.010**
	[2.76]	[1.12]	[1.97]
INDUSTRY			
CONSUMER GOODS AND FOOD INDUSTRIES	0.037**	0.027**	0.018*
	[2.05]	[2.05]	[1.70]
CIVIL MECHANICAL ENGINEERING	-0.005	0.071***	-0.004
	[0.24]	[3.75]	[0.34]
MIC	-0.02	0.114***	0.021
	[0.72]	[4.36]	[1.19]
OIL AND GAS INDUSTRY	0.232***	0.122***	0.032**
	[8.87]	[6.00]	[2.31]
OTHER HEAVY INDUSTRY	0.013	0.081***	0.075***
	[0.63]	[4.44]	[4.54]
CONSTRUCTION	0.044***	0.060***	0.033***
	[2.60]	[4.48]	[3.00]
TRANSPORT AND COMMUNICATIONS	0.269***	0.052***	0.017*
	[13.22]	[4.13]	[1.83]
AGRICULTURE	-0.004	0.016	0.013
	[0.19]	[1.15]	[1.15]
ADMINISTRATION	0.028	0.016	0.002
	[1.24]	[1.02]	[0.14]
EDUCATION	-0.019	-0.024***	0.028***
	[1.31]	[2.60]	[2.64]
SCIENCE AND CULTURE	-0.033*	-0.026*	0.032**
	[1.68]	[1.83]	[2.25]
PUBLIC HEALTH	-0.027*	-0.004	0.025**
	[1.82]	[0.41]	[2.35]

FACTOR	SOCIAL BENEFITS		
	EDUCATION AT COMPANY EXPENSE	PROVISION OF LOANS FOR CONSTRUCTION OR RENOVATION	PAYMENTS OF HOUSING RENT
ARMY, INTERIOR MINISTRY	0.155***	0.026*	0.125***
	[7.01]	[1.93]	[6.38]
FINANCE	-0.023	0.195***	-0.003
	[1.00]	[7.81]	[0.30]
ENERGY INDUSTRY	0.104***	0.026	0.012
	[3.63]	[1.31]	[0.86]
HCS	-0.006	-0.003	0.003
	[0.30]	[0.20]	[0.30]
GRP	0.000***	0	-0.000*
	[4.47]	[1.53]	[1.87]
NUMBER OF OBSERVATIONS	7461	7265	7325

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Source: Own calculations based on an RLMS database, 2010.

Appendix 7. Worker education factors (results of binary probit model, marginal effects), 2010

FACTORS	MARGINAL EFFECTS
PROPERTY TYPE	
FOREIGN COMPANY	0.121**
	[2.49]
SIZE OF ENTERPRISE	
SMALL ENTERPRISE (from 5 to 20)	-0.185***
	[10.72]
LARGE ENTERPRISE (more than 100)	0.213***
	[7.69]
INDUSTRY	
FOOD PRODUCTION	-0.043
	[0.84]
PROCESSING OF WOOD	-0.051
	[0.83]
PUBLISHING AND PRINTING	-0.057
	[1.10]
CHEMICAL PRODUCTION	0.009
	[0.18]
MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS	-0.152***
	[2.98]
MANUFACTURING OF NON-METALLIC MINERAL PRODUCTS	-0.104*
	[1.92]
PRODUCTION OF FINISHED METAL PRODUCTS	-0.016
	[0.34]
PRODUCTION OF MACHINERY AND EQUIPMENT	-0.017
	[0.34]
PRODUCTION OF ELECTRICAL MACHINES	0.036
	[0.64]
PRODUCTION OF MEDICAL WARES	0.007
	[0.13]
FURNITURE PRODUCTION	-0.053
	[0.99]
TEXTILE PRODUCTION	0.044
	[0.29]
MANUFACTURE OF WEARING APPAREL	-0.181**
	[2.13]
MANUFACTURE OF LEATHER AND LEATHER CLOTHING	-0.26
	[1.09]
PULP AND PAPER PRODUCTION	-0.259*
	[1.65]
METALLURGICAL PRODUCTION	0.003
	[0.03]

FACTORS	MARGINAL EFFECTS
ELECTRONIC COMPONENT MANUFACTURING	0
	[0.00]
CARS PRODUCTION	0.085
	[0.39]
VESSELS AND AIRCRAFT PRODUCTION	0.18
	[1.14]
RECYCLING	0.156
	[0.65]
WHOLESALE TRADE	-0.012
	[0.43]
ACTIVITIES RELATED TO THE USE OF INFORMATICS AND COMPUTER TECHNOLOGY	0.144***
	[3.05]
HOTELS AND RESTAURANTS	0.099**
	[1.97]
MOTOR VEHICLES SALES AND SERVICES	0.083
	[1.43]
CONSTRUCTION	0.141***
	[4.13]
TRANSPORT	-0.002
	[0.02]
SUPPORTING TRANSPORT ACTIVITIES	0.04
	[0.75]
COMMUNICATION	0.117**
	[2.05]
GRP PER CAPITA, 2011	0.068***
	[3.03]
NUMBER OF OBSERVATIONS	4218

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Source: Own calculations based on the "Business Environment And Enterprise Performance Survey", 2012.

Appendix 8. Export factors (results of binary probit model, marginal effects), 2012

FACTORS	MARGINAL EFFECTS
PROPERTY TYPE	
FOREIGN COMPANY	0.114***
	[4.54]
SIZE OF ENTERPRISE	
SMALL ENTERPRISE (from 5 to 20)	-0.033***
	[3.74]
LARGE ENTERPRISE (more than 100)	0.111***
	[7.52]
INDUSTRY	
FOOD PRODUCTION	0.193***
	[4.11]
PROCESSING OF WOOD	0.325***
	[5.34]
PUBLISHING AND PRINTING	0.123**
	[2.57]
CHEMICAL PRODUCTION	0.486***
	[8.33]
MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS	0.196***
	[3.93]
MANUFACTURING OF NON-METALLIC MINERAL PRODUCTS	0.04
	[0.95]
PRODUCTION OF FINISHED METAL PRODUCTS	0.191***
	[4.13]
PRODUCTION OF MACHINERY AND EQUIPMENT	0.378***
	[6.85]
PRODUCTION OF ELECTRICAL MACHINES	0.286***
	[5.24]
PRODUCTION OF MEDICAL WARES	0.518***
	[8.08]
FURNITURE PRODUCTION	0.170***
	[3.38]
TEXTILE PRODUCTION	0.260**
	[2.27]
MANUFACTURE OF WEARING APPAREL	0.130*
	[1.77]
MANUFACTURE OF LEATHER AND LEATHER CLOTHING	0.333*
	[1.75]
PULP AND PAPER PRODUCTION	0.339***
	[2.59]
METALLURGICAL PRODUCTION	0.365***
	[3.54]

ELECTRONIC COMPONENT MANUFACTURING	0.543***
	[4.08]
CARS PRODUCTION	0.557***
	[3.32]
VESSELS AND AIRCRAFT PRODUCTION	0.375***
	[3.08]
WHOLESALE TRADE	0.139***
	[4.97]
ACTIVITIES RELATED TO THE USE OF INFORMATICS AND COMPUTER TECHNOLOGY	0.140***
	[3.12]
HOTELS AND RESTAURANTS	0.076*
	[1.75]
MOTOR VEHICLES SALES AND SERVICES	0.169***
	[3.06]
CONSTRUCTION	0.004
	[0.15]
TRANSPORT	0.078
	[1.23]
SUPPORTING TRANSPORT ACTIVITIES	0.319***
	[5.75]
COMMUNICATION	0.064
	[1.35]
GRP PER CAPITA, 2011	0.032***
	[3.30]
NUMBER OF OBSERVATIONS	4213

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Source: Own calculations based on the "Business Environment And Enterprise Performance Survey", 2012.

Appendix 9. Innovation factors (results of binary probit model, marginal effects), 2012

FACTORS	MARGINAL EFFECTS
PROPERTY TYPE	
FOREIGN COMPANY	0.086*
	[1.78]
SIZE OF ENTERPRISE	
SMALL ENTERPRISE (from 5 to 20)	-0.080***
	[4.57]
LARGE ENTERPRISE (more than 100)	0.164***
	[5.95]
INDUSTRY	
FOOD PRODUCTION	0.199***
	[3.90]
PROCESSING OF WOOD	0.121*
	[1.96]
PUBLISHING AND PRINTING	0.217***
	[4.25]
CHEMICAL PRODUCTION	0.343***
	[6.99]
MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS	0.179***
	[3.45]
MANUFACTURING OF NON-METALLIC MINERAL PRODUCTS	0.200***
	[3.67]
PRODUCTION OF FINISHED METAL PRODUCTS	0.209***
	[4.49]
PRODUCTION OF MACHINERY AND EQUIPMENT	0.292***
	[5.86]
PRODUCTION OF ELECTRICAL MACHINES	0.224***
	[4.08]
PRODUCTION OF MEDICAL WARES	0.316***
	[5.52]
FURNITURE PRODUCTION	0.275***
	[5.25]
TEXTILE PRODUCTION	0.044
	[0.30]
MANUFACTURE OF WEARING APPAREL	0.012
	[0.14]
MANUFACTURE OF LEATHER AND LEATHER CLOTHING	0.051
	[0.22]
PULP AND PAPER PRODUCTION	0.026
	[0.16]
METALLURGICAL PRODUCTION	0.273**
	[2.09]
ELECTRONIC COMPONENT MANUFACTURING	0.495***
	[3.20]

FACTORS	MARGINAL EFFECTS
CARS PRODUCTION	-0.031
	[0.14]
VESSELS AND AIRCRAFT PRODUCTION	0.112
	[0.75]
RECYCLING	0.413*
	[1.87]
WHOLESALE TRADE	0.054*
	[1.94]
ACTIVITIES RELATED TO THE USE OF INFORMATICS AND COMPUTER TECHNOLOGY	0.262***
	[5.77]
HOTELS AND RESTAURANTS	0.098**
	[1.98]
MOTOR VEHICLES SALES AND SERVICES	0.021
	[0.36]
CONSTRUCTION	0.068**
	[1.99]
TRANSPORT	-0.077
	[0.96]
SUPPORTING TRANSPORT ACTIVITIES	-0.071
	[1.30]
COMMUNICATION	0.204***
	[3.65]
GRP PER CAPITA, 2011	-0.007
	[0.30]
NUMBER OF OBSERVATIONS	4218

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance.

Source: Own calculations based on the "Business Environment And Enterprise Performance Survey", 2012.

Appendix 10. Factors for investment activity by private Russian companies by type of investment activity (results of binary probit model, marginal effects), 2012

FACTOR	PRODUCT INNOVATION	PROCESS INNOVATION	INSTITUTIONAL INNOVATION	MARKETING INNOVATION	R&D
INDICATOR OF FOREIGN INVESTMENTS IN THE REGION, 2011	0.042***	0.037***	0.02	0.042***	0.042***
	[3.17]	[2.91]	[1.58]	[3.21]	[3.21]
SIZE OF ENTERPRISE					
SMALL ENTERPRISE (from 5 to 20)	-0.062***	-0.070***	-0.101***	-0.078***	-0.078***
	[4.13]	[4.79]	[6.79]	[5.14]	[5.14]
LARGE ENTERPRISE (more than 100)	0.105***	0.071***	0.104***	0.059**	0.059**
	[4.45]	[3.17]	[4.47]	[2.53]	[2.53]
INDUSTRY					
FOOD PRODUCTION	0.363***	0.294***	0.019	0.087*	0.087*
	[6.84]	[5.87]	[0.41]	[1.88]	[1.88]
PROCESSING OF WOOD	0.237***	0.160***	0.027	0.009	0.009
	[3.77]	[2.73]	[0.48]	[0.17]	[0.17]
PUBLISHING AND PRINTING	0.281***	0.194***	0.082*	0.109**	0.109**
	[5.22]	[3.83]	[1.71]	[2.29]	[2.29]
CHEMICAL PRODUCTION	0.498***	0.428***	0.157***	0.160***	0.160***
	[9.38]	[8.30]	[3.24]	[3.36]	[3.36]
MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS	0.301***	0.219***	0.079	0.034	0.034
	[5.53]	[4.29]	[1.64]	[0.73]	[0.73]
MANUFACTURING OF NON-METALLIC MINERAL PRODUCTS	0.237***	0.175***	0.052	0.033	0.033
	[4.29]	[3.38]	[1.09]	[0.69]	[0.69]
PRODUCTION OF FINISHED METAL PRODUCTS	0.282***	0.234***	0.058	-0.02	-0.02
	[5.80]	[5.11]	[1.39]	[0.50]	[0.50]
PRODUCTION OF MACHINERY AND EQUIPMENT	0.437***	0.287***	0.165***	0.173***	0.173***
	[8.32]	[5.74]	[3.45]	[3.64]	[3.64]
PRODUCTION OF ELECTRICAL MACHINES	0.419***	0.316***	0.119**	-0.004	-0.004
	[7.36]	[5.81]	[2.32]	[0.08]	[0.08]
PRODUCTION OF MEDICAL WARES	0.438***	0.279***	0.121**	0.053	0.053
	[7.28]	[4.84]	[2.22]	[1.01]	[1.01]
FURNITURE PRODUCTION	0.346***	0.266***	0.136***	0.122**	0.122**
	[6.22]	[5.05]	[2.69]	[2.46]	[2.46]
TEXTILE PRODUCTION	0.309**	0.034	-0.135	-0.053	-0.053
	[2.09]	[0.24]	[1.04]	[0.42]	[0.42]
MANUFACTURE OF WEARING APPAREL	0.124	-0.004	-0.1	-0.068	-0.068
	[1.46]	[0.05]	[1.36]	[0.94]	[0.94]
MANUFACTURE OF LEATHER AND LEATHER CLOTHING	0.087	0.05	-0.03	0.166	0.166
	[0.39]	[0.24]	[0.15]	[0.83]	[0.83]
PULP AND PAPER PRODUCTION	0	-0.067	-0.007	-0.141	-0.141
	[0.00]	[0.46]	[0.05]	[1.07]	[1.07]
METALLURGICAL PRODUCTION	0.392***	0.359***	0.194	0.241*	0.241*
	[2.97]	[2.84]	[1.56]	[1.92]	[1.92]

ELECTRONIC COMPONENT MANUFACTURING	0.570***	0.252*	0.261*	0.215	0.215
	[3.92]	[1.79]	[1.85]	[1.53]	[1.53]
CARS PRODUCTION	0.283	-0.01	0.102	-0.093	-0.093
	[1.42]	[0.05]	[0.56]	[0.55]	[0.55]
VESSELS AND AIRCRAFT PRODUCTION	0.189	0.13	0.055	-0.048	-0.048
	[1.31]	[0.96]	[0.41]	[0.38]	[0.38]
RECYCLING	0.382*	0.081		-0.016	-0.016
	[1.74]	[0.40]		[0.08]	[0.08]
WHOLESALE TRADE	0.107***	0.025	0.04	0.013	0.013
	[3.69]	[0.97]	[1.59]	[0.55]	[0.55]
ACTIVITIES RELATED TO THE USE OF INFORMATICS AND COMPUTER TECHNOLOGY	0.337***	0.237***	0.138***	0.076*	0.076*
	[6.95]	[5.23]	[3.19]	[1.83]	[1.83]
HOTELS AND RESTAURANTS	0.180***	0.108**	0.105**	0.086*	0.086*
	[3.52]	[2.29]	[2.29]	[1.92]	[1.92]
MOTOR VEHICLES SALES AND SERVICES	0.116*	0.072	0.034	0.052	0.052
	[1.94]	[1.33]	[0.66]	[1.00]	[1.00]
CONSTRUCTION	0.142***	0.090***	0.023	-0.065**	-0.065**
	[3.96]	[2.78]	[0.76]	[2.31]	[2.31]
TRANSPORT	-0.039	-0.014	0.006	-0.097	-0.097
	[0.49]	[0.20]	[0.09]	[1.49]	[1.49]
SUPPORTING TRANSPORT ACTIVITIES	0.031	0.003	-0.012	-0.055	-0.055
	[0.56]	[0.05]	[0.25]	[1.21]	[1.21]
COMMUNICATION	0.329***	0.206***	0.118**	0.031	0.031
	[5.68]	[3.78]	[2.28]	[0.63]	[0.63]
GRP, 2011 (LOGARITHM)	0.041***	0.004	0.021**	0.035***	0.035***
	[5.01]	[0.48]	[2.51]	[4.22]	[4.22]
FEDERAL DISTRICT					
SOUTH	-0.024	-0.063**	-0.116***	-0.097***	-0.097***
	[0.89]	[2.39]	[4.53]	[3.67]	[3.67]
NORTH-WEST	-0.065***	-0.073***	-0.106***	-0.107***	-0.107***
	[2.76]	[3.18]	[4.68]	[4.65]	[4.65]
FAR EAST	0.027	0.059**	0.049*	0.078***	0.078***
	[0.97]	[2.15]	[1.78]	[2.76]	[2.76]
SIBERIAN	-0.082***	-0.029	-0.071***	-0.074***	-0.074***
	[4.14]	[1.43]	[3.61]	[3.68]	[3.68]
URAL	-0.039	0.019	-0.017	0.019	0.019
	[1.22]	[0.58]	[0.52]	[0.57]	[0.57]
PRIVOLZHSKY	0.013	0.037*	0.036*	0.050**	0.050**
	[0.67]	[1.90]	[1.85]	[2.49]	[2.49]
NORTH CAUCASUS	0.043	-0.015	0.035	0.300***	0.300***
	[1.00]	[0.38]	[0.85]	[6.57]	[6.57]
NUMBER OF OBSERVATIONS	4098	4098	4093	4098	4098

The absolute value of z-statistics is in the parentheses. * 10% level of significance; ** 5% level of significance; *** 1% level of significance

Source: Own calculations based on the "Business Environment And Enterprise Performance Survey", 2012.