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How regional courts in Russia affected multinational decisions on affiliate size, entry and organization[2]

We investigate the impact of court conditions on multinational decisions on entry, subsidiary size and entry mode across subnational Russian regions in 2001–2014. We apply the literature on heterogeneous firms and the institution-based view of investor behaviour, which predict that higher institutional costs raise the size and productivity cut-off of start-up subsidiaries. Our empirical results based on microestablishment data of foreign-owned firms in Russia show that a weaker judicial framework and stronger political power of the local governor significantly de-stimulate entry. Most multinationals entered Russia, which is viewed as a high-risk country, through large and very large subsidiaries wholly owned by foreign parents. We largely explain business strategy variation of multinationals between regions by regional court conditions, as foreign investors adapted their strategic decisions to compensate court deficiencies by increasing the size of the subsidiary. When the investment climate deteriorated, firms turned to local partnerships as a viable mode of entry.

Keywords: multinational firms; institutions; regional courts; subsidiary size; entry mode; Russia.
JEL classification: F10; F23; L22; R30.

1. Introduction

Multinational firms prefer to invest in locations where protection of property rights is strong, and institutions, which provide such strength, are influential in creating incentives to invest (La Porta et al., 1999; Busse, Hefeker, 2007). Since developing countries, with relatively weak institutions, host more than half of global FDI flows, it is important to understand how multinationals design their entrance strategy when protection of property rights is less than perfect, so that host countries can optimize their policies for FDI promotion. The interaction of location specific institutions and traditional asset advantages is becoming more important in the complex and volatile global economy (Dunning, Lundan, 2008).

Our main research objective here is to study the way in which subnational institutions for the protection of property rights and contract enforcement — commercial courts in particular — have

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an impact on how multinationals structure their entry. We are particularly concerned with decisions by multinationals regarding the size of a subsidiary and readiness to accept local partners as co-owners. Do foreign investors establish large or small plants in places with weak rule of law? Do they maximize control by means of a wholly owned subsidiary, or do they prefer resident partners in a joint venture (JV) framework?

There are several reasons why Russia is a good testing ground for the effect of property risks on structural decisions by multinationals. Russia experienced relatively high entry rates by multinational capital in the 2000s and frequent instances of economic and political distress, which varied significantly across subnational regions. The country has problems in its judicial system, including bias in regional courts (Lambert-Mogiliansky et al., 2007). Focus on a single country is justified by the fact that the institutional gap between subnational regions in a single country is not too great, so it is possible to track nuances in the reaction of multinationals to differences in the level of property protection.

Many authors point to the inconsistency of court practice in Russia, despite positive evolution of the court system in recent years, and stress that the degree of consistency and of efficiency in enforcing contracts and providing a remedy for torts differs across subnational regions in spite of laws that are *de jure* uniform. The failure of some regional courts is often explained by their close links to regional or federal authorities, and by poor qualification of judges, who often have a background in law enforcement. A survey of foreign-owned firms in Russia (Ernst & Young, 2015) shows that inefficiency of the state apparatus and court system causes major difficulties for the business operations of multinationals: 77% of respondents refer to the unstable and inconsistent regulatory framework as the most serious threat, followed by corruption risk (50% of respondents) and selective enforcement (33%).

The link between the protection of property rights and size/scope decisions of multinationals in transition countries remains relatively understudied in the literature. This paper contributes to the research gap and provides evidence of the effect of courts on structural FDI decisions in a transition economy.

We model the decision of multinationals to invest and the choice of the size and mode of entry on the basis of theoretical literature, which establishes that heterogeneous firms sort into various modes of international activities (Melitz, 2003; Helpman et al., 2004). The literature suggests that the largest and most productive multinationals are more likely than others to open an affiliate in an unattractive location, because their scale and efficiency give them additional bargaining power and resources to cover the costs of weak institutions. We suggest that regions with a poor judicial system will attract fewer multinationals and most affiliates will be large-sized.

A high degree of control may also be an advantage in a poor business environment, although previous literature is inconclusive as to whether multinationals judge a wholly owned subsidiary or a JV to be the best option in this case. Institutional and transaction-cost theories suggest that JVs are preferable in challenging environments, mainly due to the complementary institutional experience of the local partner. However, extensions of the heterogeneity model predict a higher probability of creation rather than acquisition (JV) in unfavourable locations.

We use plant-level RUSLANA data, collected by Bureau van Dijk for FDI affiliates in Russia, which started business between 2001 and 2014, and the BEEPS V data from the World Bank and EBRD for the measurement of features of the court system and investment climate or investment risks in Russian regions. The empirical findings broadly confirm the theoretical predictions: strong and independent courts significantly increase entry in a region, and locations with a weaker

judiciary host larger subsidiaries. Wholly-owned subsidiaries are most popular overall, although multinationals choose JVs with a local partner in a region where investment climate is particularly weak.

The remainder of this paper consists of six sections. First, we draw on the theoretical and empirical literature to develop predictions about structural decisions by multinational firms when setting up affiliates. We then explain how our dataset was constructed from plant-level data with the subsequent addition of sectoral and regional indicators and report descriptive statistics of dependent and independent variables. That is followed by presentation and discussion of the main results of the empirical estimation. In the next section we perform a robustness analysis to validate the baseline results. The final section concludes.

2. Related literature

2.1. How the local judiciary can affect entry and size decisions by multinationals

The bedrock assumption for our paper is that a multinational creating an affiliate in a tough political environment faces threats from state control of the local legal system, and possible failure of the authorities to provide a low-cost and fair enforcement mechanism. Institutional and growth literatures establish mechanisms by which weak governance destimulates FDI entry and structural decisions: these mechanisms affect multinationals though impact on costs and profit (North, 1991), reducing productivity and growth perspectives (Acemoglu et al., 2005).

"Creeping" expropriation and powerful local businesses with unfair competitive resources have become serious political risks of late (Oetzel, 2005), and firms are more likely to enter locations with strong legal institutions. Akhtaruzzaman et al. (2017) show that expropriation risk is the most important among the available measures of various dimensions of institutional quality.

If the legal system is weak, the foreign investor takes hazard-mitigating actions (Henisz, Williamson, 1999; Henisz, 2000), which increase its bargaining power, either by establishing a larger affiliate and/or by choosing the most appropriate mode of entry.

The advantages of a larger affiliate in less attractive locations are described by the literature on firm heterogeneity, which predicts selection of firms between different modes of trade and FDI depending on productivity and scale advantages (Helpman et al., 2004). Their model explains the structure of international trade and investment by productivity differences inside sectors. For each location, there is a productivity cut-off, and only firms with productivity above this level will be able to cover entry and maintenance costs associated with creating a subsidiary in that location. Bad locations will have higher productivity cut-off thresholds. So only firms with high productivity open an enterprise in a place with very high entry and maintenance costs, and less productive firms can only afford to enter more cost-attractive locations. Improvement of relevant features of the host location may result in the entry of less productive multinationals. Further analysis (Yeaple, 2009) shows that productivity sorting extends to the scale of affiliates set up by multinational enterprises: not only do more productive firms own affiliates in a larger set of countries, but their affiliates are larger than those of less productive firms.

One question might be whether the effects of weak courts on size decisions will be the same for export-oriented affiliates and affiliates oriented to the local market. The models on firm heterogeneity exclude vertical motives for FDI, assuming that multinational firms do not export from

their foreign subsidiaries. However, many subsidiaries in our data are exporters, and it is clearly interesting to know whether they are more or less tolerant of weak courts than horizontal investments and whether a parent setting up an exporting subsidiary is choosier in its location decisions (Pandya, 2016).

Two empirical studies, which confirm the theoretical prediction of the model in (Helpman et al., 2004), are particularly relevant for our work. Firstly, Yeaple (2009), shows on the data of U.S. multinationals that more productive firms own affiliates in a larger set of countries and their affiliates are larger than those of less productive firms. The smallest and least productive U.S. multinationals are attracted to the "best" countries, and this mechanism is mostly related to the fixed costs of producing abroad. Secondly, Chen and Moore (2010) show on French microdata that more productive multinationals are more likely than less productive firms to invest in "tough" locations, including countries with weak governance structure. They also show that efficiency and scale of the affiliate are positively correlated.

Among studies on transition countries, we note the work by Demirbag et al. (2015), who explain growth prospects of FDI subsidiaries in the transition periphery and find evidence for the relative tolerance of large firms to locations with weak institutions. Oetzel (2005) reports in her qualitative study of multinationals in Costa Rica that smaller subsidiaries face greater political risk than larger ones irrespective of the size of the multinational parent, and explains this by lack of bargaining power, which leaves small subsidiaries more exposed to bureaucratic delays and red tape.

2.2. Mode of entry in weak jurisdictions[3]

Various strands of the economic literature offer different predictions concerning the choice of entry mode in institutionally weak locations. Our baseline theory (Nocke, Yeaple, 2007, 2008) favours wholly-owned subsidiaries, because greenfield investments are systematically more efficient than cross-border acquisitions. So multinationals may choose acquisition in preference to greenfield FDI in developed countries, but are more likely to opt for the latter in developing countries where risks are already high (see (Yeaple, 2013) for a detailed survey of the literature). Property-rights theory of the firm (Grossman, Hart, 1986; Hart, Moore, 1990) reaches a similar conclusion: ownership of assets is a source of power when contracts are incomplete, so creation will be a better decision than acquisition in a tough environment.

The institutional theory (North, 1991) and transaction cost theory (Williamson, 1979) predict a different outcome for the choice between JV/wholly owned subsidiary. In this framework, high-quality institutions are associated with low production costs and low transaction costs. Each alternative mode of entry has its own combination of benefits and costs, and they in turn depend on firm efficiency. Specifically, the choice can be separated into two effects (Helpman et al., 2004): political hazards increase the probability of a JV rather than a majority-owned subsidiary, but the positive effects of this choice may be offset if the JV partner attempts to expropriate assets and profits.

[3] In this paper our main unit of analysis is the foreign firm registered in Russia as a legal entity. These firms receive national rights depending on Russian civil law, except for some sectoral limitations (like access to financial services, insurance, and telecommunication infrastructure). Additionally, there are some restrictions on land possession in the border regions and access to farmland. Foreign firms may be organized as wholly-owned enterprises, joint ventures comprised of several foreign partners or may take part in Russian organizations and cooperatives.

In general, this literature establishes that a JV is a better solution for an environment characterized by high uncertainty and governance problems (Kogut, 1988), and multinationals, which enter locations with weak institutions, will minimize political risks through partnerships with resident firms despite higher risk of opportunistic behaviour and higher transaction costs.

The empirical literature on various institutional determinants of choice of entry mode remains inconsistent. Survey by Morschett et al. (2010) of published papers reports a negative effects of country risk and legal restrictions on the preference for a wholly owned subsidiary. In general, institutional barriers, including court conditions, are viewed as a challenge for multinationals, due to the so-called "liability of foreignness". Wu and Salomon (2017) find this effect on the data of foreign banks operating in the United States and report more enforcement actions against multinationals than against domestic banks. If so, JVs offer the advantages of greater lobbying power and political risk management (Demirbag et al., 2010), as well as greater resilience to expropriation, which is politically costlier for the host government if a local firm is affected (Henisz, 2000).

The greater probability of a JV as opposed to a greenfield in a bad location may also be explained by greater flexibility in choice of where to locate a greenfield. This mechanism will enable multinationals to avoid establishing new plants in bad regions, while acquisition (for creation of a JV) is location-specific, and the desired partner may already be located in a difficult place. Demirbag et al. (2010) report higher probability of JVs among multinational subsidiaries in Turkey due to political constraints. A similar finding is reported by Meyer et al. (2009) for the emerging economies of India, South Africa, Vietnam and Egypt. French companies commit less resources and opt for more flexible entry modes when facing high administrative distance and an uncertain environment (Moalla, Mayrhofer, 2020).

2.3. Literature on FDI, institutions and court performance in Russia

Recent studies show that weak institutions de-stimulate entry of multinationals in Russian regions (Ledyaeva et al., 2013; Bessonova, Gonchar, 2015). Pressure from regulatory and enforcement agencies reduce the accumulated FDI stock across regions (Kuzmina et al., 2014). The choice between establishment of a JV or a wholly-owned subsidiary depending on subnational institutions in Russia is studied in the paper by Karhunen et al. (2014). The authors conclude that the larger the legislative risk in a Russian region, the higher the probability that a JV will be established in that location rather than a wholly-owned subsidiary. The contribution which the present article can offer is much larger breadth of data coverage (the sample used in Karhunen et al. (2014) consists of only 490 firm-observations compared to 11270 in our work) and the incorporation of variations in regional, industry and subsidiary-level data.

We are not familiar with any works that explain the size decision of multinationals by the strength of the local court system in Russia. A relevant paper by Bruno et al. (2013) investigates how the political environment affects new firm entry in Russia (both domestically owned and foreign firms are included) across regions and firm-size classes. The authors report that greater democracy acts to stimulate entry by small-sized firms and reduces entry by medium and especially large firms. Change of the regional governor, interpreted in the Bruno et al. (2013) study as greater political fluidity, also increases entry by small firms. Smith and Thomas (2015), in turn, find that a positive spillover effect of multinationals in the regions is conditional on the extent of the state capture of regional governments.

We formulate our hypotheses as follows:

H1. Multinational firms prefer to invest in those subnational regions, which can provide a fair, unbiased court system, free of corruption and politicized justice.

H2. The negative effect of weak courts on entry is reinforced by political strength of regional governors

H3. If the courts are weak, the investor will choose to establish a larger subsidiary.

H4. A foreign firm is more likely to set up a wholly foreign-owned subsidiary to increase its bargaining power if the risks associated with weak courts are high.

3. Data and descriptives

3.1. Data sources

The construction of our data set combines several sources. Enterprise-level data of foreign subsidiaries in Russia are extracted from the RUSLANA database[4], maintained by Bureau Van Dijk. RUSLANA is based on official registry data and consists mainly of annual accounts. It enables identification of multinational affiliates, defined as legal entities in which no less than 10% of total capital belongs to foreign investors. The use of plant-level data helps to mitigate spatial and sectoral problems of official statistics on FDI flows, because we can identify and exclude round-tripping investments, reveal the exact location and performance of subsidiaries and avoid systematic bias of statistics on FDI flow in favour of large-scale projects in the oil and gas industry.

Our initial dataset includes all affiliates for the benchmark year 2016, with entry data from 2001 to 2014. We take the date of affiliate incorporation to be the entry date, and assume that all key decisions about the entry, including size and mode, are taken one year prior to entry. The time-lagged measurements exclude possible reverse causality between size and entry decision.

The data needed to be cleaned in various ways. First, we drop observations from countries, considered by the Russian finance ministry as tax havens, because most of these investors are either round-tripping firms of Russian origin, whose entry and structural decisions differ from those of genuine foreign investors, or they represent short-term investments of a speculative nature. About 44% of observations were identified as round-trips and removed from the dataset. Second, for specifications which require performance data, we restrict the dataset to establishments that report turnover for the year of entry. For each establishment, we use information about its location in the subnational region, main 2-digit sectoral code, ownership, mode of entry, export and import activities, and turnover. Financial measures are deflated by a GDP deflator. In addition, RUSLANA provides its own estimates of affiliate size, grouping affiliates into four size categories from "small" to "very large" by combining information about sales, employment and asset value (such information is available for more firms than the number, for which turnover figures are available).

Our data allow us to identify various types of FDI entry: new plants, which belong to one foreign investor; mergers and acquisitions with other foreign firms; and JVs with resident participants. Since we are interested mainly in complementary institutional capabilities, which the resident partner may contribute in locations with inadequate courts, we did not carry out the traditional classification into greenfield and M&A investments. In our sample, we coded JVs as plants,

[4] https://ruslana.bvdinfo.com.

jointly owned by foreign and local investors, as opposed to all other forms of entry (wholly owned plants with one or several foreign shareholders).

The resulting sample of foreign subsidiaries consists of between 6353 and 11932 firms, depending on the number of missing observations for dependent and independent variables. In general, the distribution the number of entries in different regions is biased towards a small number of entries. Almost all regions had years when the number of FDI entries did not exceed 10. At the same time, there were periods when the number of entries into the regions was in the range from 10 to 50 per year. Over our observation horizon, 23 out of 37 regions experienced such dynamics in different years. For six regions, we observe years where the number of entries varied between 50 and 100. However, there are regions in which a significant number of FDI (more than 100 per year) entered consistently during the whole period of observation. These are mostly large developed regions, like Moscow city, the Moscow region, St. Petersburg. The largest sample is used in the specification, which explains entry decisions by multinationals, and the smallest sample is used in the specification, which explains decision on the mode of entry. The data show that behaviour of foreign investors changed substantially over time: the highest number of entries in the whole period of observation was in 2007, after which the entry rate declined significantly. Large and very large affiliates dominate among entrants throughout the whole period of observation.

Wholly owned foreign subsidiaries lead in the sample: only one third of entries are joint ventures with resident firm. We also control the model for trade characteristics: 16% of affiliate firms are involved in exports and 36% in imports. Overall, the dataset includes entries from 51 countries, among which Germany is best represented.

3.2. Measuring the quality of courts

In Russia cases involving foreign companies are heard, in the main, by two types of court: (i) *arbitrazh* (commercial) courts, where cases between firms or between a firm (firms) and the government are heard; and (ii) courts of general jurisdiction, when an individual is in dispute with a firm. Some firms choose to solve disputes in international commercial arbitration, especially when they suspect that local courts to take side of the local party, although foreign arbitration awards can be hard to enforce in Russia (Glusker, 2010). Some purely civil law disputes are heard in the criminal judicial system, when law-enforcement agencies bring economic charges against firms. This paper focuses mostly on Russia's *arbitrazh* court system, the largest civil court system in the country, which hears economic disputes ver contracts and property, tax, land, antitrust regulation, problems with registration and licensing, customs control and insolvency.

Assessments of the quality of *arbitrazh* courts are mixed. Although appearing relatively efficient compared to other parts of the Russian legal system, they display multiple examples of political bias. Some authors point to the dualistic nature of the Russian legal system, where politicized cases coexist with ordinary cases that courts resolve in accordance with the written law (Hendley, 2012; Solomon, 2010). Firms are somewhat skeptical about obtaining justice from *arbitrazh* courts when their property rights are at stake and when their case matters to powerful figures in regional or federal government. For example, respondents in a survey on attitudes of the business community to *arbitrazh* courts, carried out in four rounds between 2009 and 2014 (Khakhulina, Karaeva, 2015) report that courts are least likely to rule in favor of a firm when the dispute is with regional government, and the next most favored adversaries are federal government and law-enforcement agencies.

Thus, our main regional indicator of interest is the quality of the judicial system. It is difficult to quantify court-related hazards directly, especially at the subnational level. If objective performance data is available, the observation period is short, because national and subnational judiciaries have only recently started to gather court information in a comparable and systematic manner. Moreover, some standard performance indicators, like the inverse share of court decisions that are appealed against in higher courts (used, for example in (Shvets, 2013)), may be misleading in a country where practically all more or less significant cases are appealed, and higher courts execute bureaucratic control rather than quality control over courts in primary jurisdictions (Titaev, 2012).

We rely on managerial perceptions about the judicial system and use data of the BEEPS[5] V for Russia, conducted in 2011–2012. The questionnaire covers a broad range of questions about business environment and firm performance, including court conditions and court use. In BEEPS firms are asked about their perception of the legal system, specifically about courts of general jurisdiction and *arbitrazh* courts, without distinguishing between the two. We have practical reasons to believe that the focus is mainly on *arbitrazh* courts: litigation with other firms or the state is heard in *arbitrazh* courts and annual cases are numbered in millions, compared to a relatively small number of cases involving a firm (organization) that are heard by civil courts of general jurisdiction. The latter courts deal mostly with disputes between individuals and firms over jobs, salaries and conflicts with individual shareholders. The same approach works when firm perceptions of court conditions are used in the literature (for example, Hendley (2012) uses 2005 BEEPS Russian data).

In the BEEPS V firms were distributed randomly across sectors, regions and size groups of enterprises, and we assume that the regional mean perception of the quality of courts reflects the situation in respect of protection of property rights. In total the BEEPS V data included 4220 firms in 33 two-digit sectors and 37 regions of Russia. By using the BEEPS V data, we avoid an endogeneity problem, which usually arises when the decisions of firms are explained by their perception of institutional hazards. Also, World Bank and EBRD estimates are publicly available and may influence the actual choices of location in Russia by multinationals.

The survey instrument allows us to estimate three negative characteristics of courts: unfairness, unjustified delays and inefficiency. They are measured as a regional mean of the share of firms, which strongly disagree with the statements that the court system is, respectively, "fair, impartial", "quick", and "capable of enforcing its decisions". In addition, we can measure the regional mean of the share of firms, which think that other firms in their sector make payments for dealing with courts, which we use as a proxy for corruption in courts. We assume that this indicator is closer to experienced corruption than variables, based on perceptions of corruption in courts. All four measurements related to courts are directly linked to the cost of contract enforcement and capture regional variation in the rule of law. In addition to specific measurements of court conditions, we include an indicator, which measures the cumulative index of court quality, constructed from

[5] Firm-level Business Environment and Enterprise Performance Surveys (BEEPS, currently known as enterprise surveys) implemented in European and Central Asian countries, are an ongoing joint project of the World Bank, the European Bank for Reconstruction and Development, the European Investment Bank, and the European Commission. As a rule the surveys are carried out every three or four years (six rounds altogether in Russia). The representative sample includes private companies with 5 or more employees in manufacturing and services (excluding financial services and firms wholly owned by the state).

Table 1. Description of variables used in the study and summary statistics

Variables	Description	Source	Mean	St.dev.	Min	Max
Subsidiary size	Logarithm of average real sales of the affiliate firm over observation period	RUSLANA	8.48	2.54	–1.56	17.49
Subsidiary size categories	Categories for the size of the subsidiary: 1 — small, 2 — medium; 3 — large, or 4 — very large plant	RUSLANA				
	– Small	12.7%				
	– Medium	16.3%				
	– Large	27.8%				
	– Very large	43.2%				
Joint venture	Dummy for joint venture with a resident partner = 1; others = 0	RUSLANA	0.34	0.47	0.00	1.00
Unfair courts	Share of firms in the region, which strongly disagree with the statement "The court system is fair, impartial and uncorrupted"	Own calculations based on BEEPS data	0.21	0.06	0.07	0.53
Delays in courts	Share of firms in the region, which strongly disagree with the statement "The court system is quick"	Own calculations based on BEEPS data	0.23	0.05	0.13	0.47
Inefficiency of the courts	Share of firms in the region, which strongly disagree with the statement "The court system is able to enforce its decisions"	Own calculation based on BEEPS data	0.15	0.06	0.05	0.45
Corruption in courts	Share of firms in the region, which think that other firms in their industry make payments/gifts in dealing with courts	Own calculations based on BEEPS data	0.18	0.12	0.04	0.68
Index of court quality	Estimated from regional averages of answers to the four previously mentioned questions about court quality using the principle component analysis	Own calculations based on BEEPS data	–0.62	0.95	–2.77	4.60
Duration of trial	Objective court statistics based on random representive sample	Titaev et al. (2014), data available on request	76.2	32.1	53.6	252.4
Imports	Dummy for import operation of the subsidiary	RUSLANA	0.36	0.48	0.00	1.00
ln (Population)	Logarithm of the population of the region in the year prior to the year of foreign entry	Rosstat	15.57	0.80	13.58	16.29
ln (GRP per capita)	Logarithm of real gross regional product in the year prior to the year of foreign entry	Rosstat	–2.53	0.68	–4.01	–1.55
Governor, years in office	How long the governor had been in office by the time of foreign entry	Own calculations based on HSE regional dataset	8.22	5.71	0.00	21.00

End of Table 1

Variables	Description	Source	Mean	St.dev.	Min	Max
Distance	Logarithm of the Euclidian distance between the regional capital and the capital of the main shareholder's country	Own calculations based on Vincenty's equations	7.50	0.86	5.62	9.73
Average firm size in industry and region	Logarithm of the mean real sales of all plants within the 4-digit sector and region in the year prior to the year of foreign entry	Own calculations based on RUSLANA dataset for the full population of firms	9.91	1.98	0.00	21.64
Regional share in industry	Share of sales of all plants within the region to the total sales in 2-digit industries in the year prior to the year of foreign entry	Own calculations based on RUSLANA dataset for the full population of firms	0.27	0.28	0.00	0.99
Obstacle index	The average of the firm's responses to the questions of whether various institutional (excluding courts) factors are an obstacle to doing business. The scale for each factor ranges from 0 (no obstacle) to 4 (severe obstacle)	Own calculations based on BEEPS data	1.09	0.22	0.28	1.93
Investment risk	Investment risk rating of Russian regions published annually by RAEX rating agency	RAEX rating review	15.4	15.3	1	77

Note. All monetary variables are deflated using a GDP deflator provided by Rosstat.

the regional averages of answers to four questions about the courts (the first principle component). To assess the robustness of the results, we also use a direct indicator — trial duration — obtained from objective court statistics.

Descriptive statistics (Table 1) show that scepticism about quality of the legal system is typical throughout Russia and that it varies between regions. On average 21.0% of firms report that the court system in Russian is unfair and a larger share (23.0%) report delays in courts. As regards corruption in courts, the mean share of firms in our data reporting informal payments when dealing with courts is 18%, but the figure for the worst three regions is above 50% (Primorsky Territory in the Far East with 56%, Irkutsk Region in Siberia with 58% and Rostov Region in Southern European Russia with 68%), while the top three regions report only 4–5%.

Hence, the perception-based indicators may still not be perfect for our research task, because they are cross-regional in nature and do not change over time. The question, therefore, might be how stable court quality was between 2001 and 2014? Misspecification of court-related predictors might be less of a problem if they do not differ much over a given period of observation. If institutions are classified as formal and informal (North, 1991), we may suggest that the formal component of court-related institutions did not change much during the years of observation. The rules, regulation, and laws were completed by the beginning of the 2000s. The general mechanics of work by courts remains unchanged despite some reforms at the top, like the changes in subordination to the newly created Supreme Courts in 2014. Appointments of regional judges, financing

of courts, litigation fees are regulated by the federal government, and remain constant over time. This relative stability is seen if we compare the perceptions of managers about the Russian judiciary from several rounds of the BEEPS surveys. Comparison of 2012 data and the mean value of data in three earlier rounds show that 2012 indicators of unfairness and inefficiency of courts differ from the mean of the previous three years by 2–3%, estimation of delays being less stable.

We test the robustness of background results by replacing the indicator of delays by the variable of trial duration, obtained from official statistics. The data is available only since 2009, therefore we estimate the averages for all available years and extend them to the earlier periods.

3.3. Regional and other controls

It is likely, however, that the informal component of judicial institutions, the manner in which courts apply formal law, is less stable over time than formal institutions, and matters of judicial independence, fairness, public trust, access and efficiency (Dakolias, 1999) may have changed more than formal conditions. If so, the solution might be to include additional variables that vary across regions and years and that may be correlated with features of judicial quality and multinational entry. In our data we can control for regional wealth (gross regional product per capita) and we suggest that more resources in wealthy regions are associated with a higher demand for fair courts and their better financial standing. Also, wealthy regions in Russia usually attract more foreign investors despite their higher labour cost (Gonchar, Marek, 2014).

In order to separate the effects associated with the quality of the judicial system from the overall investment attractiveness of the regions, we included an index of obstacles to doing business in all specifications. In this index we have included all institutional factors (with the exception of the courts) for which the BEEPS question is asked whether this factor is an obstacle to doing business. Also, for the robustness check, we used the investment risk rating of the regions calculated by the Expert agency.

Regional market size captures demand conditions (a strong driver for entry) and may be associated with higher caseloads and higher qualification of judges, especially in cases where the parties are large companies. In addition to regional market size, we include mean firm size at sectoral level, measured as a logarithm of the mean real sales of all plants within the 4-digit sector and region in the year prior to the year of foreign entry. This indicator controls for the minimal scale economy in the sector and captures sectoral dynamics. We also control the industry specialization of the region, measured by the share of sectoral output in the region in the total sectoral output in Russia in the year prior to the entry.

Additionally, we control for the time-variant political strength of the regional governor, which can account for regional bias in courts. The procedure of appointing and dismissing governors underwent changes during the years of observation, mainly linked to the choice between direct elections and appointments, the regional variety of legislation and practice, and since recently — the limited tenure. At first, between 1992 and 1996 in some regions governors were directly elected by the residents, in others they were appointed by local parliaments, or appointed by the president. Between 1996 and 2005 all governors were elected in all sub-national territories. In late 2004 the elections of governors were cancelled and replaced by appointments. Officially these appointments were administered by the regional legislative authorities, following recommendation of the president. In 2012 this top-down rule was again reversed in favor of direct elections,

though nine regions keep the previous procedure of appointments by the parliament. To control for the strength of the regional governor we measure how long the governor had already been in power at the time of entry of the foreign investor, supposing that the longer the governor stays in power, the easier it is for him/her to influence courts. If a strong regional governor causes bias in commercial court decisions, one would expect less entries to such a region and a larger size of multinational affiliates there. In our descriptive data there is a negative correlation between governor strength and the share of firms which strongly disagree with the statement "The court system is fair, impartial and uncorrupted".

On the other hand, a different outcome is possible: a longer term in office may enable regional governors to attract FDI and develop institutions, which protect foreign investors. For example, Moon (2015) argues that "autocrats" with long time horizons tend to provide strong protection of property rights as they expect long-term benefits from foreign investment. Russian data is not conclusive in this respect, and shows that fluidity of regional administration and safety of property rights are connected: 42% of firms surveyed by Levada Centre in 2012 report that their functioning and the safety of property rights depend on change of regional authorities (Khakhulina, Karaeva, 2015).

All specifications are controlled for year and sector dummies, thus picking up unobservable variables that may influence the entry of multinationals and court conditions in the regions.

4. Research design

We test the four hypotheses described in the literature review section, and assume the presence of exogenous governance costs associated with weak protection of property rights, as expressed by poor quality of regional courts. The research strategy permits analysis of the effects of court conditions on decisions by multinationals on entry, affiliate size and mode of entry.

Our first dependent variable is the decision to enter the subnational region, which is captured by a dummy variable, equal to 1 if the region R was chosen by the investor in year t and 0 otherwise. We assume that the foreign firm has already decided to invest in Russia and is choosing between available subnational alternatives. We explain this choice by the characteristics of the alternatives and characteristics of the new subsidiary within the framework of the alternative specific form of a conditional logit model, first introduced by McFadden (1974). We choose this model, because it allows the inclusion of both choice- and plant-specific characteristics. Furthermore, we are mostly concerned with the investors' average preferences when they select location, rather than with a substitution pattern between alternatives. In this function, the probability of choosing the region R from all the alternatives for each investment decision depends on how court conditions differ between the alternatives and on other choice-specific and plant-specific variables. We estimate the random utility model, in which each subsidiary has the possibility of being established in one of Russia's subnational regions:

$$U_{iRt} = \beta' X_{Rt} + a'_{it} Z_{it} + \varepsilon_{it}, \quad (1)$$

where U is a random utility gained by a subsidiary i from choosing destination R from 1 to 37 alternatives at t; X_{Rt} is the vector of alternative-specific regressors at the time of entry; Z_{it} is a vector of subsidiary-specific regressors, which do not vary across regions, and ε_{it} is the error term. Following McFadden (1974) the probability $\Pr\left(y_{it} = R^*\right)$ that a subnational region R^* may be chosen as a location for a subsidiary at time t can be expressed as:

$$\Pr\left(y_{it}=R^{*}\right)=\frac{\exp(\beta' X_{R^{*}t}+a_{it}' Z_{it})}{\sum_{R=1}^{37}\exp(\beta' X_{Rt}+a_{it}' Z_{it})}. \quad (2)$$

To test if the impact of regional courts on FDI entry decisions depends on the power of regional governors, we interact measurements of courts with the indicator of the governor in power.

Next, we explain the size decision of a multinational and measure it by the magnitude of its production activity expressed either by log average turnover in the years of observation, or the classification by four size groups of subsidiaries, based on combined consideration of employment and sales

$$\begin{aligned}\ln\left(Av\_sales\right)&=a_1 Courts_R+a_2 Governor_R+a_3 Market_R+a_4 Cost_R+\\&+a_5 Distance_i+a_6 RegShare_{Rj}+a_7 InvClimate_R+a_8 Min\_Scale_{Rn}+a_9 Trade_i+\\&+\sum_t \beta_t Year\_Dummy_t+\sum_n \gamma_n Sector\_Dummy_n+\varepsilon_i.\end{aligned} \quad (3a)$$

In the second case, since the dependent variable contains ordered categories for firm size, we used an ordered logit model with four outcomes — small, medium, large, and very large firm (indexed by s):

$$\Pr(size_i=s)=\Pr(\kappa_{s-1}<X_{it}'\beta+u_i<\kappa_s)=H(-\kappa_s+X_{it}'\beta)-H(-\kappa_{s-1}+X_{it}'\beta), \quad (3b)$$

where X_{it} is the vector of all explanatory variables same as equation (3a) and $H(z)=1/\left(1+\exp(z)\right)$. Here, we estimate the vector of coefficients β together with the cutpoints κ_1, κ_2 and κ_3 (κ_0 is taken as $-\infty$, and κ_4 is taken as $+\infty$).

The next estimated equation is the probability of establishing a joint venture with a resident partner:

$$\Pr(Structure_{it}=JV\,|\,X_{it})=G\left\{\begin{aligned}&a_1 Courts_R+a_2 Governor_R+a_3 Market_R+a_4 Cost_R+a_5 Distance_i+\\&+a_6 RegShare_{Rj}+a_7 InvClimate_R+a_8 Min\_Scale_{Rn}+a_9 Trade_i+\\&+\sum_t \beta_t Year\_Dummy_t+\sum_n \gamma_n Sector\_Dummy_n\end{aligned}\right\}, \quad (4)$$

where X_{it} is the vector of all explanatory variables and $G(z)=\exp(z)/\left(1+\exp(z)\right)$.

It uses the same predictors as equation (3b) in one specification, and additionally includes control for the subsidiary size in the second specification. This is an important control, not only because, in general, larger firms are more likely to be Greenfields, while smaller firms tend to be joint ventures. If our previous results prove that poor judicial quality conditions affiliate size, then the probability of a joint venture should decrease with increase of affiliate size, if court conditions and the choice of a joint venture are positively correlated.

The following variables are used as predictors. First, we use four variables, which measure various regional court conditions (*Courts*) and additionally use cumulative Index of court quality, constructed from the four specific features of courts. Then we use the same standard gravity variables

as in the equation (3a): *Market* denotes size of the regional market and *Cost* reflects the marginal production cost in the given location with its level of development. We include the *Distance* between the region and the home country and expect that affiliates in distant locations will have higher monitoring costs, higher fixed costs of investment and higher trade costs (for trading firms). *InvClimate* controls for the overall level of investment attractiveness and institutional development of the regions. The *Governor* variable measures the duration in office of the regional governor and may be expected to affect the way the quality of local courts conditions the size and mode of entry. The *Min_scale* variable measures the mean size of enterprises in the given pair of region/sector and controls for the region-specific market structure. *RegShare* reflects the degree of industry specialization of the regions. *Trade* measures involvement of the subsidiary in import activities.

We also use several controls to account for the effects of industry sector, which capture unobservable technological specificity of enterprise assets and time-related characteristics that may be associated with the turnover of the subsidiary. In all linear models, we correct standard error for heteroskedasticity and cluster ε within regions.

Finally, in order to test robustness of the results obtained in baseline specifications we carry out a series of tests and re-estimate our models using different measures of the main variables of interest.

5. Findings and discussion

5.1. How do local courts affect the probability of multinational entry?

In Table 2 we report five specifications for estimation of the probability of entry of a foreign firm in a Russian region conditioned by the quality of local courts. Our four specific measurements of the judicial system are correlated; so, we have included them in regressions one by one and additionally included specification (1), where court conditions are measured by the cumulative index of court quality calculated from the previous four indicators. The results confirm that the index of court quality and at least three specific measurements of our main predictors of interest — unfair courts, delays and inefficiency of the judicial system — significantly de-motivate foreign entry. The regional investment climate, excluding courts, acts in the same manner, significantly decreasing the likelihood of foreign companies' entry.

We also obtained some evidence that multinationals prefer regions with good courts and politically weak governors, supporting the idea that the longer the governor stays in power, the easier it becomes for him/her to influence courts. This result may be compared with the result obtained by Lambert-Mogiliansky et al. (2007): the authors found variety between regions as to the incidence of firm bankruptcies, which were more frequent in regions with politically strong governors and weak courts. In our case, foreign entry is less likely in regions with "politically popular" (long-established) governors and weak courts.

We then hypothesize that the political power of regional governors may change the effects of courts on location decision and we test this by adding an interaction term of court features and political power of governors to equation (1), keeping all other predictors. The political strength of the governor would be effective in making multinationals less deterred by the weakness of regional courts if the coefficient for the cross term is found to be negative and significant. The finding, however, supports the hypothesis that the longer the governor stays in power, the more likely

Table 2. The impact of court conditions on choice of FDI location across subnational regions in Russia

	Without interactions					Interaction of court conditions and political power of the governor				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Index of court quality	–0.213*** (0.014)					–0.245*** (0.021)				
Unfair courts		–5.570*** (0.263)					–6.806*** (0.385)			
Delays in courts			–4.203*** (0.282)					–5.101*** (0.419)		
Inefficiency of courts				–1.446*** (0.209)					–0.855*** (0.288)	
Corruption in courts					0.144 (0.119)					0.322** (0.153)
Governor, years in the office	–0.034*** (0.003)	–0.030*** (0.003)	–0.033*** (0.003)	–0.034*** (0.003)	–0.035*** (0.003)	–0.031*** (0.003)	–0.071*** (0.010)	–0.066*** (0.011)	–0.018*** (0.006)	–0.029*** (0.004)
ln(Population)	1.018*** (0.033)	1.135*** (0.035)	0.970*** (0.034)	1.090*** (0.032)	1.118*** (0.032)	1.021*** (0.033)	1.138*** (0.035)	0.978*** (0.034)	1.085*** (0.032)	1.120*** (0.032)
ln(GDP per capita)	0.852*** (0.042)	0.579*** (0.044)	0.933*** (0.044)	0.788*** (0.042)	0.824*** (0.046)	0.854*** (0.043)	0.594*** (0.045)	0.933*** (0.044)	0.776*** (0.042)	0.808*** (0.046)
Distance	–1.984*** (0.031)	–1.927*** (0.031)	–1.983*** (0.032)	–2.066*** (0.031)	–2.086*** (0.032)	–1.981*** (0.031)	–1.920*** (0.031)	–1.979*** (0.032)	–2.064*** (0.031)	–2.085*** (0.032)
Average firm size in sector/region	0.077*** (0.007)	0.074*** (0.007)	0.075*** (0.007)	0.077*** (0.007)	0.076*** (0.007)	0.077*** (0.007)	0.073*** (0.007)	0.075*** (0.007)	0.077*** (0.007)	0.076*** (0.007)
Regional share in an industry	1.796*** (0.078)	1.799*** (0.078)	1.845*** (0.078)	1.826*** (0.078)	1.893*** (0.077)	1.802*** (0.078)	1.819*** (0.079)	1.850*** (0.078)	1.818*** (0.078)	1.891*** (0.077)
Obstacle index	–0.249*** (0.064)	–0.226*** (0.062)	–0.170** (0.067)	–0.448*** (0.063)	–0.560*** (0.062)	–0.223*** (0.065)	–0.166*** (0.064)	–0.145** (0.068)	–0.470*** (0.063)	–0.545*** (0.062)
Imports[1]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

End of Table 2

	Without interactions					Interaction of court conditions and political power of the governor				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Interaction of court conditions with the governor										
(Index of court quality) × governor						0.005** (0.002)				
(Unfair courts) × governor							0.195*** (0.043)			
(Delays in courts) ×governor								0.139*** (0.047)		
(Inefficiency of courts) ×governor									–0.100*** (0.035)	
(Corruption in courts) × governor										–0.031* (0.017)

Note. Dependent variable — location choice of the region out of 37 alternatives. Alternative specific conditional logit estimations; standard errors in parentheses.
[1] Imports is a case-specific variable, coefficients were estimated separately for each of the regional alternatives. ***, **, * — significance at 1, 5, and 10% level.
Number of observations = 439021, firms = 11920, regions = 37.

political bias in courts becomes: the estimated coefficient on the interaction term between the cumulative court index and political power of the regional governor remains positive and significant (column 6 of Table 2). The same result is obtained for interaction of political power and two specific characteristics of the court system (unfairness and delays, columns 7 and 8). Stronger political power, however, makes inefficiency in courts less of a disincentive.

Additionally, if we follow the hypothesis developed in Bruno et al. (2013), and assume that period in office of the governor measures political fluidity, then our results are in line with that study, which also finds that political fluidity reduces the entry costs and increases the probability of new firm entry.

Contrary to expectation, the probability of entry is unaffected by the level of experienced corruption in courts. This suggests either that courts are not as corrupt as it is broadly assumed in the literature (Hendley (2016) makes this argument), or that multinationals already expect high levels of corruption when they decide to invest in Russia, and subnational varieties of experienced corruption (measured as the mean reported share of requested bribes in the region) are not effective in explaining entry.

Traditional controls in this model are signed as predicted in the literature on location choice: larger and more developed markets increase the probability of entry. Entry by foreign firms decreases as distance between parent and affiliate increases.

To sum up, we find that the entry decisions of multinationals are dependent on the quality of regional courts, which can safely be assumed to be a key institution protecting property rights and foreign investors. The hypothesis of differing attractiveness of regions due to political strength of the governor is also supported by the data.

5.2. How large should subsidiaries be in a location with weak and dependent courts?

In this section, we investigate how multinationals react to a weak judicial system when they decide on the size of their subsidiary. From the theoretical perspective, we might expect that the same coefficients for indicators of local courts, found significant in Table 2, will have the opposite signs in Table 3. Specifically, we would expect that a subsidiary needs to be larger in case of entry to a location with dependent and unfair courts, so that the newcomer can use additional market and bargaining power to cope with the weak courts.

The obtained results closely confirm the predictions in related theoretical works by Helpman (2004) and Yeaple (2009). For instance, all three measurements of court conditions, which were found to be significantly and negatively associated with the likelihood of entry, appear positive and significant both in OLS and ordered logit specification of equation (3b) (Table 3). If a multinational locates its affiliate in a region characterized by weaker courts, it is more likely to establish a large enterprise than it would do in more favorable locations. The marginal effects for the logit regression are shown in Figure 1. If the quality of the judiciary deteriorates, foreign companies are more likely to enter creating very large firms, while the probability of establishing of small, medium and large companies decreases. These differences are statistically significant for all indicators of court quality.

One of the judicial conditions in a region — corruption in courts, measured as a share of firms in the region reporting instances of payments when firms in their sector deal with *arbitrazh* courts — gives unexpected results. Contrary to expectation and contrary to theoretical prediction,

Table 3. Effects of court quality on subsidiary size

	OLS estimation, dependent variable – logged average real turnover coefficients					Ordered logit estimation, dependent variable – size dummy (1–small, 2–medium, 3–large, 4–very large) coefficients				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Index of court quality	0.215*** (0.070)					0.139*** (0.029)				
Unfair court		2.579** (1.037)					1.630*** (0.539)			
Delays in courts			2.895** (1.342)					1.630*** (0.539)		
Inefficiency of courts				2.837*** (1.000)					1.817*** (0.426)	
Corruption in courts					–1.905* (0.941)					–1.254*** (0.275)
Governor, years in office	0.002 (0.009)	–0.003 (0.011)	0.001 (0.009)	0.004 (0.007)	0.007 (0.012)	0.336*** (0.068)	0.270*** (0.066)	0.315*** (0.070)	0.309*** (0.067)	0.265*** (0.066)
ln(Population)	0.522** (0.229)	0.405* (0.230)	0.509** (0.250)	0.491* (0.254)	0.396 (0.252)	–0.085 (0.092)	0.057 (0.090)	–0.077 (0.094)	–0.039 (0.090)	–0.196* (0.101)
ln(GRP per capita)	–0.143 (0.317)	0.079 (0.328)	–0.160 (0.341)	–0.088 (0.340)	–0.299 (0.220)	0.007 (0.006)	0.004 (0.006)	0.006 (0.006)	0.008 (0.006)	0.011* (0.006)
Distance	–0.440 (0.066)	–0.225 (0.054)	–0.298 (0.057)	–0.291 (0.058)	0.221 (0.054)	0.184*** (0.031)	0.179*** (0.032)	0.191*** (0.031)	0.196*** (0.031)	0.215*** (0.031)
Imports	1.668*** (0.127)	1.668*** (0.128)	1.666*** (0.127)	1.679*** (0.125)	1.675*** (0.127)	1.299*** (0.055)	1.294*** (0.055)	1.305*** (0.055)	1.304*** (0.055)	1.290*** (0.055)
Mean firm size in sector/ region	0.072*** (0.021)	0.075*** (0.022)	0.072*** (0.022)	0.069*** (0.022)	0.070*** (0.021)	0.007 (0.013)	0.010 (0.013)	0.007 (0.013)	0.005 (0.013)	0.005 (0.013)
Regional share in an industry	0.257 (0.201)	0.112 (0.220)	0.181 (0.187)	0.319 (0.202)	0.129 (0.210)	0.411** (0.163)	0.320** (0.161)	0.352** (0.162)	0.447*** (0.165)	0.326** (0.161)

End of Table 3

	OLS estimation, dependent variable – logged average real turnover coefficients					Ordered logit estimation, dependent variable – size dummy (1–small, 2–medium, 3–large, 4–very large) coefficients				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Obstacle index	–0.440 (0.383)	–0.225 (0.366)	–0.298 (0.340)	–0.291 (0.429)	0.221 (0.369)	–0.428*** (0.141)	–0.323** (0.137)	–0.299** (0.142)	–0.324** (0.134)	–0.011 (0.119)
Sector dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	–1.351 (3.723)	–2.167 (4.680)	–1.468 (4.705)	–0.626 (4.335)	–1.308 (4.291)					
Cutpoint1						5.048*** (1.141)	4.167*** (1.118)	5.349*** (1.218)	5.035*** (1.145)	4.808*** (1.138)
Cutpoint2						6.191*** (1.142)	5.308*** (1.119)	6.489*** (1.218)	6.176*** (1.146)	5.948*** (1.138)
Cutpoint3						7.513*** (1.143)	6.628*** (1.120)	7.808*** (1.220)	7.497*** (1.147)	7.270*** (1.139)
R-squared	0.179	0.177	0.177	0.178	0.178					

Note. Standard errors in parentheses; robust and clustered by region standard errors are reported for OLS estimation.
***, **, * — significance at 1, 5, and 10% level.
Number of observations is 7075 (in OLS estimation) or 6353 (in ordered logit estimation).

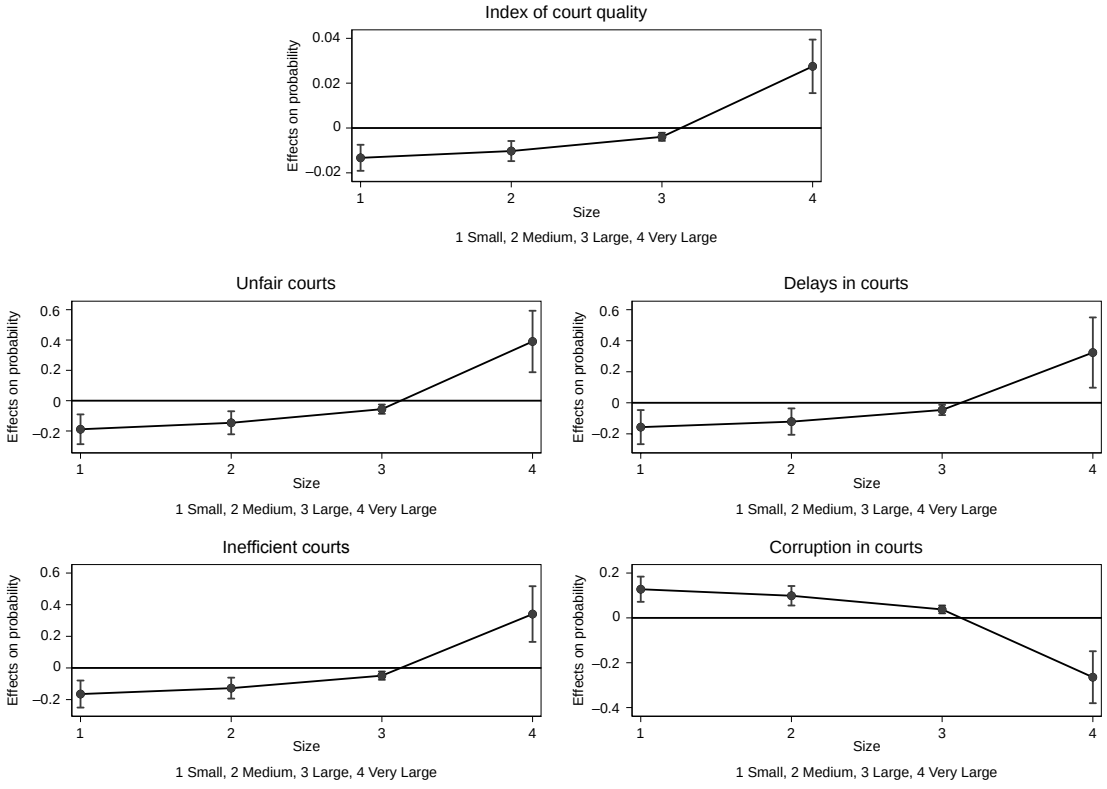

Fig. 1. Size effects of regional court conditions from the ordered logit equation, marginal effects

a higher level of experienced corruption is associated with smaller size of the subsidiary and this result is robust for various specifications and subsamples of the model. This seemingly contradictory result may be explained by different reaction of large and small subsidiaries to problems, which emerge in regional courts. As Oetzel (2005) reports in her qualitative study, smaller subsidiaries are more vulnerable to various political risks and can be held hostage to long bureaucratic processes (obtaining various permissions, etc.). While large firms with much bargaining power have various levers for solving such problems, smaller subsidiaries have to solve them by making unofficial payments, including payments to courts, in order to "oil the system". So petty corruption would be more typical of smaller firms.

In other words, when regional courts are perceived as unfair, selective and inefficient, a multinational may set up a larger subsidiary, and the bargaining power thus obtained makes it possible to do without the "helping hand" of corruption in courts.

So, the hypothesis of a strong link between decisions on subsidiary size and problems with the judicial system is supported by the data. As predicted by the theory, better property protection, measured in our case by court conditions, is found to reduce the scale threshold and stimulate entry by smaller-sized firms. This is not the case for experienced corruption in courts, which does not prevent entry, but is strongly associated with smaller firms. In other words, smaller subsidiaries are less well prepared to deal with unfair and selective courts than larger subsidiaries, and when small subsidiaries enter, they are more frequently forced to buy better treatment in courts by means of money or gifts.

5.3. Joint venturing with a resident partner

The regressions reported in Table 4 explain how mode of entry is determined by court conditions in a region. We report the results of the logit model, which employs the same controls as in the previous regressions, and additionally control for subsidiary size, measured as logged average annual turnover during all years of observation.

Table 4. Choice of joint venture as an entry mode depending on the court conditions. Logit regression, average marginal effects. Dependent variable — probability of joint venture with a local partner

	Specifications				
	(1)	(2)	(3)	(4)	(5)
Index of court conditions	–0.004				
	(0.006)				
Unfair courts		0.069			
		(0.101)			
Delays in courts			–0.190		
			(0.117)		
Inefficient courts				–0.100	
				(0.092)	
Corruption in courts					–0.097*
					(0.059)
Governor, years in office	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ln (Population)	–0.018	–0.015	–0.025*	–0.020	–0.014
	(0.015)	(0.014)	(0.015)	(0.015)	(0.014)
ln (GRP per capita)	–0.067***	–0.068***	–0.058***	–0.066***	–0.086***
	(0.020)	(0.019)	(0.020)	(0.019)	(0.021)
Distance	0.022***	0.021***	0.023***	0.022***	0.022***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Imports	–0.013	–0.013	–0.014	–0.013	–0.014
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Average firm size in industry and region	–0.001	–0.001	–0.001	–0.001	–0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Regional share in an industry	0.016	0.019	0.013	0.010	0.021
	(0.037)	(0.037)	(0.037)	(0.037)	(0.037)
Obstacle index	0.150***	0.132***	0.168***	0.154***	0.146***
	(0.030)	(0.029)	(0.031)	(0.029)	(0.026)
Size of affiliate (log av.turnover)	–0.029***	–0.029***	–0.029***	–0.029***	–0.029***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Sector dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Number of observations	6670	6670	6670	6670	6670

Note. Logit estimations in 5 specifications. The comparison group is a plant owned by one or several foreign subsidiaries. Size of affiliate is measured as logged annual average turnover during all years of observation. Marginal effects are evaluated at the average value of independent variables. Standard errors in parentheses; ***, **, * — significance at 1, 5, and 10% level.

The results do not show that multinational managers respond to the regional legislative risks by partnering with host country firms, which may offer some advantages in interactions with local courts and local government. Only an increase in the rate of corruption in the courts reduces the likelihood of creating joint ventures. Although the statistical significance of this effect is not very high (10%). At the same time, the likelihood of creating a joint venture is largely explained by the general level of institutional development of the region. The deterioration of the investment climate in terms of an increase in the index of obstacles to doing business leads to an increase in the likelihood of creating partnerships with local companies. The results show that an increase by one standard deviation of obstacle index corresponds to 2.8–3.6% (depending on specification) increase in the likelihood of organizing an affiliate as a joint venture. Thus, foreign investors are trying to use the experience of local enterprises to find the best ways to adapt to adverse business conditions.

As regards economic and geographical indicators, our findings concur with the previous literature to the effect that JVs are more likely to be established in regions with lower costs: per capita gross regional product is always negatively associated with JV probability. Geographical remoteness of the investor's home country to the region of investment in Russia, which is usually associated with high transaction and production costs, negatively affects the probability of a JV.

Smaller firms are more likely to be organized as joint ventures. We may suggest that decisions on size and entry mode are interdependent when the business climate is poor, and the multinational has to balance the perceived investment risks against the risks of higher transaction costs and possible opportunistic behaviour of the JV partner.

These findings are not consistent with our hypothesis based on the literature on heterogeneous firms. They confirm that the decision on the mode of entry is motivated rather by the general investment risks than specific court problems. However, we cannot ignore the empirical fact that the majority — two thirds of multinationals enter Russia via wholly-owned foreign subsidiaries or JVs with other foreign partners, sacrificing local institutional knowledge for control and lower risk of opportunistic behaviour of the resident joint venture partner. So, we would suggest that JVs with a resident partner are more common when investment risks are high enough (higher than the usual level faced by a firm investing in Russia). In this case multinationals minimize institutional and property risks through partnerships.

6. Robustness check

We perform a robustness analysis to ensure that our results are not driven by the BEEPS methodology. First, we included the investment climate ratings of the regions published by RA Expert rating agency in the regression. The advantage of these ratings is that they are collected annually, are publicly available and foreign investors are informed about this data. Choosing between two available statistics, investment attractiveness and investment risk of regions[6], we give preference to the risk indicator, which is methodologically close to the indicators of obstacles to doing business, used in the background analysis. The results are shown in Table 5 columns (1)–(5). The effect of investment risk rating of regions confirms an earlier reported a negative impact of the investment climate hazards on probability of foreign entry. Moreover, the variables of interest

[6] RA Expert website http://www.raexpert.ru/ ratings/regions/.

Table 5. The impact of court conditions on choice of FDI location across subnational regions in Russia. Alternative regional investment risk measure and alternative court quality measure

	Alternative regional investment risk measure (Expert rating)					Alternative court quality measure
	(1)	(2)	(3)	(4)	(5)	(6)
Index of court conditions	–0.245*** (0.014)					
Unfair courts		–5.826*** (0.258)				
Delays in courts			–4.526*** (0.264)			
Inefficient courts				–2.064*** (0.212)		
Corruption in courts					0.115 (0.124)	
Trial duration						–0.001** (0.001)
Governor, years in office	–0.033*** (0.003)	–0.029*** (0.003)	–0.032*** (0.003)	–0.034*** (0.003)	–0.035*** (0.003)	–0.035*** (0.003)
ln (Population)	0.872*** (0.030)	1.002*** (0.031)	0.866*** (0.030)	0.925*** (0.030)	0.964*** (0.031)	1.155*** (0.035)
ln (GRP per capita)	0.921*** (0.040)	0.637*** (0.041)	0.980*** (0.041)	0.853*** (0.040)	0.888*** (0.046)	0.911*** (0.063)
Distance	–1.956*** (0.032)	–1.909*** (0.031)	–1.966*** (0.032)	–2.044*** (0.032)	–2.078*** (0.032)	–2.096*** (0.031)
Average firm size in industry and region	0.075*** (0.007)	0.071*** (0.007)	0.073*** (0.007)	0.075*** (0.007)	0.073*** (0.007)	0.075*** (0.007)
Regional share in an industry	1.817*** (0.078)	1.839*** (0.078)	1.868*** (0.077)	1.858*** (0.077)	1.973*** (0.076)	1.953*** (0.082)
Reginal investment risk	–0.007*** (0.001)	–0.006*** (0.001)	–0.006*** (0.001)	–0.007*** (0.001)	–0.006*** (0.001)	
Obstacle index						–0.585*** (0.063)
Imports[1]	Yes	Yes	Yes	Yes	Yes	Yes

Note. Alternative specific conditional logit estimations; standard errors in parentheses.
***, **, *–significance at 1, 5, and 10% level. Number of observations = 439021, firms = 11920, regions = 37.
[1] Imports is a case-specific variable, coefficients were estimated separately for each of the regional alternatives.

measuring the quality of the judicial system retain their sign, as well as statistical and economic significance.

Secondly, we used an alternative indicator of the quality of courts, based on objective regional court statistics. This indicator contains data on trial duration. Data for this indicator are available only from 2009, for this reason we took averages for the available years and spread them over the entire study period. The estimates obtained show (see column (6) in Table 5) that the deterioration of the objective indicator of the quality of courts in a given region also

leads to a decrease in the likelihood of a foreign company entering this region. The weaker effect obtained on the data of judicial statistics can be explained by the fact that when constructing subjective estimates, we based the index on those answers where the respondents 'strongly disagreed' with the statements, i.e. we gave more weight to those regions where business leaders saw more reason to question the effectiveness of the judiciary. Aggregated judicial statistics does not make it possible to single out those regions where problems are of greater intensity. Therefore, results based on official court statistics look less impressive and not always robust to different model specifications.

7. Conclusions

In this paper, we have investigated the importance of institutions in the structure of implants by multinationals in Russia in 2001–2014 and specifically the role of regional court quality in determining heterogeneity in the scale and scope of FDI by multinationals. This paper makes several contributions to the literature. First, it provides institutional analysis at enterprise level, integrating variation of subnational institutions for the protection of property rights in one country and variation in the features of microestablishments. So, we have attempted to bring together institutional analysis, the concept of heterogeneous firms and the traditional asset advantages of multinationals within the OLI paradigm. We take account of specific features of the region, sector and subsidiary. Second, we explain entry decisions and choice of entry mode by the predictors of court conditions, which are particularly important for multinational business, avoiding more general institutional concepts based on less specific measurements, such as democracy or the rule of law.

Most multinationals entered Russia, which is a high-risk country, through large and very large subsidiaries organized as wholly-owned foreign enterprises. The observed variation of multinational business strategies across subnational regions is largely explained by court conditions, as foreign investors adapted to weak courts by setting up a large subsidiary. As shown in the findings, the overall institutional factors, which discourage entry, were found to encourage larger size and partnership as hazard-mitigating choices.

The findings of this study are of obvious policy relevance and may contribute to the debate on the role of foreign investments in transition economies. The results emphasize the high social and economic cost of impartial courts, and the significant role, which foreign ownership plays in shaping the structure of the host economy and in microeconomic response to weak institutions. It would be difficult for public policy to act simultaneously on climate, geography and all the institutional barriers, which affect foreign entry. However, the government can do much to counter detrimental effects on property protection caused by biased courts and corrupt regional elites.

When managers of multinationals take decisions on location, size of the subsidiary and mode of entry to a country with a weak institutional environment, they should consider the mechanism by which court weaknesses and regional political hazards interact to cause specific threats to their business. This article shows that two strategies of adaptation are mostly employed — avoid locations with excessive legal risks, and safeguard risks through larger affiliates.

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