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# Changes in Market Behaviour Among Russian Forest Enterprises

MATS-OLOV OLSSON

## *Abstract*

The article reports on a follow-up of a case study conducted in 1998–1999 investigating the rules governing the behaviour of Russian forest enterprises. The new study, carried out in 2011–2012, used the same survey in interviews with a subset of the enterprises that took part in the original investigation. The objective was to see whether enterprises' behaviour and the rules governing their behaviour had become more market efficient since our original study. The new study showed that, over a ten-year period, the behaviour of the surveyed enterprises became better adapted to rules governing a modern market economy. However, many traits of the virtual economy remained.

THIS ARTICLE REPORTS ON A FOLLOW-UP OF A SURVEY-BASED CASE study of institutional change in the Russian forest sector conducted in 1998–1999 as part of a project based at the International Institute for Applied Systems Analysis (IIASA). The original study sought to identify institutional hurdles to an efficient forest sector development in Russia's emerging market economy. Case studies were conducted in eight Russian regions with the purpose of describing the institutional framework governing actors' behaviour in the regional forest sector and identifying the most prominent institutional problems hampering the further development of the forest sector in the respective eight regions.<sup>1</sup> The final

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<sup>1</sup>The IIASA-based project *Institutions and the Emergence of Markets—Transition in the Russian Forest Sector* was conducted in the period 1997–2001. Part of IIASA's long-standing Forestry Program, it engaged four in-house scholars as well as nine Russian researchers serving as local study co-ordinators for case studies conducted in eight Russian regions. In addition, 15 PhD students were engaged in the project while participating in the institute's Young Scientists Summer Program. Apart from the case-study reports, several specific aspects of the institutional framework governing actors' behaviour in the Russian regional forest sector were explored by the summer school students and members of the in-house research team. Information about IIASA is available on the institute's website, available at: <http://www.iiasa.ac.at>. Each of the eight case studies was reported in IIASA's Interim Report series.

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report on the work was published in an article synthesising the results of the eight case studies in order to reach more general conclusions about the institutional barriers for a restructuring of the forest enterprise sector to make it more competitive in the emerging Russian market economy (Carlsson *et al.* 2001).

Douglass North defines institutions as ‘the rules of the game in a society; more formally, they are the humanly devised constraints that shape human interaction. In consequence they structure incentives in exchange, whether political, social, or economic’ (North 1997, p. 2). Institutions should be distinguished from organisations, described by North as ‘groups of individuals bound together by a common objective function (economic organizations are firms, trade unions, cooperatives; political organizations are political parties, legislative bodies, etc.)’ (North 1997, p. 1).

In our original case study, a survey was made of forest enterprise representatives in eight Russian regions: the counties (*oblasti*) of Murmansk, Arkhangel’sk, Moscow, Tomsk and Irkutsk, the Republic of Karelia, and the regions (*krai*) of Krasnoyarsk and Khabarovsk (see Figure 1). The selection of regions was made with the ambition to include regions located in different parts of the country that were engaged in some form of forestry-based production. As it turned out, we were able to include eight regions ranging from Karelia in the west to Khabarovsk in the east. Since our ambition was to perform a case study, there were no formal statistical criteria influencing our selection of regions to include. Rather, our original choice of eight regions was primarily based on very practical



FIGURE 1. LOCATION OF THE CASE-STUDY REGIONS

*Notes:* The eight regions included in our 1998–1999 case study are indicated by light grey shading. The four regions in the follow-up study are marked in darker grey. Regional borders refer to the situation before 2007; on 1 January 2007, two autonomous *okrug*a located in the north (Taymyr AO) and north-east (Evenk AO) of the Krasnoyarsk *krai* were merged with the *krai*.

*Source:* Map adapted by the author from Wikimedia Commons, available at: [https://commons.wikimedia.org/wiki/File:Map\\_of\\_Russian\\_Subjects\\_old.png](https://commons.wikimedia.org/wiki/File:Map_of_Russian_Subjects_old.png), accessed 1 April 2020.

considerations, such as the availability of collaborators willing to help us conduct interviews with representatives of regional forest enterprises. Interviews were conducted with about 25–35 forest enterprise managers in each one of the eight regions mentioned, 215 interviews in total.<sup>2</sup> Questions in the survey mainly related to the behaviour of the respondents in their capacity as managers working in a new and unfamiliar market context. The surveys were conducted with the help of local Russian study coordinators. Respondents' answers were reported in writing (in both Russian and English) and delivered to the IIASA-based core group of researchers where the information was coded into a database and further analysed.

In the follow-up study conducted in 2011–2012, the results of which are presented here, a subset of the enterprises taking part in our original study were revisited. However, it turned out to be impossible to gain access to all enterprises that were investigated as part of our original study and we only managed to re-establish contact with six of our eight local study coordinators.

In a preparatory study in 2011, we asked our local study coordinators to ascertain whether or not the enterprises that had taken part in our original study were still in operation. In the process, they would also be able to identify which enterprises had discontinued their operations and (it was hoped) why they had done so.

In a second phase of the study, a subset of the enterprises in four of the eight original case-study regions (Murmansk, Arkhangel'sk, Moscow *oblasti* and the Republic of Karelia) were revisited and enterprise representatives were asked to answer the same questions as posed in the original study. By using (in principle) the same questionnaire, we expected to discover if enterprises' behaviour had changed in the 14 years since our first survey and, if so, in what way. The reasons for the failure to include more than these four regions were primarily practical; it was only in these four regions that we were able to engage our original Russian local study coordinators to help us carry out enterprise interviews. In two regions (Krasnoyarsk and Khabarovsk), our former local study coordinators agreed to investigate what had happened to the enterprises included in our original study, but they were not able to conduct any new interviews, claiming that the majority of the intended respondents were not willing to be interviewed for our follow-up study.<sup>3</sup> In the remaining two regions (Tomsk and Irkutsk), our former local study coordinators refused to work with us.

Since quite a few enterprises had ceased operations, and since some of the enterprises that were still in operation were not willing to take part in our study, we ended up surveying a total of 40 enterprises. The structure of the two studies—the number of enterprises taking part in the different regions—is summarised in [Table 1](#).

The remainder of this article presents the results of the follow-up study of the institutional changes in the Russian forest sector. First, the results of the preparatory study are discussed, the purpose being to determine which of the enterprises that took part in our original study in

<sup>2</sup>In addition, interviews were conducted with 25 forest enterprises in northern Sweden, which were also part of the study, the objective being to provide a frame of reference. The same questionnaire was used for both Swedish and Russian enterprises. It was assumed that the pattern that emerged from the interviews with Swedish enterprises would represent typical market behaviour.

<sup>3</sup>One reason given for this refusal was respondents' unwillingness to reveal 'business secrets'. One of our local study coordinators also hinted that enterprise representatives might have been more willing to answer our survey if they were paid for their participation, which our limited funding did not permit.

TABLE 1  
FOREST ENTERPRISES TAKING PART IN OUR TWO SURVEYS 1998–1999 AND 2011–2012 (UNITS)

Region number Region name Subsets of the database	1 Murmansk <i>Oblast'</i>	2 Arkhangel'sk <i>Oblast'</i>	3 Karelian Republic	4 Moscow <i>Oblast'</i>	SUM 1–4	5 Krasnoyarsk <i>Krai</i>	6 Khabarovsk <i>Krai</i>	SUM 1–6	7 Tomsk <i>Oblast'</i>	8 Irkutsk <i>Oblast'</i>	SUM 1–8
Total number of enterprises in the 1998–1999 survey	24	25	36	25	<b>110</b>	24	25	<b>159</b>	26	30	<b>215</b>
Total number of enterprises excluding <i>leskhozy</i> in the 1998–1999 study	18 (75%)	21 (84%)	32 (89%)	21 (84%)	<b>92</b> <b>(84%)</b>	19 (83%)	25 (100%)	<b>136</b> <b>(86%)</b>	26 (100%)	28 (93%)	<b>190</b> <b>(88%)</b>
Number of enterprises (excluding <i>leskhozy</i> ) still in operation in 2011– 2012*	13 (72%)	13 (62%)	21 (66%)	16 (76%)	<b>63</b> <b>(68%)</b>	13 (70%)	10 (40%)	<b>86</b> <b>(63%)</b>	?	?	–
Number of enterprises answering our 2011–2012 survey	6 (46%)	13 (100%)	11 (52%)	10 (63%)	<b>40</b> <b>(63%)</b>	0	0	–	0	0	–

Notes: Percent of number on row immediately above shown in parentheses. \* Following the adoption of the new Forest Code in 2006, the previous forest management organisations (*leskhozy*) were reorganised into *lesnichestva*. Most old *leskhozy* are still operating under the new category of *lesnichestva*. Some *leskhozy* were merged with others to form larger *lesnichestvo* units.

1998–1999 were still in operation in 2011–2012 and what distinguished these enterprises from those that were no longer in operation. Next, we turn to a discussion of the picture that emerges from the renewed survey among representatives of 40 of the enterprises in our original case study that were still functioning in 2011. Here the focus is on how these surviving enterprises had changed, whether and to what extent they had adapted their behaviour to function better in the emerging Russian market economy. The article ends with some tentative conclusions about observed changes in the forest sector in the four case-study regions. Before moving to a presentation of the findings of the follow-up study, we will however look at the theoretical underpinning of our study of institutional change in the Russian forest sector.

### *Theoretical foundation of the original study and some recent advances*

#### *The IAD framework and the structure of the study*

In our previous IIASA-based research, we studied the institutions—or ‘rules-in-use’—governing the behaviour of actors in the Russian regional forest sector. More specifically, the focus was on actors’ behaviour in the regional timber procurement arena, extending from the management of forest lands at one end of the spectrum, *via* timber harvesting, to wood utilisation at the other end.<sup>4</sup> The study was inspired and structured by an approach elaborated over many years by the late Nobel laureate Professor Elinor Ostrom of Indiana University, Bloomington, and her associates around the world. Their Institutional Analysis and Development (IAD) framework constitutes a general research design for the study of natural resource management.<sup>5</sup> The framework attributes great importance to factors relating to (a) the resource itself, (b) the society and (c) the institutions governing resource use. In the original 1998–1999 study, the structural configuration defined through these three factor groups was assumed to condition actors’ behaviour on the regional timber procurement arena. Information about the situation in the eight Russian regions that were part of the original study was obtained through official statistical sources, various existing scholarly analyses, and the project’s own surveys among regional forest enterprise managers in the respective regions.

The three factor groups conditioning actors’ behaviour on the timber procurement arena were analysed in our original 1998–1999 study and the results were presented in a series of case-study reports issued in IIASA’s interim reports series.<sup>6</sup> With regard to the first factor group (the resource itself, timber/wood), some features emerged as especially

<sup>4</sup>This approach covers the rules-in-use governing almost all activities in the forest sector, the notable exception being rules governing the behaviour of final wood-product users and those affecting final wood demand.

<sup>5</sup>The IAD framework has been used in numerous studies of resource management around the world. Good overviews of the approach are given in, for instance, Ostrom *et al.* (1994) and Ostrom (2005).

<sup>6</sup>The full results of the 1998–2001 analyses of the forest sector in the four regions that are part of the present follow-up study are found in the following IIASA interim reports: Ivanova and Nygaard (1999) (Murmansk); Carlsson *et al.* (1999) (Arkhangel’sk); Piipponen (1999) (Karelia); Kleinhof *et al.* (1999) (Moscow).

pertinent in the 1998–1999 situation.<sup>7</sup> Obviously, the character of the timber/wood available for utilisation (harvesting and regeneration) is highly dependent upon the geographical and climatic conditions as well as the rules restricting resource use and the available harvesting technology.

With respect to the four regions in our follow-up study, we noted the following characteristics: two of our study regions (Arkhangel'sk and Karelia) had abundant forest resources, a significant share of which consisted of mature stands and old growth forests (Carlsson *et al.* 1999; Piipponen 1999). Pests, diseases and forest fires, as well as inefficient management methods, caused significant losses of forest resources. Exploitation had been extensive, mainly using clear-cutting in the most accessible areas, while future exploitation would require investments in forest roads as well as in modern efficient harvesting and transport technology.

The forest resources of Murmansk and Moscow *oblasti* were of an entirely different character. A large part of the forests in these two regions was protected (Group 1). In Moscow *Oblast'*, all forests belonged to this category, and half of those forests were completely protected. The average age of forest stands in the region had increased from 31 to 58 years during the last 30-year period, and the growing stock of mature and over-mature stands had tripled. As a result of growing areas of both over-mature hardwood and softwood (aspen and birch) stands, the forests of the region could no longer perform their ecological function.<sup>8</sup> In some cases, their impact on the environment was negative. This was the case with, for instance, the CO<sub>2</sub> balance, as well as some important indices characterising air and water quality, for example (Kleinhof *et al.* 1999).

In Murmansk, forest stands were characterised by low density and productivity. The area of sanitary cuttings exceeded that of industrial harvesting. Industrial pollution, pests, diseases and forest fires had caused significant loss of forest resources. The forest road network was underdeveloped requiring considerable investments (Ivanova & Nygaard 1999).

### *The virtual economy—causes and consequences*

The disintegration of the Soviet system in 1991 led to the sudden termination of established and previously planned supply and distribution links in the economy. Enterprise managers, who were trained in the Soviet system—they were often engineers rather than economists—lacked the skills necessary for operating in a market economy. They were now, in principle, supposed to take purchase and sales decisions based on commodity scarcity relations signalled by the price system. Previously all such decisions were expressed in the economic plans elaborated by officials working in the central planning authorities.

This situation threatened to bring the whole Russian economy to a halt. It is in this context that we witnessed the emergence of a very special economic order, wherein enterprises

<sup>7</sup>The analysis of the resource factor group (a) was made in the 1998–1999 study and the results summarised here date from then. No new analysis of this factor group was made in the follow-up study. The two other factor groups (b and c) were investigated on both study occasions, some of the results of which are presented throughout this article.

<sup>8</sup>According to Russian scientists (cited by Kleinhof *et al.* 1999), mature and over-mature forest stands do not have the capacity to store any carbon at all.

elected to circumvent the emerging market economic institutions (rules) and instead continued to be guided by the (now) informal institutions previously in operation during Soviet times. As a consequence, some of the pre-1991 inter-enterprise input–output relations could be maintained, allowing payment or credit problems to be solved through barter and arrears. This way production could go on, allowing (at least temporarily) enterprises a continued existence.

This seemingly odd development in Russia during the first decade after the disintegration of the Soviet Union was given a rational explanation through the so-called theory of the virtual economy elaborated by Clifford G. Gaddy and Barry W. Ickes (Gaddy & Ickes 2002). Their theory, which was used and corroborated in our original 1998–1999 study, aimed at explaining why it turned out to be so difficult to make Russian enterprises modify their behaviour to suit the demands of the emerging market economy. The argument is that largely outmoded production capital and a serious lack of market economic competence, as well as a suboptimal geographical distribution of production, were the main aspects of the legacy of the Soviet era that system change in Russia was expected to overcome.

According to the virtual economy theory, production relations constituting this economic order give rise to a specific behaviour on the part of the actors of the system, a behaviour that in many respects drastically deviates from what is typical in a well-functioning market system. In comparison with the situation in a market system, managers of companies operating in the virtual economy will take counter-intuitive—yet, at least in the virtual economy context, rational—decisions related to not laying off labour despite decreased demand for the company's products; favouring investments in so-called 'relational capital' (RC) at the expense of investments in modern production technology (MC) and management competence;<sup>9</sup> not seeking to develop new products despite decreasing demand for existing products and/or signs of growing demand for products that the company would be able to produce; not exploring the potential benefits of marketing nor striving to find new (cash paying) customers; trusting only personal relations and always expecting, and trying to safeguard against, breach of agreements; and seeking to negotiate favours and alternative ways of fulfilling company obligations towards the state, such as paying taxes in kind rather than in cash, thereby making public affairs less transparent. Examples of this type of behaviour were clearly to be seen in the material gathered through the survey among regional forest sector decision-makers performed within the 1998–1999 IIASA study.

How could a system like the virtual economy emerge in post-Soviet Russia, as many people, experts and non-professionals alike, expected that the country would now finally experience some of the blessings of a market economy? The emergence of the Russian virtual economy might be seen as a path-dependent adaptation of the old command economy to the radically new conditions of market competition. In a systems-theoretical perspective, the development could be seen as a self-organising adaptation allowing non-market-viable Soviet enterprises to survive (at least for a time) in the market

<sup>9</sup>'Relational capital' (RC) refers to the political and personal goodwill enterprise managers enjoy with government officials and other business owners. Investment in RC is seen as an alternative to investment in physical and human capital (MC) and such investment is a major impediment to true restructuring (Ickes 2005).



environment rapidly emerging in post-Soviet Russia (Olsson 2008b, pp. 171–74). What resulted was a situation in which most newly installed formal institutions were more or less disregarded, while actors continued to be guided by the familiar informal institutions that survived in the emerging Russian market system.

### *Suboptimal geographical allocation of production*

In the virtual economy perspective, much of the problematic socio-economic development in post-Soviet Russia has been profoundly conditioned by the operation of the previous system of central economic planning. The most important legacy of the operation of this system was the inefficient (in a market economic sense) geographical allocation of production facilities (factories) that resulted from Soviet investment decisions. When the transition started at the beginning of the 1990s, it soon became clear that a huge number of factories in Russia were not viable in the emerging market environment and that many of them might never become profitable and able to survive in the new market economy context. The situation was most problematic in the so-called *monogoroda* ('monocities', 'monotowns'), namely towns or settlements that had (often) been constructed around a single factory exploiting a local natural resource and employing a large share of the local workforce. A large number of such *monogoroda* were established all over the vast Soviet territory, usually in locations that would never have been considered viable in a market economy, but which were deemed efficient in the Soviet planned economy context.

The virtual economy mechanism was especially useful for enterprises located in *monogoroda*, in particular those situated in distant, isolated and sparsely populated areas, where restructuring of the 'town-forming' factory might not even be possible or at least would require a very long time. To avoid major problems associated with a partial or complete closedown of such a factory—mass unemployment, forced relocation of a large part of the population—production could instead continue, at least temporarily, by means of direct or indirect state subsidies and the slack allowed by the remaining supply and delivery chains and the informal credit system accompanying it.

Obviously, at least in the longer-term perspective, this inefficient geographical production allocation would have to be changed. Measures have indeed been taken to diversify and rationalise the existing production structure or, alternatively, resize (usually downsize) or entirely close down existing facilities in order to achieve market efficiency. However, this ongoing process of change does not appear to be able to achieve its ultimate goals in a short time.

Gaddy and Ickes (2013) have also emphasised the problem of *monogoroda* and their dependence on direct or indirect state transfers, diverting resources from being used for market-efficient investments that would stimulate economic growth. The authors speak about the *monogorod* industries as 'rent addicts' since they can only survive if they receive increasing direct support (part of the resource rent) from the government or are favoured by hidden subsidies *via* purchases of raw materials (especially energy) at below-market prices from the large gas and electricity companies.<sup>10</sup> If this situation is allowed to

<sup>10</sup>See also Ickes (2005), Oxenstierna (2015).

continue, the suboptimal investments will lead to reduced GDP growth, something that may ultimately cause problems of legitimacy for the government and even lead to social unrest. In principle, this transfer system serves to conserve a suboptimal geographical production structure and delays the transition process.<sup>11</sup>

The number of Russian *monogoroda* has been variously estimated throughout the post-Soviet era. According to an early estimate cited by the World Bank (2010), a study commissioned in 1999–2000 by the Russian Ministry of Economy classified 467 cities and 332 smaller towns as *monogoroda*. An estimate in 2008 by the Institute of Regional Policy (cited by Crowley 2016) came to much the same conclusion. Articles in the Russian press warned that the problems associated with the large number of *monogoroda* might easily lead to civil protests and even unrest and violence potentially threatening Moscow (Crowley 2016). Discussions on the dimension and seriousness of the *monogorod* problem continued. According to a list published in mid-2014 by the Russian Ministry of Economic Development, there were 313 municipalities, of which 229 were larger than ‘settlements’ (Crowley 2016).<sup>12</sup>

Clearly, many of these *monogoroda* and their basic industries would not survive without support (resource transfers) from the regional or central government. The significance and magnitude of this problem has been noted and discussed by several scholars.<sup>13</sup>

The fact that the Russian *monogoroda* have been allowed to continue their subsidised existence despite the diversion of investment resources that this entails, might be seen as an example of the interdependence existing between the market and the state, where the state supports the existence of the *monogoroda* thereby assuming the responsibility for, and protection of, their vulnerable citizens. This kind of interdependence has been noted by, for instance, Karl Polanyi (1944). A state-supported programme was launched in November 2016 to improve the situation in *monogoroda* by reducing their dependence on the functioning of their town-forming enterprises.<sup>14</sup> In principle, and especially in the 71

<sup>11</sup>Among the 136 forest enterprises—excluding *leshkozy* (forest management units)—in six of our eight original case-study there were 20 enterprises located in 11 (of a total of 43) so-called *monogoroda*. Of these 20 enterprises, six were located in three *monogoroda* in Murmansk Oblast; nine enterprises in five *monogoroda* in Karelia; two in two *monogoroda* in Moscow; and three in one *monogorod* in Krasnoyarsk Krai. There were also *monogoroda* in Arkhangel’sk (eight) and Khabarovsk (11), but we did not interview any forest enterprises located in these settlements. Of the 20 forest enterprises located in a *monogorod* that were interviewed in 1998–1999, four had been closed down by 2011–2012.

<sup>12</sup>The criterion for being included in this list was that ‘the leading enterprise provides at least 20% of overall employment in the town, and that it engages in resource extraction (excluding oil and gas), industrial production, or the reworking of industrial products’ (Crowley 2016, p. 416). The website ‘monogoroda.rf’ (<http://монгорода.рф>) is presented as a crowd-sourcing platform initiated by the Russia Housing and Urban Development Corporation (AO DOM.RF, <https://дом.рф/>), the Foundation for the Development of Monogoroda, KB ‘Strelka’ (<http://www.fmrus.ru/>), and the Strelka Institute of Media, Architecture and Design (<https://strelka.com/en/>). Here 319 *monogoroda* are identified belonging to the following three categories: 100 *monogoroda* with the most difficult socio-economic situation; 148 *monogoroda* where there is a risk of deteriorating socio-economic situation; and 71 *monogoroda* with a stable socio-economic situation. The site also contains a map of Russia showing the location, names and population numbers of these *monogoroda*.

<sup>13</sup>See, for instance, World Bank (2010), Gaddy and Ickes (2013), Zubarevich (2014, 2015), Wengle (2015), Crowley (2016).

<sup>14</sup>Prior to this date, since 2009, *monogoroda* were supported on the basis of presidential or government decrees (BOFIT Weekly 2017/37).

*monogoroda* with a stable socio-economic situation, the town-forming enterprise may serve as a basis for diversifying production thereby stimulating local economic development.<sup>15</sup> However, development prospects are less favourable for *monogoroda* in which the town-forming enterprises are mainly engaged in woodworking, textile or defence material production (IKSI 2017).<sup>16</sup> Most town-forming enterprises in the *monogoroda* of Arkhangel'sk Oblast' (five out of seven) and the Karelian Republic (nine out of 11) are engaged in various kinds of woodworking, which may make development prospects less favourable.<sup>17</sup>

### *Recent theorising on social orders*

Recently, Douglass North and his colleagues (2007, 2009, 2013) have advanced a new body of theory, which offers an explanation of the fact that the Russian society has not yet been transformed into an efficiently functioning Western-type market system. In an ambitious attempt to explain why so many developing countries do not seem able to extricate themselves from a situation characterised by stark poverty, economic inequality and undemocratic political rule, North *et al.* (2007, 2009, 2013) have suggested a new way of viewing social development through history. The authors distinguish three social orders, starting with what they call the primitive order of hunter-gatherer societies (of which there are only very few left in the world today). From this stage of development societies advance *via* so-called limited access order (LAO) societies (also called natural states), to which a majority of today's nations belong, to finally reach open access order (OAO) societies, a stage to which still only relatively few societies have reached—essentially only the west European nations, the United States, Canada, Japan, Australia and New Zealand.

North and his colleagues suggested that the decisive features determining to which social order a specific society/nation belongs have to do with the way the local or national elite forms coalitions to limit access to organisations, especially organisations with the capacity to use violence, and how such dominant coalitions control the way rents from the utilisation of natural resources and economic activity are distributed. In LAO societies:

powerful individuals possess privileges and rents, and since violence threatens or reduces those rents, the risk of losing the rents can make it in the interests of powerful individuals and groups to cooperate

<sup>15</sup>Ideas along these lines have been discussed in Russia, see for instance, Kryukova and Makeeva (2013), Shastitko and Fatikhova (2015), Antonov *et al.* (2017), Karmanova *et al.* (2017).

<sup>16</sup>Town-forming enterprises in the woodworking, textile and defence material industries predominate among the 100 *monogoroda* with the most problematic socio-economic situation (IKSI 2017). In our 1998–1999 study, three of the 20 forest enterprises located in *monogoroda* (in six of our eight original case-study regions) were located in a socio-economically stable *monogorod* (Lesosibirsk, Krasnoyarsk Krai). Of the remaining 17 enterprises, 12 were located in *monogoroda* with a problematic socio-economic situation (four in Murmansk; seven in Karelia; one in Moscow Oblast'). Five of the enterprises in our study were located in *monogoroda* with a deteriorating socio-economic situation (two in Murmansk; two in Karelia; and one in Moscow Oblast').

<sup>17</sup>Furthermore, according to reports in the press, state funds allocated for the support and development of *monogoroda* have been underutilised. For instance, Tsygankova (2018) reports that state funds allocated to be used for developing Nadvoitsy (a small *monogorod* in Karelia with a town-forming enterprise engaged in metallurgy) have not been fully claimed, simply because investors could not be found.

with the coalition in power rather than to fight. Privileged individuals have privileged access to social tools enabling them, and only them, to form powerful organisations. In limited access orders, the political system manipulates the economy to create rents as a means of solving the problem of violence. Acknowledging this direct link between the creation of rents and maintenance of order enables us to integrate economic and political theory in a new way. (North *et al.* 2007, p. 3)

In contrast:

the third order, the *open access order*, relies on competition, open access to organizations, and the rule of law to hold the society together. These societies use competition and institutions to make it in the interests of political officials to observe constitutional rules, including consolidated political control over all organizations with the potential for major violence. (North *et al.* 2007, p. 4)

LAO societies tend to develop through several (loosely defined) stages: from fragile, to basic, to mature, to eventually meet the doorstep conditions for transition to open access order. It is suggested that:

development policies often fail because they try to transplant elements of the open access order—such as competition, markets, and democracy—directly into limited access orders. These reforms threaten the rent-creation that holds the society together and in many cases challenge the very logic on which the society is organised. Not surprisingly, the elite and many non-elite resist, sabotage, or subvert such reforms in limited access societies that are not ready for them. (North *et al.* 2007, p. 5)

van Bavel and his colleagues (2017) have suggested the inclusion of ‘bottom-up’ organisations, which are developed by ordinary producers with or without the support of the dominant coalition. Organisations, both ‘top-down’ and ‘bottom-up’, are central in mature LAOs and largely determine whether such a society will move towards meeting the threshold conditions for being classified as open access orders (OAO).

To conclude, we find that the conceptual framework developed by North and his colleagues (2007) offers an approach that can fruitfully contribute to a better understanding of developments in Russia, a country that could qualify as a ‘mature’ LAO.<sup>18</sup> Even if recently introduced restrictions on organisations have made observers fear that the Russian society is moving back in the direction of a ‘basic’ LAO, Yakovlev (2013, 2014, 2015) highlighted the viability of a continued state-led modernisation that also engages the small and medium-sized enterprise (SME) sector—now numerically substantive and economically powerful.

#### *Results of the preparatory study*

The follow-up of our previous IIASA-based research began with a preparatory study conducted in 2011 among the forest enterprises in six of our original eight case-study

<sup>18</sup>It can be noted that the analysis by Gaddy and Ickes (2005, 2013, 2015) of Russian resource rents, including what they are and how they are expropriated and redistributed among certain actors in the Russian economy, seems entirely compatible with the LAO theory elaborated in North *et al.* (2007, 2009, 2013).

regions. The purpose was to learn which ones of the enterprises taking part in our original study in 1998–1999 were still in operation in the forest sector and which ones had been closed down or were no longer operating in the forest sector. Table 1 above shows that a substantial number of the enterprises that took part in our original study in 1998–1999 were no longer operating in the forest sector in 2011. We can note that 50 (or about 37%) of the 136 forest enterprises (excluding forest management units, *leskhozy*) surveyed in 1998–1999 had been closed down (or had changed their line of business) by 2011. Thus, 86 enterprises (63%) were still in operation. Enterprise closures varied between the six regions; in Krasnoyarsk *Krai*, with the highest ‘survival rate’, 80% of the enterprises in our 1998–1999 survey were still in operation in 2011, while the corresponding share for Khabarovsk *Krai* was merely 36%. The ‘survival rates’ for the four regions discussed in this report (the *oblasti* of Murmansk, Arkhangel’sk and Moscow, and the Karelian Republic) were, respectively 72, 62, 76 and 66%.

The reasons for the observed differences in ‘survival rate’ between the six regions might, at least partly, have to do with the fact that only a limited number of non-randomly selected forest enterprises participated in our series of case studies, the result being that non-viable enterprises were more numerous in some regions than in others.<sup>19</sup>

In our original study, reported in Carlsson *et al.* (2001), an attempt was made to classify enterprises according to the type of investment they seemed to prefer. The theory of the virtual economy (Gaddy & Ickes 2002) divides enterprises’ investment behaviour into two types: investments aiming at improving the enterprise’s market competitiveness, and those aimed at improving the enterprise’s eligibility for public support. The former behaviour favours investments in capital, such as modern technology and competence, which reduces the ‘distance to the market’ (MC), while the latter favours investments in so-called ‘relational capital’ (RC). A firm aiming to improve its market competitiveness could be expected to favour investments in MC capital but failing for one reason or another to improve its competitiveness, it might compensate by investing in RC capital. By studying how enterprises answered 20 questions in our survey—where ten questions sought to capture MC investment behaviour and ten questions aimed at identifying firms’ RC behaviour—we were able to categorise the surveyed firms according to their propensity to invest in MC and RC capital. The concluding hypothesis that emerged from this exercise was that enterprises favouring MC investments were more likely to survive and prosper in the emerging Russian market economy, while enterprises engaging heavily in RC investments were more likely (at least in the longer-term) not to survive.

By using the same methodology and the data for 1998–1999 for categorising the 136 enterprises in our preparatory study (see Table 1 above), it was possible to plot the enterprises in a table showing where in the ‘MC–RC space’ they were placed. By separating out those enterprises that our preparatory study had shown were no longer in operation in 2011 and plotting them in a corresponding table, we could see to what extent

<sup>19</sup>In practice, the selection of participating enterprises was largely dependent upon managers’ willingness to give our local study coordinators access and time for interviews. For instance, the low ‘survival rate’ for enterprises in Khabarovsk *Krai* probably has to do with the fact that a comparably large share of the enterprises taking part in our survey in this region were not sufficiently well equipped to stay in operation in the new Russian market economy.

TABLE 2

DISTRIBUTION OF ALL 136 SURVEYED FOREST FIRMS (*LESKHOZY* EXCLUDED) IN SIX RUSSIAN REGIONS ACCORDING TO THEIR DISTANCE TO THE MARKET (MC) AND THEIR INVESTMENTS IN RELATIONAL CAPITAL (RC) 1998–1999; PERCENT; [UNITS] ( $N = 136$ )

All 136 enterprises				
Relational capital orientation (RC)	Distance to the market (MC)			
	Short	Medium	Long	
High	1:3 [0]	2:3 2,2 [3]	3:3 5,2 [7]	
Medium	1:2 4,4 [6]	2:2 29 [39]	3:2 15 [20]	
Low	1:1 7,4 [10]	2:1 26 [35]	3:1 12 [16]	

TABLE 3

DISTRIBUTION OF THE 50 SURVEYED FOREST FIRMS (*LESKHOZY* EXCLUDED) WHICH WERE NO LONGER IN OPERATION IN 2011 IN SIX RUSSIAN REGIONS ACCORDING TO THEIR DISTANCE TO THE MARKET (MC) AND THEIR INVESTMENTS IN RELATIONAL CAPITAL (RC) 1998–1999; PERCENT; [UNITS] ( $N = 50$ )

The 50 enterprises no longer in operation				
Relational capital orientation (RC)	Distance to the market (MC)			
	Short	Medium	Long	
High	1:3 0 [0]	2:3 33 [1]	3:3 29 [2]	
Medium	1:2 33 [2]	2:2 28 [11]	3:2 30 [6]	
Low	1:1 10 [1]	2:1 49 [17]	3:1 63 [10]	

our original categorisation of the enterprises was able to indicate whether an enterprise was likely to survive and continue its operation or whether it was unlikely to survive. The result of this exercise is shown in the following two tables (Tables 2 and 3).

In Table 2, numbers within brackets denote the total number of enterprises found in the nine different fields indicating the extent to which they favoured MC and RC investments. The other numbers denote percentage shares of the total number of enterprises (136) taking part in the preparatory study in 2011.

In Table 3, bracketed numbers denote the number of enterprises that were no longer in operation when the preparatory study was undertaken in 2011. Numbers in black show the percentage of the enterprises in the respective fields in Table 2 that were no longer in operation in 2011.

One way of looking at the incidence of enterprise closure is to relate the number of closures to the number of enterprises still in operation in the respective field groups. We can then see that only three of the 16 enterprises in the group with the ‘shortest distance to the market’ (fields 1:1 and 1:2) had ceased operation at the time of our preparatory study (2011). In the group of 46 enterprises with the longest ‘distance to the market’ (MC) and with a medium or high share of investments in ‘relational capital’ (RC, fields 3:1, 3:2, 3:3 and 2:3), 19 enterprises (or approximately 41%) had ceased operation in 2011. In the group of 74 enterprises with medium ‘distance to the market’ (MC) and low or medium investments in ‘relational capital’ (RC), with (as assessed in the report on our original 1998–1999 study) an uncertain future, as many as 28 enterprises (38%) had ceased operation in 2011 (Carlsson *et al.* 2001).

Figure 2 shows some of the structural and behavioural differences between the 86 forest enterprises that were still in operation at the time of our second survey in 2011–2012 and the 50 enterprises that had been closed down or left the forest sector in the period since our first survey in 1998–1999. (The Figure is based on data from our first enterprise survey in 1998–1999.)

It could be noted that half the number of enterprises that had ceased operation in the period since our first survey in 1998–1999 were located in two regions: the Karelian Republic (20%) and Khabarovsk *Krai* (30%). Almost as many of the defunct enterprises (46%) had been comparatively small with under 50 employees. (Only about one-fifth of the enterprises still in operation belonged to this group.) Similarly, it could be noted that more than half of the non-surviving enterprises (54%) were relatively young, having been established after the disintegration of the Soviet Union in 1991. One-third of the enterprises still in operation were established in the same period. About one-third of the 136 enterprises in our preparatory study were privately owned. Almost half of these privately owned enterprises had ceased operation in the period between our surveys.

In sum, according to our survey in 1998–1999, the tendency to invest in capital promoting ‘market efficiency’ (MC) was more prominent among enterprises that survived and still remained in operation by 2011, while a larger share of the enterprises tending to favour investments in ‘relational capital’ (RC) had ceased operation by that time, mostly due to bankruptcy. We can also see that enterprises no longer in operation by 2011 had been mostly small, recently established, private enterprises at the time of our first survey in 1998–1999. The managers of these enterprises had been dissatisfied with the design and enforcement of existing legislation and had had problems with their enterprises’ outdated technology, the competence of their personnel, and finding capital to allow investments. They had also advocated changes in the current tax system. Our 1998–1999 survey indicated that these characteristics were less prominent among enterprises that survived and still remained in operation in 2011.

#### *Results of the follow-up study*

Based on the information obtained through the 2011 preparatory study, representatives of the forest enterprises that were still in operation were approached and asked to take part in a new survey, where they would answer (in principle) the same questions that they were asked in the original survey. For practical reasons—primarily failing to employ necessary local study

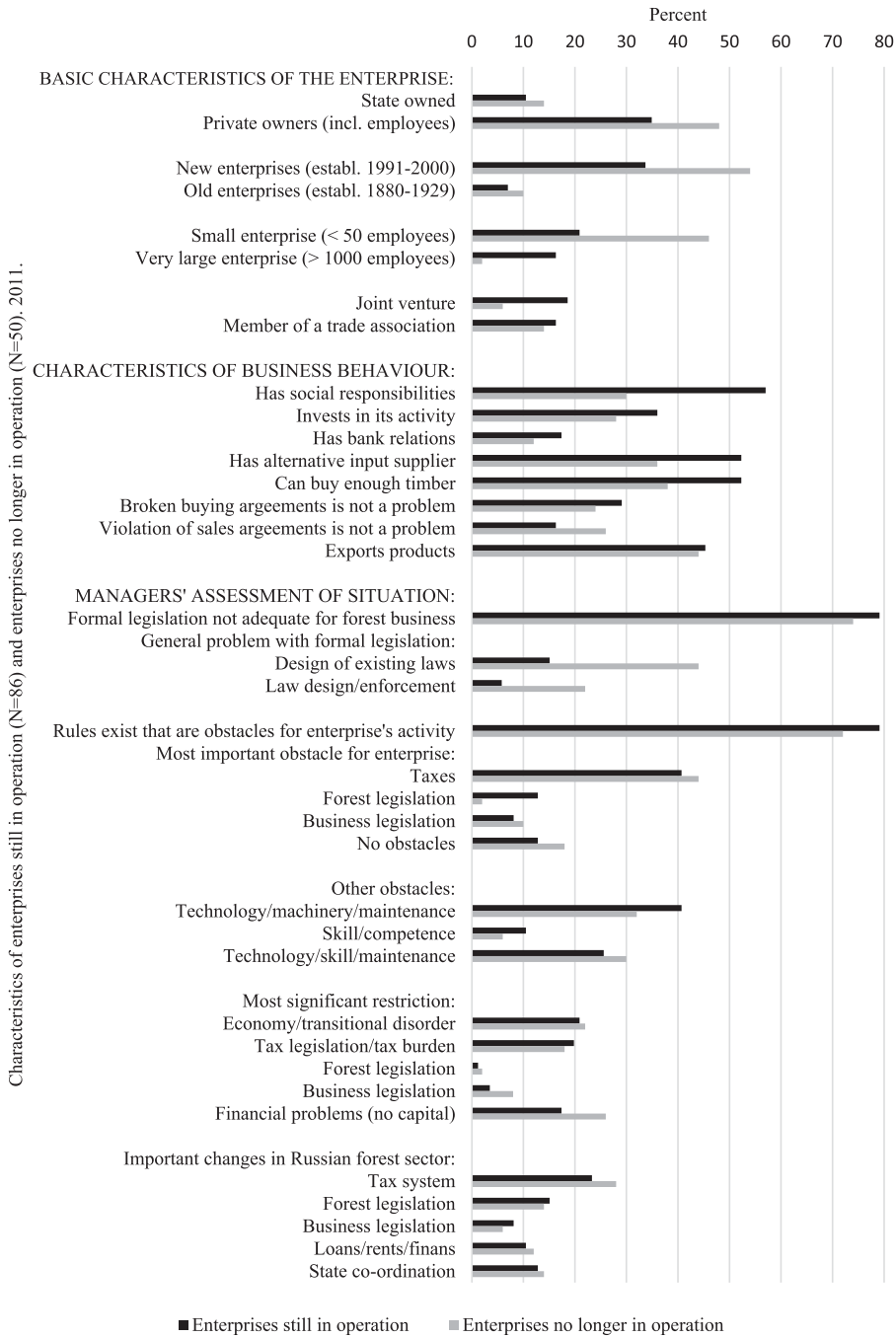


FIGURE 2. COMPARISON OF ONGOING (N=86) AND DEFUNCT ENTERPRISES (N=50) (%), 2011  
 Source: Data from the 1998–1999 survey.



coordinators—the follow-up study could only be conducted among the forest enterprises in four of the eight original case-study regions (Murmansk, Arkhangel'sk and Moscow *oblasti*, and the Republic of Karelia).<sup>20</sup> Of the 92 forest enterprises (excluding *leskhozy*) that took part in our original 1998–1999 study in these four regions, 63 enterprises were still in operation when the preparatory study was conducted in 2011. Representatives of 40 of these 63 enterprises agreed to be interviewed for our 2011–2012 follow-up study.

*Overview of the changes demonstrated by the 40 enterprises in our study*

The answers offered to our interview questions by the representatives (mostly CEOs or senior managers) of these 40 enterprises were compared with the answers given to the corresponding questions in our 1998–1999 interviews. The comparison revealed some changes in the behaviour of the 40 enterprises since our original survey.

Let us first look at some data showing changes among our 40 surveyed enterprises in terms of employment and output that took place in the 12-year period between our first and second survey. The average number of employees in the surveyed enterprises decreased in the period 1998/1999–2011/2012 by almost 50%, from 660 to 353 people. A general decrease in employment would seem unavoidable in the transition to a market economic system. In fact, our survey data show that employment decreased significantly (by 60% or more) in 17 enterprises, by 20–60% in 13 enterprises, and by up to 20% in another four enterprises. However, in the same period employment increased in six enterprises.

Table 4 shows the development of production volume (output) related to employment change for our surveyed enterprises.

It can be noted that 20 of the 28 enterprises for which relevant output data were available behaved in a way that was to be expected in the ongoing transition; they increased their productivity (output–employment ratio). Only one enterprise displayed problematic behaviour, increasing its employment while simultaneously decreasing its output.

To get an impression of how deeply entrenched the Russian firms were in the virtual economy at the time of our original study we can compare the answers to our 1998–1999 survey questions given by the representatives of the 40 Russian forest enterprises that also took part in our recent follow-up study with the answers given by representatives of the 24 forest enterprises in northern Sweden, which we took to represent firms operating in a mature market economy. Doing so, we can see that the Russian enterprises differed from the Swedish enterprises in that significantly fewer made investments (47.5% compared to 85%). While most Swedish enterprises (80%) had a relationship with a bank, very few Russian firms had so (only 20%) at the end of the 1990s. A large majority of the Swedish firms (80%) could acquire the quantity of timber (inputs) they desired, while only about half of the Russian firms could do so. While almost no Swedish firms had problems with violations of purchase agreements, more than half of the Russian firms reported having such problems. The situation was similar with regard to violations of sales agreements: 88% of the Swedish

<sup>20</sup>Eight Russian regions took part in our original case study in 1998–1999. Apart from the four regions mentioned, Tomsk and Irkutsk *Oblasti*, and Krasnoyarsk and Khabarovsk *krai* also took part in our original case study.

TABLE 4  
EMPLOYMENT AND PRODUCTION (OUTPUT) CHANGE IN THE PERIOD 1998/1999–2011/2012  
FOR 28 OF THE 40 SURVEYED ENTERPRISES IN THE FOUR CASE-STUDY REGIONS (UNITS)

	Murmansk	Arkhangel'sk	Karelia	Moscow	Total
Employment decrease–output increase	1	9	2	8	20
Employment and output decrease	–	1	2	–	3
Employment and output increase	2	2	–	–	4
Employment increase–output decrease	–	–	1	–	1
Output data missing	3	1	6	2	12
<b>Total</b>	<b>6</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>40</b>

firms did not experience any problems with sales agreements, compared to almost 80% of the Russian firms who did. While the Swedish firms paid for all purchased wood by cash (for the most part after delivery), about 40% of the Russian firms paid for their purchased inputs by barter or a combination of barter and cash. The Russian firms that paid for their inputs by cash (55%) had to provide payment either before or on delivery.<sup>21</sup>

Let us now turn to our present task of comparing how the situation in our 40 Russian enterprises has changed from the time of our original study in 1998–1999 up to 2011–2012. Table 5 summarises some of the changes in enterprises' behaviour that were detected in our survey data. As expected, there were no dramatic differences between our two survey dates in terms of enterprises' main activity. However, our data on main product (output) do indicate that the number of enterprises producing round wood and sawn logs had decreased in 2011–2012 compared to 1998–1999, while the number of enterprises engaged in wood processing had increased.

By and large, we can see that much in the behaviour of the 40 enterprises in our study changed during the period since our first survey, aligning more closely to what could be expected in a normal market economy. So, for instance, we note that barter, which was relatively common at the time of our first survey in 1998–1999, no longer seemed in use by 2011–2012. By this time, more enterprises made investments in their companies, banks were typically used to transfer payments for raw materials (inputs) as well as for receiving payments for products sold, and receiving payment after rather than before delivery had become more common. Fewer enterprises experienced a shortage of raw materials, and fewer seemed to have problems with violations of purchasing and sales agreements. The number of enterprises that were members of a trade association had increased. All of this testifies to enterprise behaviour being increasingly oriented towards the market.

*Enterprises' investment behaviour: is the virtual economy being abandoned?*

In the report from our original case study of the institutional changes in the Russian forest sector (Carlsson *et al.* 2001), a simple method was elaborated in order to illustrate the investment behaviour of the interviewed forest enterprises. The method, briefly outlined

<sup>21</sup>More information about these differences can be obtained in the main report of our original study, Carlsson *et al.* (2001).

TABLE 5  
 ATTRIBUTES OF 40 FIRMS IN THE FOUR RUSSIAN CASE-STUDY REGIONS IN BOTH ORIGINAL  
 1998–1999 STUDY AND 2011–2012 FOLLOW-UP (UNITS)

	Number of firms Sum of all four regions (N = 40)	
	1998–1999	2011–2012
<b>Mean number of employees in surveyed firms</b>	660	353
<b>Activity of firms</b>		
Forest management	1	1
Harvesting	12	12
Sawmill/processing	13	11
Pulp/paper	2	3
Consult/trading	1	0
Sawmill/pulp	1	0
Harvest/sawmill	2	4
Harvest/sawmill/processing	0	1
Processing—doors/windows/furniture/musical instruments	8	8
<b>Invests in firm's activity</b>		
Yes	19	25
No	21	10
No answer	0	5
<b>Has social responsibilities</b>		
Yes	22	20
No	18	14
No answer	0	6
<b>Is exporting part of production</b>		
Yes	18	11
No	22	21
No answer	0	8
<b>Has bank relations?</b>		
Yes	7	30
No	33	4
No answer	0	6
<b>Amount of timber supply</b>		
Enough	19	23
Shortage	20	9
No answer	1	8
<b>Violation of purchasing agreements</b>		
Big problem	10	8
Small problem	12	5
No problem	16	15
No answer	2	12
<b>Method of payment for products sold</b>		
Barter and cash/barter	16	0
Cash before and/or on delivery	22	11
Cash after delivery	1	10
Mixed method: cash before/on/after and other	1	15
No answer	0	4
<b>Violation of sales agreements</b>		
Big problem	22	9
Small problem	9	12
No problem	8	15
No answer	1	4
<b>Most significant restriction on firm's activity</b>		
Transition disorder (barter, payment arrears, law enforcement)	5	0
Tax legislation/tax burden	7	0
Technology/machinery, weak competitiveness	2	9

(Continued)

TABLE 5 (Continued)

	Number of firms Sum of all four regions (N = 40)	
	1998–1999	2011–2012
Forest legislation	2	0
Business legislation	1	0
Bureaucracy: no support of leaseholders, corruption, investment climate	1	5
Weak state support/coordination (infrastructure/transport costs)	4	1
Skill/competence, find market, low quality inputs	3	7
Business practice, ethics, entrepreneurial tradition, product development	1	1
Financial problems/no capital	6	8
Other	0	1
No answer	0	8

Source: Data from interviews.

above, entailed a quantitative illustration of two characteristic features predicted by the theory of the Russian virtual economy, launched by Clifford Gaddy and Barry Ickes in the late 1990s (Gaddy & Ickes 1998a, 1998b, 1999, 2002, 2013). Using 20 questions in our two surveys, it has been possible to plot the 40 enterprises that took part in our follow-up study in Tables 6 and 7 showing the degree to which they tend to invest in, respectively, MC and RC capital. It is assumed that enterprises favouring investments in MC are more likely to embrace a behaviour that is essential (even required) in order to survive and function effectively in a market economy.

Tables 6 and 7 depict the distribution of the 40 surveyed enterprises in the ‘MC/RC space’. The enterprises are grouped along two dimensions—their investments in MC (horizontal axis) and RC (vertical axis)—depending on the degree to which they favoured investments in, respectively, MC and RC capital. In a modern market economy, one would expect efficiently functioning enterprises to end up in the lower left field (1:1) of Tables 6 and 7 (short MC, low RC). The position of our 40 surveyed enterprises has been calculated for our two interview occasions, 1998–1999 (Table 6) and 2011–2012 (Table 7). The

TABLE 6  
DISTRIBUTION OF THE 40 SURVEYED FOREST ENTERPRISES IN FOUR RUSSIAN REGIONS IN 1998–1999 ACCORDING TO THEIR ‘DISTANCE TO THE MARKET’ (MC) AND THEIR INVESTMENT IN ‘RELATIONAL CAPITAL’ (RC); PERCENT; [UNITS] (N = 40)

Relational capital orientation (RC)	Distance to the market (MC)		
	Short	Medium	Long
High	1:3	2:3 5 [2]	3:3
Medium	1:2 5 [2]	2:2 35 [14]	3:2 17.5 [7]
Low	1:1 10 [4]	2:1 25 [10]	3:1 2.5 [1]

TABLE 7  
DISTRIBUTION OF THE 40 SURVEYED FOREST ENTERPRISES IN FOUR RUSSIAN REGIONS IN 2011–2012 ACCORDING TO THEIR ‘DISTANCE TO THE MARKET’ (MC) AND THEIR INVESTMENT IN ‘RELATIONAL CAPITAL’ (RC); PERCENT; [UNITS] ( $N = 40$ )

Relational capital orientation (RC)	Distance to the market (MC)		
	Short	Medium	Long
High	1:3	2:3	3:3
Medium	1:2 2.5 [1]	2:2 15 [6]	3:2
Low	1:1 47.5 [19]	2:1 25 [10]	3:1 10 [4]

difference between Tables 6 and 7 reflects the behavioural changes that have taken place in the period between our two surveys.

The general impression conveyed by Tables 6 and 7 is that the share of enterprises investing primarily in capital that improves enterprises’ market competitiveness (MC) increased significantly between the two observation dates. On average, the 13 enterprises that were interviewed in Arkhangel’sk *Oblast*’ improved their position in Table 7 the most. Next in terms of average improvement are the ten enterprises in Moscow, then the 11 enterprises in the Karelian Republic, and finally, with the least improvement (even a deterioration in MC), are the six enterprises in Murmansk *Oblast*’.

Tables 6 and 7 give a fairly clear general picture of the changes in terms of investment behaviour that occurred in the period between our two surveys. However, they do not tell us anything about individual enterprises and the degree to which their behaviour changed. By plotting the data obtained through the answers to our 10+10 survey questions designed to capture enterprises’ propensity to invest in, respectively, MC and RC capital, and comparing the difference in enterprises’ ‘G–I index numbers’<sup>22</sup> between the two survey dates, we can visualise the degree to which an enterprise’s market behaviour improved or deteriorated in the given period. The result of this exercise is shown in the scatterplot in Figure 3, where the dots in the figure represent our 40 surveyed enterprises.

The location of the dots in the plot represents the degree of change in individual enterprises’ position in the MC–RC space between the second and the first observation date. Positions in the lower left quadrant represent market-efficient changes in both MC and RC (that is, reduced ‘distance to the market’ and simultaneously reduced investments

<sup>22</sup>In our context, an enterprise’s ‘G–I index number’ is simply a paired number (MC:RC) showing the sum of the answers to, respectively, our ten ‘MC’ and ten ‘RC questions’. The answers to each one of these ‘yes/no’ questions were encoded as a binary 0/1 (0 for ‘no’ and 1 for ‘yes’). The ‘index’ number of an enterprise is merely the sum of its encoded answers to the 10+10 questions. The ‘index’ may take on values between 0 and 10, where 0 represents the ‘best’ value, that is, indicating a behaviour that is considered the most efficient in a market economy sense. (To end up with 0 as the best ‘index’ value of MC, an enterprise’s MC index value was encoded as 10 minus Sum-MC.)

Change in Sum-MC and Sum-RC 1998–1999 to 2011–2012

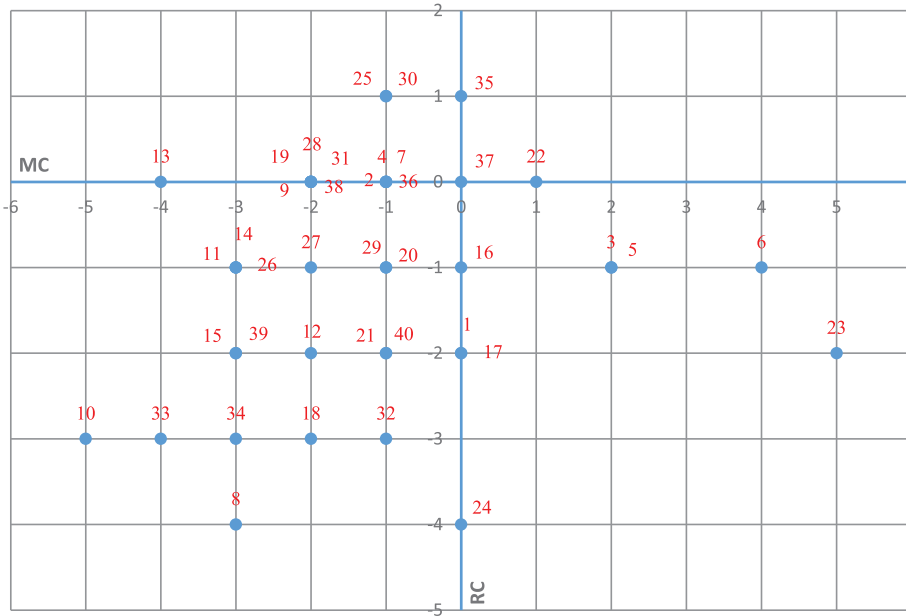


FIGURE 3. CHANGES IN THE 40 SURVEYED ENTERPRISES’ INVESTMENTS IN, RESPECTIVELY, MC AND RC CAPITAL BETWEEN OUR TWO SURVEYS OCCASIONS, 1998–1999 AND 2011–2012  
 Notes: Numbers in the plot refer to individual enterprises in the follow-up study of 2011–2012 (no. 1–6 represent enterprises in Murmansk Oblast’, no. 7–19 enterprises in Arkhangel’sk Oblast’, no. 20–30 enterprises in the Karelian Republic, and no. 31–40 enterprises in Moscow Oblast’). The location in origo (37) means no changed position in either of the two dimensions.

in ‘relational capital’). The 17 enterprises in the plot with the largest negative numbers in both MC and RC changed their investment behaviour in a way that was relatively most efficient in a market economy sense.

All in all, 31 of the 40 enterprises that took part in our follow-up study in 2011–2012 reduced their ‘distance to the market’ in the sense that is captured by our G–I index. They either unambiguously improved their position in both MC and RC (these are the 17 enterprises in the lower left quadrant), or at least improved their position in either MC (ten enterprises) or RC (four enterprises) without simultaneously having to see their position deteriorate in, respectively, RC or MC.

Of the 17 enterprises that unambiguously reduced their distance to the market (improved their position in both MC and RC), seven were located in Arkhangel’sk Oblast’, five in the Karelian Republic, and five in Moscow Oblast’. One enterprise (no. 37 in Moscow Oblast’) neither changed its position in MC nor in RC (Origin). None of our 40 enterprises saw its position unambiguously deteriorate in both MC and RC (the upper right quadrant). Two enterprises (in Karelia) improved their position in MC but simultaneously saw their position in RC (upper left quadrant) deteriorate. Four enterprises (three in Murmansk, one

in Karelia) improved their position in RC, while their position in MC (lower right quadrant) simultaneously deteriorated.

Based on the observed changes in enterprises' position in the MC/RC space illustrated in Figure 3, we can tentatively distinguish three groups of firms: first, transition firms, meaning the 17 enterprises that unambiguously improved their position in the MC/RC space ( $MC < 0$  and  $RC < 0$ ); second, non-transition firms, that is, the eight enterprises whose position deteriorated in either MC or RC without any change in RC or MC, respectively; and, third, ambiguous firms, the 15 enterprises whose position improved in either MC or RC without deteriorating in, respectively, RC or MC.

When trying to distinguish some characteristics separating the group of 'transition firms' from the groups of 'non-transition' and 'ambiguous firms' the following observations were made.<sup>23</sup>

First, foreign (partial) ownership of the surveyed enterprises was in general insignificant, and entirely non-existent in the group of non-transition firms. There were comparatively more small and large enterprises in the group of non-transition firms, while medium-sized firms were more common among the transition and ambiguous firms. Comparatively more non-transition firms were recently established (five of the eight non-transition firms were established after 1991), while a majority of the 'transition' and 'ambiguous' firms had been established much earlier, in the period 1930–1969. The perhaps most clearly distinguishable difference between transition and non-transition firms had to do with investments. While almost two-thirds of the transition firms and four-fifths of the ambiguous firms invested in their production, only one-quarter of non-transition firms did so. Around four-fifths of the transition and ambiguous firms had a relationship with a bank in 2012, compared to merely half of the non-transition firms.

Second, while, respectively, 65% and 53% of the transition and ambiguous firms stated that there were rules that constituted obstacles to their activity, so did nearly all (seven of eight) non-transition firms. Third, a large majority of our 40 enterprises were dissatisfied with the formal legislation. Dissatisfaction seemed most widespread among non-transition firms: only one of eight firms (12.5%) found the legislation adequate for business. Corresponding shares for transition and ambiguous firms were 24% and 27%, respectively. Fourth, at least five of the eight non-transition firms had social responsibilities. The corresponding shares for the other two groups were somewhat lower. It also seems that shortage of raw material (timber) was more prevalent among non-transition firms than among transition and ambiguous firms.

Finally, we noted two seemingly odd features: a larger share of non-transition firms (four out of eight) exported some of their output compared with the transition and ambiguous firms. Non-transition firms also seemed more eager to lay off personnel. Close to two-thirds of the firms in this group reduced their personnel by 60% or more in the period 1998/1999–2011/2012. A lower proportion, approximately 40% of the firms in the transition group (seven out of 17) and one-third in the ambiguous group (five out of 15), laid off as many employees.

<sup>23</sup>Note that these comments must be taken with great caution. Since this is a case study in which a non-randomly selected and small sample of enterprises were surveyed, no statistically valid inferences to a population could be made. Furthermore, the small and uneven size of the three identified groups makes the use of percentage shares slightly awkward.

*Behavioural characteristics evident in our second survey*

A few new questions in our recent survey sought to capture some behavioural aspects that we did not look for in our original survey. The following comments add to the information on the investigated enterprises' current business behaviour.

The first relates to perceptions of 'most important activity'. The responding representatives of the 40 forest enterprises that took part in our 2011–2012 survey were asked to rank a number of alternative activities that they saw as the most important for enterprise management in order to make their companies more prosperous. The activity considered the most important by the largest number of respondents (19, or 47.5%) was to 'improve production efficiency through investments in new technology'. This activity was seen as the second most important by another nine enterprises (22.5%).

The activity considered most important by the second largest number of enterprises (ten or 25%) was to 'improve production efficiency through organisational changes'. This activity was considered the second most important by another four (10%) enterprises. The measure viewed as most important by the third largest number of enterprises (four or 10%) was to 'develop new products to enter new markets'. All in all, 26 enterprise representatives (65%) listed the activity to 'improve work productivity through personnel education' as the second, third or fourth most important measure to improve the situation in the Russian forest sector.

Finally, we note that the activity to 'influence politics to acquire special privileges for the enterprise' was not listed as the most important by any of the 26 enterprise representatives who ranked all suggested alternatives. It was mentioned as the second most important measure by only one (Karelian) enterprise, and as the least and next to least important measure by totally 13 enterprises (35%). This alternative was not ranked at all by 16 enterprises (40%).

The second behavioural characteristic identified related to the payment of taxes. In order to verify to what extent taxes owed by the 40 interviewed enterprises were paid through tax offsets (a method frequently used in 1998–1999), enterprise representatives were asked to estimate the share of their taxes paid in cash as opposed to in kind. It turned out that all but one enterprise paid their taxes in cash. Five of the six interviewed enterprises in Murmansk *Oblast'* left this question unanswered. One enterprise—the only *leskhoz* in our follow-up study—reported that in 2011–2012 it paid 52% of its total tax amount in cash and the remaining 48% in kind. We decided to include this special kind of *leskhoz* in our survey on the basis of the specific business activities it normally conducted. The share of taxes paid in cash and in kind was said to be about equally large five and ten years earlier, with a slightly higher share in kind than in cash.

As already noted, all of the other 34 enterprises in the study stated that they paid 100% of their taxes in cash in 2011–2012. The situation was the same five years earlier (2007), while two enterprises in Moscow *Oblast'* stated that they paid part of their taxes in kind ten years earlier (2002)—one enterprise as much as 92% of its entire tax bill, the other 10%.

Membership of political assemblies was another behavioural characteristic identified. Seven representatives of the 40 enterprises in our survey stated that one of their employees was or had been a member of a political assembly. In Murmansk *Oblast'*, one company reported that the director was a member of an unspecified political assembly. In Arkhangel'sk *Oblast'*, two enterprises reported that one person (the same person, a



member of the board) had been a member of the Federation Council from Arkhangel'sk in 2004–2006; in Karelia four enterprise representatives stated that one employee (the director) was a member of such a political assembly.

With regard to attitudes to illegal harvesting, as many as 20 enterprises (50%) at the time of the 2011–2012 survey maintained that this was no longer a problem or was only a minor problem. Eight enterprises (20%)—two in Karelia and six in Moscow *Oblast'*—still saw illegal harvesting as a big problem. Another three enterprises (in Karelia) reported that the implementation of the rules against illegal harvesting caused problems. For instance, forest leaseholders who make small, unintentional infringements on nearby cutting areas might have to pay significant penalties. Such penalties might actually lead to bankruptcy. Small mistakes like that might furthermore bring formal court charges for illegal harvesting. This problem was common to all forest harvesting companies. Thus, in this sense, illegal harvesting was still seen as a problem. Nine enterprises (22.5%) did not answer this question.

With regard to the ownership of forest lands, ten of our 40 interviewed enterprise representatives (25%) noted that it would be more advantageous if forested lands were privately owned. Overall, representatives of 22 enterprises (55%) reported that private ownership of forest lands would not bring any benefits at all. (Four of these 22—two in Arkhangel'sk and two in Karelia—suggested that forests ought to be state-owned. No reasoning for this position was given; the only comment was that 'natural resources should belong to the people'.) Eight enterprises (20%) did not answer this question.

Finally, ten respondents (25%) maintained that enterprise management had no way of influencing politicians for the benefit for the forest industry. Another three respondents could not see that much could be done, given the absence of lobby organisations. However, six enterprise representatives (15%) thought it was nevertheless worthwhile engaging in lobbying and discussions with the regional authorities ('the government'). Half of our 40 interviewed enterprise representatives did not answer this question.

Asked what steps enterprises actually took to influence politics in their regions, seven enterprise representatives replied that there was nothing to be done, so they did nothing. Thirteen enterprises (nearly one-third) stated that they were involved in activities such as negotiating or holding discussions with the authorities; that they participated in government-led forest-related activities and other measures supporting the forest sector; and that they made use of public (investment) programmes. Nearly half (19) of our 40 interviewed enterprises did not answer this question.

#### *Tentative conclusions*

At the end of the 1990s, after a decade of transition, it still seemed uncertain whether the virtual economy as an institutional setup would become deeply and permanently entrenched and dominate the emerging Russian market economy, with due negative consequences in terms of allocative efficiency. However, in the early 2000s, as some analyses suggested, Russian enterprises were leaving the virtual economy and, increasingly, were behaving in accordance with institutions' governing behaviour in a market economy.<sup>24</sup>

<sup>24</sup>See, for example, Hanson (2003), Lazarev and Gregory (2007), Olsson (2008a), Kvintradze (2010).

After some 20 years of transition, it is worth looking for developments in the behaviour of economic actors that indicate a departure from the behaviour predicted by the virtual economy theory. While we could confirm changes in some observed business behaviour—for instance, in the increased propensity to make investments in capital promoting market efficiency (above called MC capital)—that could be interpreted as a sign of the virtual economy being superseded, we can also note that some behaviour predicted by the virtual economy theory still prevailed among enterprises in the Russian forest sector at the time of the second survey.

Thus, despite far-reaching economic reforms and much new legislation, such as a new Forest Code and a new Tax Code (the former signed by the president in December 2006, the latter adopted in two parts in July 1998 and August 2000), the behaviour of Russian enterprises was still to some extent governed by rules that, basically, were incompatible with what is considered normal in a mature market economy.<sup>25</sup>

In the first part of this follow-up of our 1998–1999 survey-based case study of institutional change in the Russian forest sector, we found that enterprises favouring market-efficient behaviour (as revealed in our original survey) had a greater chance of survival than those that made comparatively greater use of investments in so-called relational capital. In general, the non-surviving enterprises seemed more deeply entrenched in the virtual economy. In the second part of the study, we compared the behaviour of 40 forest enterprises in four of our case-study regions, as revealed in our 2011–2012 survey, with their behaviour as it emerged in our first survey in 1998–1999. This comparison showed that, in general, the share of surveyed enterprises investing in market competitive capital had increased between the two observation dates.

One of the most important reasons for the emergence of the virtual economy system in the first place was the existence of a large number of so-called *monogoroda*, a legacy of the Soviet planned economy. While the special problems caused by the *monogoroda* are nowadays acknowledged by the authorities, still much remains to be done in order to solve (or decrease the negative consequences of) these problems. The existence of the *monogoroda* was arguably also the main obstacle preventing the smooth transition of the Soviet economic system into a normally functioning market system (Olsson 2008b). In accordance with the social order framework elaborated by North *et al.* (2007, 2009, 2013), we can see how the existence of *monogoroda* and the non-transparent (and often unlawful) property redistribution resulting from the privatisation process set the stage for the emergence of the dominant elite coalition formed by state officials and the circle of oligarchs.<sup>26</sup> This coalition, which has gone through various transformations since the

<sup>25</sup>Forest Code of the Russian Federation (Lesnoi kodeks Rossiiskoi Federatsii ot 04.12.2006 N 200-F3.), available at: <https://legalacts.ru/kodeks/LK-RF/>, accessed 23 March 2020; Tax Code of the Russian Federation, Part 1 (Nalogovyi kodeks Rossiiskoi Federatsii (chast' pervaya) ot 31.07.1998 N 146-F3), available at: <https://legalacts.ru/kodeks/NK-RF-chast-1/>, accessed 23 March 2020; Tax Code of the Russian Federation, Part 2 (Nalogovyi kodeks Rossiiskoi Federatsii (chast' ftoraya) ot 05.08.2000 N 117-F3 (red. ot 27.12.2019, s izm. ot 28.01.2020) (s izm. i dop., fstup. v silu s 28.01.2020)), available at: <https://legalacts.ru/kodeks/NK-RF-chast-2/>, accessed 23 March 2020.

<sup>26</sup>In a similar vein, Wengle (2015) notes the same kind of coalition between the state and powerful private business interests (oligarchs) in her analysis of the marketisation of the Russian electricity sector. She labels these strategies 'post-Soviet developmentalism'.

beginning of the 1990s, has governed the Russian transition and managed to curb violence outbreaks and preserve the expropriation of resource rents. In the process, it has prevented the country from advancing from a mature limited access order (LAO) society towards meeting the doorstep conditions for qualifying as an open access order (OAO) nation.

The LAO framework, which aims to rearrange long-term historical developments in a coherent new perspective, also offers an explanation for why the significant support and advice on reform measures, provided by various development agencies (World Bank, IMF, IBRD) to help transform Russia into a modern democratic market economy, did not produce the intended results. The design of these reform measures was ultimately based on the workings of an OAO society, and they simply did not function as intended in the Russian LAO context. The funding that came with these reform measures was merely confiscated as rent by the members of the dominant coalition.

This is not to say that no productive reforms were implemented in Russia after the disintegration of the Soviet Union. On the contrary, during Vladimir Putin's first term as president, several reforms intended to improve market relations and develop the democratic workings of the Russian government and parliament were launched (Olsson 2008b, pp. 164–68). These reforms counteracted the dominance of the virtual economy and meant, in principle, a strengthening of institutions governing the operation of enterprises in the emerging market economy as well as a more orderly (and democratic) functioning of Russian political life.

In conclusion, we should note the tendency, also observed in the analysis of our two surveys, that the enterprises in the Russian forest sector seem (slowly) to have embraced increasingly efficient market behaviour, at least up to the time of the second study. This adoption was accompanied and stimulated by reforms of the Russian business infrastructure, as required for an efficiently functioning market economy. These reforms were sometimes initiated and supported by Western development agencies. However, based on the recent theorising of North *et al.* (2007, 2009, 2013) about the workings of an LAO society, the positive effects of Western support are open to question. If the development of the Russian forest sector—and, for that matter, the transition of Russian society in total—should move towards a Western-style democratic market economy (an OAO society), policy reforms stimulating market economic behaviour must be designed and assessed according to principles and criteria compatible with (and acceptable in) the existing LAO society. Clearly, such a development strategy could not be expected to produce any fast and spectacular results. Realistically, we should expect this transformation process to take many years, probably decades. However, the process will certainly benefit from continued and increasing interaction (trade, investment) between Russian and foreign enterprises. The current international political situation with escalating tensions, therefore, is worrying and threatens to delay positive economic and political developments that would benefit enterprises and citizens in Russia as well as the rest of the world.

## References

- Antonov, G. D., Ivanova, O. P. & Utrobin, K. A. (2017) 'Formation of Clusters Mono Towns Located in Areas of Priority Socioeconomic Development', *The European Proceedings of Social & Behavioural Sciences EpSBS*, Vol. XIX, available at: <https://www.futureacademy.org.uk/files/images/upload/WELLSO2016F91.pdf>, accessed 20 November 2018.
- BOFIT (2017) 'Impact of Support Measures for Russian Monotowns Hard to Determine', *BOFIT Weekly 2017/37* (Helsinki, The Bank of Finland Institute for Economics in Transition—BOFIT), available at: [https://www.bofit.fi/en/monitoring/weekly/2017/vw201737\\_3/](https://www.bofit.fi/en/monitoring/weekly/2017/vw201737_3/), accessed 26 September 2018.
- Carlsson, L., Lundgren, N.-G. & Olsson, M.-O. (2001) 'The Russian Detour: Real Transition in a Virtual Economy?', *Europe-Asia Studies*, 53, 6.
- Carlsson, L., Lundgren, N.-G., Olsson, M.-O. & Varakin, M. Y. (1999) *Institutions and the Emergence of Markets, Transition in the Arkhangelsk Forest Sector*, IIASA Interim Report IR-99-021 (Laxenburg, International Institute for Applied Systems Analysis).
- Connolly, R. (2013) *The Economic Sources of Social Order Development in Post-Socialist Eastern Europe* (London, Routledge).
- Crowley, S. (2016) 'Monotowns and the Political Economy of Industrial Restructuring in Russia', *Post-Soviet Affairs*, 32, 5.
- Gaddy, C. G. & Ickes, B. W. (1998a) *Beyond a Bailout: Time to Face Reality About Russia's 'Virtual Economy'*, 1 June (Washington, DC, The Brookings Institution), available at: <https://www.brookings.edu/articles/beyond-a-bailout-time-to-face-reality-about-russias-virtual-economy/>, accessed 22 March 2020.
- Gaddy, C. G. & Ickes, B. W. (1998b) 'Russia's Virtual Economy', *Foreign Affairs*, 77, 5.
- Gaddy, C. G. & Ickes, B. W. (1999) 'An Accounting Model of the Virtual Economy in Russia', *Post-Soviet Geography and Economics*, 40, 2.
- Gaddy, C. G. & Ickes, B. W. (2002) *Russia's Virtual Economy* (Washington, DC, The Brookings Institution).
- Gaddy, C. G. & Ickes, B. W. (2005) 'Resource Rents and the Russian Economy', *Eurasian Geography and Economics*, 46, 8.
- Gaddy, C. G. & Ickes, B. W. (2013) *Bear Traps on Russia's Road to Modernization* (New York, NY, Routledge).
- Gaddy, C. G. & Ickes, B. W. (2015) 'Putin's Rent Management System and the Future of Addiction in Russia', in Oxenstierna, S. (ed.) *The Challenges for Russia's Politicized Economic System* (London & New York, NY, Routledge).
- Hanson, P. (2003) 'The Russian Economic Recovery: Do Four Years of Growth Tell Us that the Fundamentals have Changed?', *Europe-Asia Studies*, 55, 3.
- Ickes, B. W. (2005) 'The Political-Economy Trap and Economic Reform in Russia', in Lundahl, M. & Wyzan, M. L. (eds) *The Political Economy of Reform Failure* (New York, NY, Routledge).
- IKSI (2017) *Obzor Rossijskikh monogorodov. Analiticheskii doklad IKSI*, June (Moscow, Institut kompleksnykh strategicheskikh issledovanii), available at: <https://icss.ru/vokrug-statistiki/obzor-rossijskix-monogorodov>, accessed 27 September 2018.
- Ivanova, L. & Nygaard, V. (1999) *Institutions and the Emergence of Markets: Transition in the Murmansk Forest Sector*, Interim Report IR-99-071, December (Laxenburg, International Institute for Applied Systems Analysis).
- Jacobsen, B. (1999) *Auctions without Competition—The Case of Timber Sales in the Murmansk Region*, Interim Report IR-99-072 (Laxenburg, International Institute for Applied Systems Analysis).
- Karmanova, T. E., Podsevalova, E. N., Mityurnikova, L. A., Suslova, I. A. & Zikirova, S. S. (2017) 'Optimal Planning of Socio-Economic Development of Russian Monotowns for the Purpose of Creating the Economic Growth Points on Their Basis', *International Journal of Applied Business and Economic Research*, 15, 8.
- Kleinhof, A. E., Carlsson, L. & Olsson, M.-O. (1999) *The Forest Sector in Moscow Oblast*, IIASA Interim Report IR-99-069 (Laxenburg, International Institute for Applied Systems Analysis).
- Kryukova, E. M. & Makeeva, D. R. (2013) 'Analysis of World and Russian Best Practices of Strategic Development of Mono-Towns', *World Applied Sciences Journal 27* (Education, Law, Economics, Language and Communication), 27, 1, available at: [http://www.idosi.org/wasj/wasj27\(elec\)13/35.pdf](http://www.idosi.org/wasj/wasj27(elec)13/35.pdf), accessed 15 September 2018.
- Kvintradze, E. (2010) *Russia's Output Collapse and Recovery: Evidence from the Post-Soviet Transition*, IMF Working Paper WP/10/89 (Washington, DC, International Monetary Fund), available at: <https://www.imf.org/external/pubs/ft/wp/2010/wp1089.pdf>, accessed 4 May 2018.
- Lazarev, V. & Gregory, P. (2007) 'Structural Convergence in Russia's Economic Transition, 1990–2002', *Economic Change and Restructuring*, 40, 3.

- North, D. C. (1997) *The Contribution of the New Institutional Economics to an Understanding of the Transition Problem*, WIDER Annual Lectures 1 (Helsinki, United Nations University, World Institute for Development Economics Research—UNU/WIDER).
- North, D. C., Wallis, J. J., Webb, S. B. & Weingast, B. R. (2007) *Limited Access Orders in the Developing World: A New Approach to the Problems of Development*, Policy Research Working Paper 4359 (Washington DC, The World Bank).
- North, D. C., Wallis, J. J., Webb, S. B. & Weingast, B. R. (2013) *In the Shadow of Violence: Politics, Economics, and the Problems of Development* (New York, NY, Cambridge University Press).
- North, D. C., Wallis, J. J. & Weingast, B. R. (2009) *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History* (New York, NY, Cambridge University Press).
- Olsson, M.-O. (2008a) 'The Russian Virtual Economy Turning Real: Institutional Change in the Arkhangel'sk Forest Sector', *Europe-Asia Studies*, 60, 5.
- Olsson, M.-O. (2008b) *Continuity and Change: Institutions and Transition in the Russian Forest Sector* (Saarbrücken, VDM Verlag Dr Müller).
- Ostrom, E. (2005) *Understanding Institutional Diversity* (Princeton, NJ, Princeton University Press).
- Ostrom, E., Gardner, R. & Walker, J. (1994) *Games and Rules and Common Pool Resources* (Ann Arbor, MI, University of Michigan Press).
- Oxenstierna, S. (2015) 'The Role of Institutions in the Russian Economy', in Oxenstierna, S. (ed.) *The Challenges for Russia's Politicized Economic System* (London & New York, NY, Routledge).
- Piipponen, M. (1999) *Transition in the Forest Sector of the Republic of Karelia*, Interim Report IR-99-070 (Laxenburg, International Institute for Applied Systems Analysis).
- Polanyi, K. (1944) *The Great Transformation* (New York, NY, Farrar & Reinhart).
- Robinson, N. (2013) "'Natural" States and the Development of Democracy', in Grinin, L. E. & Korotayev, A. V. (eds) *Evolution. Development Within Big History, Evolutionary and World-System Paradigms* (Volgograd, Uchitel), available at: <https://www.sociostudies.org/almanac/evolution/dwbhawsp/articles/>, accessed 4 May 2018.
- Shastitko, A. & Fatikhova, A. (2015) 'Monotowns: a New Take on the Old Problem', *Baltic Region*, 1, 23, available at: [https://journals.kantiana.ru/eng/baltic\\_region/1900/5543/](https://journals.kantiana.ru/eng/baltic_region/1900/5543/), accessed 15 November 2018.
- Tsygankova, S. (2018) 'Ne nashli investorov: Den'gi vydelennye federal'nyim tsentrom na monogorod Nadvoitsy, Kareliya dolzhna vernut', *Rossiiskaya gazeta—Ekonomika Severo-Zapada*, No. 7670 (207), available at: <https://rg.ru/2018/09/18/reg-szfo/karelii-pridetsia-vernut-v-kaznu-dengi-na-razvitiemonogoroda.html>, accessed 15 October 2018.
- van Bavel, B., Ansink, E. & van Besouw, B. (2017) 'Understanding the Economics of Limited Access Orders: Incentives, Organizations and the Chronology of Developments', *Journal of Institutional Economics*, 13, 1.
- Wengle, S. A. (2015) *Post-Soviet Power: State-led Development and Russia's Marketization* (New York, NY, Cambridge University Press).
- World Bank (2010) *Russian Economic Report*, No. 22 (Washington, DC, World Bank), available at: <http://documents.worldbank.org/curated/en/974021468092953100/Russian-economic-report>, accessed 4 May 2018.
- Yakovlev, A. (2013) 'Is there a "New Deal" in State-Business Relations in Russia?', *BOFIT Online*, No. 7 (Helsinki, Bank of Finland, Institute for Economics in Transition—BOFIT), available at: <https://helda.helsinki.fi/bofi/bitstream/handle/123456789/12631/172273.pdf?sequence=1&isAllowed=y>, accessed 15 October 2018.
- Yakovlev, A. (2014) 'Russian Modernization: Between the Need for New Players and Fear of Losing Control of Rent Sources', *Journal of Eurasian Studies*, 5, 1.
- Yakovlev, A. (2015) 'State-Business Relations in Russia After 2011: "New Deal" or Imitation of Changes?', in Oxenstierna, S. (ed.) *The Challenges for Russia's Politicized Economic System* (London & New York, NY, Routledge).
- Zubarevich, N. (2014) 'Four Russias: Rethinking the Post-Soviet Map', *openDemocracy*, available at: <https://www.opendemocracy.net/od-russia/natalia-zubarevich/four-russias-rethinking-post-soviet-map>, accessed 4 May 2017.
- Zubarevich, N. (2015) 'Regional Inequality and Potential for Modernization', in Oxenstierna, S. (ed.) *The Challenges for Russia's Politicized Economic System* (London & New York, NY, Routledge).