Boosting Productivity in Russia:

Improving Resource Allocation and Firm Performance

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Acknowledgements

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## Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AHS</td>
<td>effectively applied tariff (as used in WITS)</td>
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<td>AMS</td>
<td>average management scores</td>
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<tr>
<td>BRIC</td>
<td>Brazil, Russia, India, and China</td>
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<tr>
<td>BRICS</td>
<td>Brazil, Russia, India, China, and South Africa</td>
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<tr>
<td>CDS</td>
<td>Competition Development Standard</td>
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<td>ECA</td>
<td>Europe and Central Asia</td>
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<td>EFI</td>
<td>Equitable Growth, Finance and Institutions GP</td>
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<td>EIU</td>
<td>Economist Intelligence Unit</td>
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<tr>
<td>FAS</td>
<td>Federal Antimonopoly Service</td>
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<tr>
<td>FCI</td>
<td>Finance, Competitiveness and Innovation GP</td>
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<tr>
<td>FDI</td>
<td>foreign direct investment</td>
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<td>GDP</td>
<td>gross domestic product</td>
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<tr>
<td>GP</td>
<td>Global Practice</td>
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<tr>
<td>HHI</td>
<td>Herfindahl–Hirschman Index</td>
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<tr>
<td>HS10</td>
<td>10-digit Harmonized System</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>IPA</td>
<td>investment promotion agency</td>
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<td>MAS</td>
<td>Manufacturing Advisory Service</td>
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<td>MEP</td>
<td>Manufacturing Extension Partnership</td>
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<td>MFN</td>
<td>most-favored nation</td>
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<td>MNC</td>
<td>multinational corporation</td>
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<td>MOPS</td>
<td>Management and Organizational Practices Survey</td>
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<td>MTI</td>
<td>Macroeconomics, Trade and Investment GP</td>
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<tr>
<td>PCM</td>
<td>price-cost margin</td>
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<td>PER</td>
<td>public expenditure review</td>
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<td>PMR</td>
<td>product market regulation</td>
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<tr>
<td>R&amp;D</td>
<td>research and development</td>
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<td>RCT</td>
<td>randomized controlled trial</td>
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<tr>
<td>RPK</td>
<td>revenue passenger kilometer</td>
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<tr>
<td>RUB</td>
<td>Russian ruble</td>
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<tr>
<td>SME</td>
<td>small and medium-sized enterprise</td>
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<td>SOB</td>
<td>state-owned bank</td>
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<tr>
<td>SOE</td>
<td>state-owned enterprise</td>
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<tr>
<td>STRI</td>
<td>Services Trade Restrictiveness Index</td>
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<tr>
<td>TFP</td>
<td>total factor productivity</td>
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<tr>
<td>WDI</td>
<td>World Development Indicators</td>
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<td>WITS</td>
<td>World Integrated Trade Solutions</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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Preface

Total factor productivity—the efficiency with which societies combine their people, resources, and tools—is the central driver of economic growth. Long-run increments in earnings in industry or agriculture, the source of employment for many of the world’s poor, can only be achieved by increasing worker or farmer productivity.\(^1\) Productivity growth is the main driver of development, accounting for half of the differences in gross domestic product (GDP) per capita across countries. Yet, productivity growth has slowed globally in recent decades, posing a critical challenge to countries’ ability to improve citizens’ living standards.

In the Russian Federation, slowing productivity growth threatens to undermine the results of the post-transition period, which saw rapid growth and poverty alleviation accompanied by a surge in total factor productivity. This growth was fueled by the structural reforms in the 2000s, which boosted productivity primarily through the reallocation of resources across sectors. Yet, this growth trajectory did not persist, and sustaining Russia’s past economic achievements will depend on rekindling productivity growth through both internal firm drivers and external drivers.

**Boosting Productivity in Russia: Improving Resource and Firm Performance**

The main objective of this report is to provide new evidence on Russia’s productivity growth dynamics and its determinants to guide the design of productivity-enhancing policies. The report builds both on existing global evidence on productivity, as well as new work specifically prepared for Russia by the World Bank, academia, and other institutions.

The report focuses, primarily, on two channels through which Russia can foster productivity growth: (i) upgrading firm capabilities, which is a function on managerial capabilities and linkages to multinational firms, and (ii) removing economic distortions that prevent an efficient allocation of resources across firms, which is a function of product market competition and the presence of the state in the economy. These are not the only factors that could affect productivity growth in Russia. However, they are the ones identified by the World Bank team as the most important ones, based on existing evidence both at the national and global level.

The relevance of the above-mentioned factors to explain productivity growth is well understood and also documented. Indeed, the Government of the Russian Federation is implementing a range of programs aimed specifically at improving competition outcomes and firm capabilities. This is both under the National Development Goals and the Roadmap on the Development of Competition. The findings from this report and the presented policy recommendations can help inform the re-design of existing economic programs to make them more effective, as well as the creation of new initiatives. Maintaining a coordinated and evidence-based policy agenda in the above mentioned areas will help promote productivity growth, foster a pro-competitive business environment, and improve the living standards of the population.

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\(^1\) See Ivanic and Martin (2018) who argue that agricultural productivity growth benefits the poor most. See Vijil et al. (2018) for a discussion of productivity growth and poverty in Brazil.
Executive Summary

The Elusive Productivity Promise

Output and productivity growth have slowed in Russia.² While GDP grew by 5.2 percent annually between 2000 and 2013, it has not grown by more than 3 percent annually since 2014. GDP growth of 2.3 percent in 2018 surpassed expectations. However, the outlook for the coming years is modest (1.2 to 1.8 percent annually for 2019 to 2021). The slowdown in GDP growth is mainly a result of the reduction in productivity growth. Russia’s structural policy reforms in the early 2000s contributed to a productivity surge of 4–5 percent per year in the first half of the decade (Figure 1). However, this growth trajectory did not persist. In the first half of the 2010s, the contribution of productivity growth to output growth was only half of what it had been in the 2000s (Figure 2). One of the consequences of the slowdown in Russia’s growth has been stalled income convergence with advanced economies.³

The decline in aggregate productivity growth in Russia is the result of several factors. The main determinant behind the productivity slump is low firm productivity growth, because the firm is the main creator of value in the economy. Channels for boosting firm productivity growth include: (1) reallocating resources such as labor and capital across different firms more efficiently (reallocation channel); (2) correcting perverse entry-exit market dynamics to avoid that unproductive incumbents survive while productive firms exit the market (entry-exit channel); and (3) upgrading firms’ capabilities by fostering innovation, technology adoption, and better managerial practices (within channel).⁴ (See .) External

² Productivity means the efficiency with which firms transform inputs into outputs.
³ International Monetary Fund European Department (2019)
⁴ Cusolito and Winkler (2015)
Drivers of firm productivity growth are often associated with the rules and conditions that shape the business environment in which firms operate. These include product market competition, regulations, and taxes, to mention a few. This report focuses specifically on (A) product market competition and (B) state participation in the economy as the most important external drivers of productivity growth in Russia. Internal drivers are related to firm capabilities such as managerial skills, innovation, technology adoption, and quality upgrading. This report focuses specifically on (C) managerial capabilities and (D) linkages to multinational corporations (MNCs) as the most important internal drivers of productivity growth in Russia.

Figure 3. Channels and Drivers of Aggregate Productivity Growth Examined in this Report

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**Domestic and foreign product market competition foster a better allocation of resources across firms and thus increase productivity growth.** This is because competition fosters the entry of high-productivity firms and the exit of laggard incumbents. Thus, it induces the reallocation of resources toward the most productive firms.\(^5\) In the short run, competition may have negative effects on productivity through the firm-upgrading channel. However, it often increases productivity in the long term. The impact of domestic competition on innovation has an inverted U-shape: firms competing “neck and neck” with frontier firms will innovate, seeking room to escape competition. Firms too far from the frontier may find profits so low that they will not or cannot upgrade, and thus exist the market if they cannot compete anymore.\(^6\) Dynamically, lack of product market competition may dampen investments in intangible assets like managerial skills and innovation, as rent dissipation makes it difficult to finance these investments.\(^7\)

**Lack of competition due to the presence of the state in the economy can limit a country’s capacity to grow.** Economic distortions—often associated with state participation in the economy as regulator (through competition policy), as seller of goods or services (through state-owned enterprises) or as buyer (through public procurement processes)—alter the conditions under which private-owned firms operate.\(^8\) For example, hefty investment by state-owned enterprises (SOEs) may contribute to capital misallocation, because state support is likely to lead to relatively unproductive firms attracting too much investment.\(^9\)

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\(^5\) Melitz (2003); De Loecker (2011)

\(^6\) Aghion et al. (2005)

\(^7\) Bloom and Van Reenen (2007)

\(^8\) Hsieh and Klenow (2009)

\(^9\) Freund and Sidhu (2019); Bai, Hsieh and Qian (2006); Dollar and Wei (2007)
Moreover, SOEs tend to absorb a larger proportion of labor than needed to produce a good or service. The unutilized capacity not only makes SOEs inefficient but also crowds out inputs for productive private-owned firms.

There are other channels through which state participation in the economy can contribute to misallocation. For example, procurement rules that do not foster a competitive process can discriminate in favor of specific groups, shifting resources toward low-productivity companies. The widespread use of single-source procurement or concentration of contract awards among a few firms can interfere with the reallocation of inputs toward more efficient firms.\(^\text{10}\)

In developing economies, more intense competition is associated with 2 to 7 percent higher sector-wide productivity growth. Empirical studies have linked the intensity of competitive pressures—measured by price-cost margins (PCMs)—to productivity growth in both advanced economies and developing economies. An early study from the United Kingdom showed that an increase of 10 percentage points in PCMs is associated with a 1.3–1.6 percent loss in total factor productivity (TFP) growth, on average.\(^\text{11}\) More recent evidence points to a larger effect in developing economies. Industry and firm data from South Africa over the period of 1980 to the early 2000s suggests that a 10 percent reduction in mark-ups would increase productivity growth by 2 to 2.5 percent per year.\(^\text{12}\) Similar studies in Tunisia,\(^\text{13}\) Turkey,\(^\text{14}\) Brazil,\(^\text{15}\) and Argentina\(^\text{16}\) suggest that boosting competition has potential gains on the order of 3.4 to 7 percent in additional labor productivity growth per year.

**Competition-driven price reductions may have a disproportionate positive impact on poor households, helping reduce poverty.** Experimental evidence from a conditional cash transfer program for the poor in the Dominican Republic showed that competition in the retail market led to 6 percent lower prices, benefitting low-income households.\(^\text{17}\) A simulation of the effect of market power in Mexico suggests that lack of competition costs households in the lowest income decile about 20 percent more than households in the highest decile.\(^\text{18}\) A similar simulation for Russia shows that introducing pro-competition reforms in telecommunications, air transport, utilities, and retail trade could reduce the national poverty rate by up to 3 percentage points—one-fifth of the national poverty rate in 2017 (13.2 percent).\(^\text{19}\)

**Management practices affect productivity.** Differences in management quality are important contributors to productivity differences across and within countries.\(^\text{20}\) Empirical evidence shows that “within firm productivity improvements” account for between 50 percent and 75 percent of variation in productivity\(^\text{21}\) and that about 30 percent of total productivity differences across firms are explained by differences in management practices.\(^\text{22}\) Well managed firms efficiently organize their plants, effectively innovate, manage human and financial resources, develop strategic and marketing plans, innovate more, adopt better technologies, and track their performance systematically. These firms are more productive,

\(^{10}\) See the World Bank Group’s “Markets and Competition Policy Assessment Tool (MCPAT)” (Martínez Licetti et al. 2018).

\(^{11}\) Nickell (1996)

\(^{12}\) Aghion, Braun and Fedderke (2008)

\(^{13}\) World Bank (2014)

\(^{14}\) World Bank (2013)

\(^{15}\) Reis et al. (2018)

\(^{16}\) Martínez Licetti et al. (2018)

\(^{17}\) Busso and Galiani (2014)

\(^{18}\) Urzúa (2013)

\(^{19}\) Background note prepared by the World Bank Group poverty team.

\(^{20}\) Iacovone, Maloney, and Mckenzie (2018)

\(^{21}\) Bartelsman, Haltiwanger, and Scarpetta (2009)

\(^{22}\) Bloom, Sadun and Van Reenen (2017)
produce higher quality products, and have higher survival probability, employment and sales growth, market value, and exports. For instance, an experimental management intervention in the Indian textiles sector showed that adopting better management practices raised average productivity by 11 percent through improved quality, increased efficiency, and reduced inventory. Randomly selected Italian firms that sent their managers to the United States to receive management training under the Marshall Plan in the 1950s witnessed an increase in firm performance for at least fifteen years after the treatment when compared to the set of eligible firms that were left out because of the budget cut, a natural experiment that demonstrates the effects of management training programs. In an experiment in Mexico using consulting services from local firms, the management intervention increased productivity and return on assets by one-fifth of a standard deviation and increased profits by about one-tenth of a standard deviation compared to the control group. In the long run, firm size increased by 57 percent and wage bill by 72 percent. In sum, firm capabilities are crucial for fostering aggregate productivity growth. The analysis performed for this report demonstrates that, if the management practices of an average Russian firm improved by a magnitude similar to that in a recent pilot by World Bank and Stanford researchers in India (i.e., by about 38 percentage points), sales per employee would increase by 68 percent, and productivity would increase by 13.5 percent.

**MNCs are powerful sources of upgrading.** The expertise, technology and marketing experience of MNCs help local firms in host countries improve by several means. First, the presence of foreign affiliates in the upstream (input-supplying) industries may provide local producers with more diverse and higher quality intermediates and capital goods and, in this way, allow them to increase their productivity, upgrade the quality of their products, and broaden their product ranges. Foreign direct investment (FDI) may also have an indirect effect on the efficiency of domestic suppliers by increasing competition. Second, in their quest for cheaper and higher quality inputs, MNCs in the downstream (input-sourcing) industries may provide their local suppliers with expertise, training, and incentives for quality improvements, and possibly even cooperate on developing new and higher quality products. The resulting product upgrading and improved performance may then be reflected not only in the domestic firms’ sales to the MNCs but also in the local firms’ exports. Finally, domestic firms may learn from MNCs operating in the same industry, either by observing the foreign firms or through hiring former MNC employees.

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23 Bloom et al. (2018)
24 Giorcelli (2019)
26 For further discussions on this issue, see Iacovone and Qasim (2013).
27 Bloom et al. (2013)
28 For instance, Javorcik, Keller, and Tybout (2008) report that small Mexican producers meet with their input suppliers (usually foreign affiliates) every six months to learn about the possibilities of upgrading their products. Suppliers provide the necessary inputs and often prepare a new formula for the product based on these inputs.
29 Amiti and Konings (2007), Bas and Strauss-Kahn (2015) and Goldberg et al. (2010) provide evidence on the importance of access to imports of diverse and high-quality inputs for productivity, export quality and product scope, respectively.
30 A survey among Czech manufacturing firms analyzed by Javorcik (2008) shows that 40 percent of domestic suppliers receive some kind of assistance from their MNC customers, including personnel training (19 percent), provision of inputs (10 percent), help with quality assurance (10 percent), and help with finding export opportunities (7 percent). Even more remarkably, half of domestic firms selling to MNCs report they have had to improve product quality to become suppliers. Moreover, Javorcik, Lo Turco, and Maggioni (2017) show that presence of MNCs stimulates domestic firms in the supplying sectors to introduce more complex products, where complexity is measured using an indicator due to Hidalgo and Hausmann (2009). Javorcik (2004) documents spillovers from FDI to the supplying industries: a one-standard-deviation increase in foreign presence in downstream sectors is associated with a 15 percent rise in output of each domestic firm in supplying industries.
31 See, for instance, Haskel, Pereira, and Slaughter (2007), Keller and Yeaple (2009), Poole (2012), Balsvik (2010), and Javorcik (2004).
This report explores the role of the above-mentioned factors in explaining Russia’s lackluster productivity. It pays special attention to competition and state participation in the economy as key drivers of productivity growth through the reallocation and entry-exit channels. It also focuses the analysis on two important drivers of within-firm upgrading: managerial capabilities and linkages to MNCs.

The next sections summarize the main findings from the report.

**Competition and Direct Participation of the State in the Economy**

While the Government of the Russian Federation has taken steps to strengthen competition policy and reshape the role of the state in the economy, many markets still lack healthy competitive dynamics. Since 2013, the government has promoted competition sub-nationally with the Competition Development Standard (CDS) and passed several reforms to its antitrust legal framework. Since 2018, a Roadmap on the Development of Competition aims to promote competition and reduce the participation of SOEs in the economy. However, the empirical evidence presented in this report suggests that many sectors still exhibit market distortions.

**Markups in Russia are high and heterogeneous.** Average markups in Russia have declined (see Appendix for methodological caveats), but they are still high when compared globally. Further, markups are highly heterogeneous across different types of firms. Large, exporter, and state-owned enterprises have higher markups than other firms (Figure 4). While high price-margins could be the result of product differentiation (i.e., quality upgrading), they could also reflect anticompetitive behavior.

![Figure 4. Markups across Firms](image)

### Table 1: Markups across Firms

<table>
<thead>
<tr>
<th>Industry</th>
<th>Mean Markup 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.25</td>
</tr>
<tr>
<td>Mining</td>
<td>0.30</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.28</td>
</tr>
<tr>
<td>Construction</td>
<td>0.26</td>
</tr>
<tr>
<td>Services</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Notes: Data for all industries across groups are all equal group. Agriculture = 0.25, Mining = 0.30, Manufacturing = 0.28, Construction = 0.26, Services = 0.23.

![Bar Chart](image)
Regional market fragmentation inhibits competition and facilitates local monopolies. While the share of highly concentrated markets fell from 8 percent to 3 percent between 2009 and 2019, there is significant variation across regions. Russia’s markets are highly fragmented. In 2019, 69 percent of firms considered their own municipality (as opposed to national or global markets) to be their main sales destination. This share is higher than in other large countries, such as Brazil or China. This holds despite the efforts of the Government of the Russian Federation to introduce the CDS, which requires sub-national governments to take specific actions to make local markets more contestable.

SOE presence in specific markets is linked to higher market concentration and poor market outcomes (e.g., quality, prices). For example, the telecom sector has seen market consolidation since 2000, but the most recent successful market entrant—with 17 percent of shares as of 2019—is being acquired by the incumbent SOE. In the oil and gas sector, SOEs increased their share of the oil production market from 20 percent in the early 2000s to 56 percent in 2013. In the air transport sector, the SOE is gaining market share by acquiring operating rights from airlines that have exited the market. The market share associated with airlines that are not among the top five firms declined from 39 percent in 2008 to 12 percent in 2012. The state wholly or partially owns the few airlines that obtained commercial air operator certificates in recent years. Increased concentration has not been associated with improved market outcomes. For example, as of 2017, mobile broadband speed was 16.5Mb/s compared to the global average of 22.2. Russian travelers buy airline tickets to popular international destinations at almost double the prices paid by consumers in neighboring Ukraine or Baltic countries.

Investors’ perceptions and international rankings confirm low competition intensity. Even though perceptions of the intensity of competition in Russia’s markets improved marginally between 2016 and 2017, they continue to lag those in peer countries in the region and among the BRICS\textsuperscript{33} group (Figure 5). The World Economic Forum’s Global Competitiveness Index reveals a deterioration in the perception of the effectiveness of Russia’s anti-monopoly policy.\textsuperscript{34} The Economist Intelligence Unit’s tracker shows that the perception of business risks related to competition is higher than in peer countries worldwide.

\textsuperscript{32} Due to data reliability issues, markups in the mining sector for SOEs were excluded from this graph.
\textsuperscript{33} Brazil, Russia, India, China, and South Africa
\textsuperscript{34} Based on the Global Competitiveness Index’s score on “Effectiveness of Antimonopoloy Policy,” which fell from 3.53 in 2016 to 3.47 in 2017. The score is on a scale of 0 (least effective) to 7 (most effective).
SOEs can play important roles in delivering public goods and services. There are economic justifications for direct state participation in some sectors of the economy. For example, SOEs can address specific market or coordination failures. Under effective regulation, they can ensure efficient provision of public goods and services. SOEs also often pursue strategic objectives, such as national security. In Russia, several SOEs, such as Sberbank and Gazprom, are global market players with strong economic performance.

The state presence in Russia’s economy is both broad and deep. SOEs operate not only in sectors with natural monopolies but also where private sector competition is viable. SOEs account for at least one-third of Russia’s economy. At least one SOE operates in 39 of 44 sectors (Figure 6). In comparison, SOEs operate in an average of 25 and 23 sectors in non-OECD and OECD countries, respectively. Just seven of the 39 markets where SOEs are present can be considered natural monopolies. In these markets (e.g., electricity transmission, railroad infrastructure provision), it is efficient for only one firm to supply the good or service. In 11 sectors in which SOEs are present (e.g., electricity distribution), more than one firm can provide the services efficiently under certain conditions, such as demand structure or market size. Seven of the remaining markets that feature at least one SOE (e.g., air transport services) may be served efficiently by more than one firm even if network and scale effects generate high market concentration. In these sectors, competitive neutrality principles are important to ensure a level playing field among private and public actors (Figure 7).

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For the purpose of this analysis, SOEs are defined based on information available in the PMR questionnaire. This includes (i) shares held by the government, (ii) whether the government holds the largest single share, and (iii) whether the government holds special voting rights (e.g., golden shares).
Figure 6. Benchmark Number of Sectors with SOE Presence

Source: OECD PMR Database
There are market distortions in sectors where SOEs operate as monopolies or alongside the private sector. SOEs in Russia operate in concentrated markets. In some cases, this may be a natural consequence of the sector’s cost structure. However, SOEs are also often the largest economic actors in the market. According to OECD product market regulation (PMR) data, SOEs are the largest companies in 16 of the 19 network sectors in which they operate. On average, SOEs underperform compared with their private peers in the same sectors.\(^\text{36}\) The overall compensation premium paid by SOEs contributes to labor shortages in the private sector.\(^\text{37}\)

Finally, several of Russia’s SOEs operate in commercial sectors that could be served exclusively by the private sector. In Russia, there is no clear economic or strategic justification for the existence of SOEs in ten of the 39 markets where the Government of the Russian Federation controls at least one firm. Examples of these sectors include accommodation, food and beverages, construction, media, and machine building (Figure 7). In these sectors, SOEs can limit competition, become fiscal burdens for the public sector, or crowd out private investments.

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\(^{36}\) Di Bella, Dynnikova and Slavov (2019)

\(^{37}\) World Bank (2019)
The Government of the Russian Federation also has high direct participation in the economy as a buyer, through public procurement. The size of the state is reflected in the volume of procurement. In 2017, public procurement by government units and SOEs amounted to approximately 29 percent of GDP.\(^3\) Hence, the state is both a large buyer and a large seller in the economy, as SOEs buy from other SOEs. In fact, only 12.7 percent of the total volume of government contracts was awarded to privately owned firms in 2017.

SOEs’ procurement processes also suffer from limited competitive neutrality. The absence of a unified procurement framework for both private-owned and state-owned firms has resulted in SOEs often using procurement methods that do not ensure competition. The lack of standardization and homogenization of procurement rules increases the risk of non-transparent, biased selection and the disqualification of bids. Non-competitive procurement methods were used in 96 percent of all tenders under the legal framework used mainly by SOEs. (See regulatory framework 223-FZ in Figure 8.) In 2017, Russia ranked in the mid-range of BRICS countries in terms of aligning public procurement regulation with international best practices related to (i) bid submission and opening and (ii) evaluation and award. Moreover, even for contracts awarded under the more transparent general procurement framework (44-FZ), the Ministry of Finance estimates that 35 percent of all open tenders, equivalent to RUB 2.5 trillion, were cancelled (i.e., all firms were disqualified) and turned into single-source procurements. While the use of open electronic tenders has led to estimated budget savings of 6.7 percent, the share of electronic tenders is still small, and 30 percent of electronic tenders continue to be awarded through single-source procurements.

**Figure 8. Volume of Public Procurement by Regulatory Framework and Degree of Competition (RUB Trillion)**

![Chart showing volume of public procurement by regulatory framework and degree of competition](chart)

Source: Ministry of Finance

The country’s regulatory framework favors SOEs. Restrictive PMR is particularly harmful to competition in markets with a large presence of SOEs. For example, Rostelecom, the state-owned telecommunications incumbent, enjoys exclusive rights to provide Internet services to federal and municipal healthcare clients. Also, Aeroflot, the flag carrier, faces limited competition on some international routes due to its “designated carrier” status, which is not always available to its competitors. Moreover, the state-owned railway company, RZD, and its subsidiaries are vertically integrated in the infrastructure and

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\(^3\) Procurement volumes reflect gross revenues/expenditures, while GDP reflects value added.
freight/passenger services sectors, and competitors face numerous challenges in accessing the rolling stock.

Managerial Practices and Exposure to Foreign Firms

Compared to advanced countries, Russian firms lag in adopting structured managerial practices. The critical managerial practices include three broad areas: (i) performance monitoring: collecting and analyzing information on daily activities of the firm for continuous improvement; (ii) target setting: using and stretching short- and long-run targets; and (iii) performance incentives: rewarding high performing employees and retraining or moving underperformers. On a scale of 0–1, an average Russian manufacturing firm scores 0.43 on management practices, a value similar to Mexico and Pakistan but behind Croatia (0.54) and the United States (0.62). (See Figure 9.)39 Russian firms are especially ineffective at monitoring their performance—they use fewer key performance indicators and monitor them less frequently than firms in all comparator countries (Figure 10). As such, they risk management not being aware of key issues that the companies are facing and not taking corrective actions.

Figure 9. Average Management Scores (AMS), Overall

Figure 10. AMS by the Two Sub-Indices

Source: Survey of management practices in each country: Grover and Torre 2019 (Russia); Grover, Iacovone, and Chakraborty 2019 (Croatia); Bloom, Brynjolfsson, et al. 2019 (United States); Lemos et al. 2016 (Pakistan)

Note: p(10) refers to the 10th percentile of the management score and likewise, p(90) and p(75) refer to the 90th and 75th percentiles.

39 Although Mexico and Pakistan may not be the best comparator countries for Russia, comparisons with other transition countries can be drawn from earlier work by Bloom, Schweiger, and Van Reenen (2011). The European Bank for Reconstruction and Development (EBRD) and the World Bank conducted a survey on Management, Organization and Innovation (similar to MOPS) for 10 transition economies, including Russia. The results of the face-to-face interviews conducted with 1,874 factory managers were benchmarked against Germany and India. These data suggest that, on average, management practices in Russia are similar to those in India, a developing country whose GDP per capita was slightly higher than Uzbekistan. Management in Russia is worse than in most transition countries, including Belarus, Ukraine, Serbia, Bulgaria, Lithuania, Poland, and the benchmark economy, Germany. Only Kazakhstan and Uzbekistan fared worse than Russia on management score (Bloom, Schweiger, and Van Reenen 2011).
Russia has a large share of poorly managed firms, many of which do not face strong pressures to improve or exit the market. Not only is the average management score in Russia lower than in comparator countries, but Russia also has a wider distribution of management practices across firms (Figure 11) and a much larger share of poorly managed firms than comparator countries. Nearly 3 percent of Russian firms adopt no structured management practices, and 60 percent of them score below 0.5. While 18 percent of United States firms score above 0.75, only 3.5 percent of Russian firms do. Surprisingly, firm age is not associated with better management practices in Russia. Unlike firms in the United States and Mexico, Russian firms do not learn as they age, nor are they put out of business (Figure 12). Plants have heterogeneous managerial capabilities when they are born. However, with a rapid selection process where weaker establishments exit the market, there is less of a relationship between growth and management practices among incumbent plants that have matured to their steady state size. The fact that this pattern is not observed in Russia is indicative of difficulties with firm exit in Russia. The longevity of poorly managed firms confirms that resources are misallocated in the Russian economy—learning and market selection are not occurring due to a lack of effective competition, among other reasons.

**Figure 11. AMS Distribution, Russia versus Croatia**

**Figure 12. AMS by firms’ age, Russia**

Source: Survey of Management Practices in Russia (Grover and Torre 2019) and Croatia (Grover, Iacovone, and Chakraborty 2019).

**Exposure to foreign firms and participation in international markets improve managerial practices.** Exposure to the global economy, either through exporting or by being a supplier of a foreign company, positively correlates with Russian firms’ management scores. Firms that switched to becoming exporters or suppliers to foreign firms between 2012 and 2017 witnessed a substantial increase in management capabilities—particularly the ones that became exporters (Figure 13).
Figure 13. AMS with foreign exposure, Russia

Source: Survey of Management Practices in in Russia (Grover and Torre 2019).

Note: The figure depicts the average management score of firms in 2012 and 2017 for two groups: (1) “became exporters” (didn’t export in 2012 but did so in 2017) and (2) “became suppliers” (didn’t supply a foreign firm in 2012 but did so in 2017).

Exporting can enhance the performance of domestic firms. Exporting improves firms’ knowledge of—and ability to adapt to the needs of—foreign markets. It forces them to develop planning and marketing tools and reliable production, storage, and logistics systems. Exporting firms may learn about the profitability of new business opportunities by observing or competing with their foreign peers in the export markets, and this knowledge may persuade them to invest in improving quality or developing new products. A study on manufacturing firms in Slovenia showed that exporting raises productivity by an estimated 1 to 8 percent.40

Working with foreign firms improves the performance of domestic firms. Spillover effects diffuse through value chains. MNCs in upstream (input-supplying) industries provide local producers with more diverse and higher quality intermediates or capital goods and, thus, allow them to improve the quality of their products or broaden their product ranges. MNCs in downstream (input-sourcing) industries provide their local suppliers with expertise, training, and incentives for quality improvements. Buying MNCs impose very demanding requirements on domestic suppliers, including upgrading their organization and production in line with modern managerial and organizational practices to ensure high product quality, standardization, and reliability of shipments.

Foreign presence in upstream industries increases the quality of exports. A 10 percent increase in FDI presence in upstream sectors is associated with about a 10 percent increase in exports. The positive effects of foreign presence in upstream industries apply to exports directed to both OECD countries and

40 See De Loecker (2013). In estimating the impact of exporting on future productivity, the study by De Loecker allows for an endogenous productivity process to account for the possibility of higher productivity causing exporting activity.
other markets. The impact is more pronounced for exports of lower quality products, indicating that FDI in input-supplying industries promotes convergence.41

Attracting FDI is essential to increase domestic firms’ productivity. Increasing FDI in upstream sectors would help Russian firms working with foreign firms improve their exports and overall performance. The share of net FDI in Russia’s GDP is lower than expected and has dramatically decreased. In 2017, the country’s net FDI was a mere 1.8 percent of GDP, placing Russia among the countries with the lowest FDI as a share of GDP (Figure 14). Moreover, FDI inflows fell by 68 percent between 2013 and 2014—a dramatic change from growing by 89 percent between 2009 and 2013 (Figure 15). Between 2014 and 2017, FDI in Russia went primarily to sectors like agribusiness (e.g., dairy and animal products), manufacturing (e.g., clothing, cosmetics, and industrial machinery), and real estate (e.g., construction).

![Figure 14. Net FDI Inflows, Average 2015–17 (% of GDP)](image1)

![Figure 15. Evolution of Net FDI Inflows (Current US$ Billion)](image2)

Source: Data from World Development Indicators (WDI).
Source: Data from WDI.

Policy Recommendations

Increasing productivity and economic growth in Russia requires working simultaneously on both internal and external drivers of productivity growth. Addressing external drivers will reduce misallocation of resources. Addressing internal drivers will improve firms’ performance. Four areas of intervention are top priorities: (A) fostering competition and market regulation, (B) eliminating distortions associated with the direct intervention of the state in the economy, (C) improving managerial practices, and (D) increasing foreign exposure of Russian firms. The following paragraphs describe the main policy recommendations related to each area. They are also summarized in Table 1.

41 The report also considers the impact of FDI on firm productivity: estimations show a negative relationship between the productivity of domestic firms and FDI presence in the same sector. However, the presence of FDI in upstream and downstream sectors does not have a statistically significant relationship with firm productivity. Poor measurement of firm productivity could drive these results.
Fostering Competition and Market Regulation and Eliminating Distortions Associated with Direct Interventions of the State in the Economy

While the Government of the Russian Federation has taken important steps to strengthen competition policy, weaknesses in design and implementation remain. Authorities recently developed a country-wide strategy to boost competition and reduce government involvement in the economy. However, the multitude of initiatives may not yield the expected results. For example, reforms outlined in the Roadmap on the Development of Competition fail to address actual challenges, such as cartel agreements. In some cases, they may even punish efficient firms that are expanding. Similarly, a recent reform of the CDS perpetuates the conceptual shortcomings in its original design. The list of indicators by which local government units are measured does not fulfill the standards for monitoring and evaluation of competition goals (e.g., targets of 20 percent private participation in waste management and building maintenance alike). In addition, it covers public and social services sectors in which competition is less of a priority (e.g., psychological support for children with disabilities). Local authorities also often do not appear to have the regulatory mandate or guidance needed to achieve their targets.

The government can foster competition and eliminate distortions associated with the presence of the state in the economy by:

- **Redesigning the CDS.** To improve the impact of the CDS in the short term, authorities should (i) amend the indicators to track not only market structure and private participation but also market outcomes, (ii) harmonize the approach to measuring the indicators, and (iii) provide the resources to collect the data required to properly measure the indicators. In the medium term, authorities should overhaul the CDS to focus less on monitoring and more on policy actions. CDS-related reforms should target sectors in which competition is critical for economic development (i.e., input or final product or services markets) rather than human services indicators (e.g., in education and health). They should include concrete measures by local governments, such as regulatory design and implementation or procurement. The Government of the Russian Federation should also consider designing an evaluation to accurately measure the impact of the reform.

- **Updating Russia’s antitrust framework to reflect international best practices.** Authorities should revisit the definition of market dominance and use a more economic approach, simplify merger control requirements, treat vertical restraints on a case-by-case basis, and limit potential exceptions to unilateral anticompetitive conduct. Also, the Federal Antimonopoly Service (FAS) and the Analytical Center can conduct additional ex-post assessments of the effects of FAS’ decisions.

- **Limiting the procedural discretion with which companies—and SOEs in particular—procure goods and services.** To achieve this, the government could provide further guidance and enforcement on competitive procurement methods to limit single-source procurement (under Law No. 223-FZ). In the medium term, it can amend the legal framework for procurement by SOEs to further limit options for non-competitive procurement methods. This can be achieved by making the list of pro-competitive procurement methods under Law No. 223-FZ exclusive and limiting the scope for SOEs to adopt other methods.

- **For SOEs in commercial sectors, considering divestiture and privatization in a transparent and competitive process.** Small and medium-sized enterprises (SMEs) for which there is no clear ownership rationale should be considered for privatization. Large SOEs and conglomerates should be
evaluated for organizational, financial, and other forms of restructuring. This would be a first step to improve their performance and potentially attract private investors.

- **For SOEs in network and strategic sectors, enforcing rules that encourage SOEs to operate efficiently.** Where there is a rationale for direct state participation, the government can encourage SOEs to operate efficiently through various means, including restructuring, governance improvements, and financial discipline. Russia could also follow international examples to move SOEs from line ministries to independent holding entities. Within network sectors, for those segments where private sector participation is viable (e.g., transport), rules should foster competitive neutrality.

- **Amending regulations in specific sectors that reinforce the dominance of incumbent firms, including SOEs, in upstream and downstream sectors.** The government can directly remove sector-specific barriers to firms contesting markets such as pharmaceuticals and construction. Similarly, in enabling sectors such as telecommunications and transport, the government could revisit exclusivity rights such as those granted to state-owned operators.

**Upgrading Firms’ Performance and Increasing Foreign Exposure**

Public initiatives to support improving managerial practices and increasing foreign exposure can improve the performance and productivity of Russian firms. The government should consider:

- **Assessing and restructuring existing government programs for firm productivity and growth.** An assessment of the main federal and local programs supporting firms’ growth and productivity is important to identify which programs are performing well and could be scaled up and which programs should be restructured or closed. The World Bank’s experience in implementing public expenditure reviews (PERs) of innovation and SME programs in a range of client countries has identified four important stages of such assessments. First, mapping the full range of programs captures total spending, confirms alignment with national and regional development priorities, and identifies potential overlaps. The second stage is assessing the functioning of these programs by evaluating their origins, the extent to which they are addressing clearly identified market failures, the extent to which they are adequately targeted, and the extent to which they are deploying the most appropriate policy instruments. The third stage is reviewing the cost efficiency of investments in these programs and interventions (i.e., the breakdown of administrative vs. program expenditures as well as participating firms’ performance on output indicators such as adoption of practices, additional sales, and additional employment over the cost of the programs). Finally, and ideally, an impact evaluation comparing (otherwise similar) participating and non-participating firms allows calculating the returns on investment of these programs to decide whether to expand, restructure, or eliminate them.42

- **Establishing new programs that support improving managerial practices.** The management practices survey conducted by the World Bank revealed that firms did not invest in adopting structured management practices primarily because they were unsure about the benefits of these practices (70

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42 The World Bank facilitates knowledge diffusion and adoption of good practices through policy dialogue and advisory work. The World Bank has carried out innovation and SME PERs in more than 15 countries, including innovation policy reviews in Japan, Poland, Colombia, and Chile and SME support reviews in Serbia, Ethiopia, and Senegal. These PERs help client governments align their innovation or SME growth strategies and public spending on these programs with firm needs, strengthen the design and implementation of programs, and improve their efficiency and effectiveness. Their results have directly informed the design of lending operations and technical assistance programs.
percent) or they found the implementation to be too costly and were not aware of the most relevant management practices that would help them improve their performance (58 percent). Some firms also reported the lack of managerial and non-managerial skills needed for implementing these practices, while a few reported unsuccessfully attempting to adopt structured management practices (35 percent). The barriers reported by these firms could be addressed by the following programs and interventions:

a. **First, information barriers.** Managers are usually unaware that their companies’ management and organization is poor. They lack a benchmark for “how things could be.” This could be addressed by providing an informative and effective diagnostic (or audit), similar to programs in the United States, United Kingdom, and Canada. A complementary large-scale communication program could provide descriptive evidence about how improving managerial practices and organization leads to increasing profits and performance overall.

b. **Second, information asymmetry barriers.** Firms do not know who to trust to help them. One way to help address this issue would be to set up a system where consultants are certified, and new clients can access feedback provided by previous clients to assess the quality of the services. Such a program might require that firms initially receive vouchers for consulting services under the condition that they provide detailed feedback. Once enough firms participate, the feedback would help other firms select consultants. An alternative would be to set up a “performance premium” for consulting companies when their clients achieve specific milestones.

c. **Third, uncertainty barriers.** Firms may be unsure about investing in consulting services to improve their organizational or managerial practices because they are uncertain about the returns on these investments. The government could reduce the costs of “trying out” consulting services by setting up a system of grants and vouchers that are initially generous and then decrease through subsequent usages. Demonstration projects would help firms realize the value in these services and encourage them to procure such services on their own. An alternative could involve offering a “performance insurance” scheme where the insurance would be triggered if the client firm is not satisfied with the services or milestones are not reached.

For each of the interventions proposed, the government needs to address various implementation issues:

a. **Identify a coordinating agency.** The coordinating agency would design the managerial programs, supervise their implementation, monitor results, and incorporate learning and continuous improvements.

b. **Identify and effectively target beneficiary firms.** Doing so will require defining criteria such as size, legal status, and export orientation. Having a clear target beneficiary will facilitate making concerted efforts to reach out to relevant firms.

c. **Identify suppliers of services.** Identify consulting companies or individual consultants by defining criteria such as financial standing of the company, qualification and experience of the consultants, and minimum dedication to the program in terms of time and capacity to provide consulting services.

d. **Design the implementation phases of the program.** The implementation phases would include: (i) a diagnostic or audit of the beneficiary company, which the consulting firm would prepare in

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43 Grover and Torre (2019).
collaboration with the beneficiary firm, with the aim of identifying the main managerial challenges that the beneficiary firm faces; (ii) one or more group training sessions on management practices for beneficiary firms facing similar issues;\textsuperscript{44} and (iii) in depth individual consulting assistance for beneficiary firms that demonstrate the highest potential to become more productive, export, and grow.\textsuperscript{45}

e. **Design the financial structure of the program.** Earlier phases of support, especially the initial diagnostic or audit, are unlikely to receive much demand unless fully (or nearly fully) subsidized. How seriously the firm takes the initial recommendations should determine whether additional consulting at state expense is forthcoming. The decision about the degree of subsidies should depend on the extent of market failures mentioned above (i.e., information barriers, information asymmetry barriers, and uncertainty barriers) and on a careful estimate of potential beneficiaries’ willingness to pay.\textsuperscript{46}

- **Promoting investment climate reforms that reduce the costs of FDI and introducing investment promotion policies targeted toward industries supplying export-oriented sectors.** Investment climate reforms that reduce the costs of FDI require identifying specific bottlenecks—including policy constraints and bureaucratic procedures to enter Russian markets—that foreign firms face, whether they affect all firms or firms that intend to enter specific industries. Broader investment climate policies should be complemented by investment promotion activities that encompass facilitating visits of prospective investors, matching prospective investors with local partners, helping obtain permits and approvals, preparing project proposals, conducting feasibility studies, and servicing investors whose projects have already become operational. Attracting FDI in specific sectors is likely to lead to greater FDI inflows than less intense across-the-board attempts to attract investment. Analysis of FDI targeting activities in 56 countries indicates that priority sectors receive more than twice as much FDI as sectors not targeted by investment promotion agencies (IPAs).\textsuperscript{47} The government should phase out the use of fiscal incentives to attract investors or promote domestic linkages because international evidence suggests such policies have little impact on investment decisions.

- **Setting up supplier development programs to maximize opportunities for linkages and spillovers between foreign and local firms.** Successful supplier development programs require various

\textsuperscript{44}Iacovone, Maloney, and McKenzie (2019) show that group consulting in Colombian auto-parts producers is as effective as one-on-one management consulting at improving firm performance. Likewise, Maloney (2015) finds that in Japan there is now more of an emphasis on group interventions, partly due to cost considerations.

\textsuperscript{45}The United Kingdom’s MAS offers five levels of support services to SMEs. Level 1 is a free helpline inquiry service, through which manufacturing and business experts are available to answer questions on a range of technical issues. Level 2 is a free, one-day on-site review to assess the firm’s operations and highlight opportunities to improve operational performance. Level 3 includes providing general awareness training and networking events, including best-practice factory visits. Level 4 is MAS’s subsidized consultancy support (up to two weeks), referred to as “workouts” for improving processes in the firm (e.g., lean manufacturing processes, improving shop floor layouts and space utilization). In Level 5, MAS acts as a broker for “non-manufacturing queries, such as financial, human resources, marketing, legal, or environmental issues” to other providers and programs within the United Kingdom’s suite of Solutions for Business to help firms discover new markets, export globally, learn design principles, or secure financing for research and development (R&D).

\textsuperscript{46}The funding models for countries’ management extension services vary considerably. While national governments often provide a portion of funding, with matched funding coming from local regions and recipient firms, in Japan funding of the Kohsetsushi Centers comes entirely from the provincial government. Likewise, while most countries expect recipient firms to participate in at least a portion of the cost, Japan strives to offer free- or low-cost services to SMEs through its Kohsetsushi Centers. Consultations with Japanese SMEs are free, although the cost of using the facilities is shared.

\textsuperscript{47}While the magnitude of the effect of sector-specific targeting on efforts to attract FDI by IPAs may seem large, it is not implausible. We do not delve deeper into these recommendations in the context of Russia because this was not the central aim of this report.
elements. To begin with, they need to be demand driven. It is crucial to start from the demand of foreign firms to guarantee sustainability. If local firms receive support to upgrade when a clear demand is lacking, the consequence is likely to be a backlash against the program and lack of interest in the future. Second, once a clear demand from foreign firms is identified and quantified in terms of specific quality requirements and prices, the program needs to implement a phased approach. Many companies can apply for an initial diagnostic, but only a selected group, which passes certain milestones jointly agreed upon with foreign buyers, can move to the second phase where they receive support to upgrade their production and organization. After this phase, another filter would be applied, in conjunction with foreign buyers, to select the companies that receive support to go through required certification processes, or even further to receive financial assistance to upgrade their machinery to be able to expand scale and upgrade quality. Further, the program needs to have a strong monitoring system that collects data on performance and feedback in real time to continuously adjust to market demands.
<table>
<thead>
<tr>
<th>Channel</th>
<th>Driver/area of policy action</th>
<th>Examples of priority policy actions</th>
<th>Short term</th>
<th>Medium term</th>
</tr>
</thead>
</table>
| **External drivers of productivity growth:**                            | (A) Fostering competition by (i) improving the CDS, (ii) continuing to align the antitrust legal framework to international good practices, and (iii) limiting single-source procurement | - Amend results framework to focus on market outcomes instead of market structure.  
- Streamline merger control system.  
- Further limit single-source procurement through implementing guidelines.  
- Amend legal framework to reduce non-competitive procurement by SOEs.  
- Bring SOE and other government procurement under one framework. |            |                                                                                                                                          |
| (1) Addressing misallocation (reallocation channel) and (2) facilitating entry/exit of high-productivity firms (entry-exit channel) | (B) Eliminating distortions associated with the direct presence of the state in the economy by (i) revisiting the need for SOEs in commercial sectors and (ii) amending sector-specific rules that reinforce dominance of incumbents, including SOEs | - For SOEs in commercial sectors: Consider divesting and privatizing small and profitable SOEs in a transparent and competitive process.  
- For SOEs in network and strategic sectors: Enforce rules that encourage SOEs to operate efficiently.  
- Remove barriers for firms to contest markets where SOEs are present.  
- Improve governance, harden budget constraints and limit the ability of SOEs to access financing that is not available to private firms.  
- For SOEs in commercial sectors: Consider restructuring large conglomerates prior to assessment for privatization.  
- For SOEs in network and strategic sectors: Amend legal provisions that may reinforce dominance, including by SOEs. |            |                                                                                                                                          |
| **Internal drivers of productivity growth:**                            | (C) Upgrading firms’ managerial practices, including performance monitoring, target setting, and performance incentives. Particular emphasis should be put on performance monitoring | - Evaluate rigorously and restructure if needed existing government programs for firms’ productivity and demand growth (e.g., export promotion). This could be done through World Bank Public Expenditure Review of Innovation and Productivity Programs methodology and impact evaluations, which help measure the effects of existing initiatives.  
- Establish new programs that support introducing managerial practices: (i) identify a coordination agency, (ii) identify and target beneficiary firms, (iii) identify suppliers of services (consulting firms); (iv) design the program implementation, including a diagnostic of the beneficiary firms, group training sessions on management practices for beneficiary firms facing similar issues and in depth individual consulting assistance for firms with the highest potential to become more productive; and (v) define the financial structure of the programs, including vouchers and matching grants for beneficiary firms. |            |                                                                                                                                          |
| (3) Improving within firm productivity: supporting firms’ performance upgrading (within channel) | (D) Strengthening linkages between local and foreign firms | - Promote investment climate reforms that reduce the cost of FDI.  
- Introduce investment promotion policies targeted toward industries supplying export-oriented sectors.  
- Set up supplier development programs to maximize opportunities for linkages and spillovers between foreign and local firms. These should be (i) demand-driven, (ii) phased to filter out participants with low potential, and (iii) accompanied by a strong monitoring system. |            |                                                                                                                                          |
1. Productivity Dynamics: The Elusive Promise

Total factor productivity—the efficiency with which societies combine their people, resources, and tools—is the central driver of economic growth. As Paul Krugman (1994) famously claimed, “Productivity is not everything, but, in the long run, it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker.” Sustained increases in productivity are critical not only to the average citizen but also to those sharing least in society’s benefits.

Long-run increments in earnings in industry or agriculture, the source of employment for many of the world’s poor, can only be achieved by increasing worker or farmer productivity.⁴⁸ Workers will only leave informal self-employment if formal sector earnings merit it. Hence, the route to good jobs goes through productivity. Productivity-driven cost reductions reduce the prices of key products consumed by the poor and thereby increase household purchasing power. New technologies reduce the cost and improve the efficacy of service delivery in all social spheres. Spurring productivity growth is thus the pivotal element of an integrated strategy to generate good jobs and increase people’s wellbeing (Cusolito and Maloney, 2018).⁴⁹

Despite recent improvements in gross domestic product (GDP) and total factor productivity (TFP) growth, Russia’s growth remains below pre 2008/9-crisis levels (Figure 16 and Figure 17). Moreover, the country’s relative growth performance has recently weakened, while income convergence with advanced economies has stalled.⁵⁰ Russia’s TFP growth trend is not a rare phenomenon, for two main reasons. First, the global productivity locomotive appears to have stalled. The recent productivity slowdown in advanced countries and, to a lesser extent, in follower countries threatens to reduce the rate at which all countries drive ahead and leave global poverty behind. This is occurring despite spectacular advances in computing power and a host of derivative technologies. The rapid advances in science and technology seem out of sync with observed productivity growth. Second, convergence seems to be on hold. The hoped-for natural convergence of follower countries with the global frontier has not occurred, and many countries seem to be trapped at low- or middle-income levels. Both aspects of the TFP puzzle—the productivity slowdown and the lack of convergence—must be resolved to raise global productivity growth and welfare (Cusolito and Maloney, 2018).

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⁴⁹ Cusolito and Maloney (2018)
⁵⁰ International Monetary Fund European Department 2019.
The decline in aggregate productivity growth in Russia is the result of several factors. These include (1) the inefficient allocation of resources such as labor and capital across firms (reallocation channel); (2) perverse entry-exit market dynamics, as unproductive incumbents survive, while productive firms exit the market (entry-exit channel); and (3) weak within-firm upgrading (within channel).51 (See Figure 18.) The main determinant behind the three channels is low productivity growth at the firm level, because the firm is the main creator of value in the economy. External drivers of firm productivity growth are often associated with the rules and conditions that shape the business environment in which firms operate. These include product market competition, regulations, and taxes. This report focuses specifically on (A) product market competition and (B) state participation in the economy as the most important external drivers of productivity growth in Russia. Internal drivers are related to firm capabilities such as managerial skills, innovation, technology adoption, and quality upgrading. This report focuses specifically on (C) managerial capabilities and (D) linkages to multinational corporations (MNCs) as the most important internal drivers of productivity growth in Russia.

The within channel is often—but not always—the most significant. Global empirical evidence about the relative importance of each of the three channels of productivity growth is limited. However, a recent World Bank Group analysis by Cusolito and Maloney (2018) offers the first decompositions for a sample of developing and emerging countries. The within channel is the most important in four of six countries, explaining roughly half or more of efficiency growth in these economies, especially in Ethiopia and China. However, depending on the country, the other components also play important roles. In Chile and Colombia, the entry-exit channel is the largest contributor. The reallocation channel is marginally the dominant contributor in India and comes a close second in Colombia.

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51 Cusolito and Winkler (2015)
Domestic and foreign product market competition are important drivers of productivity growth. Competition fosters the entry of high-productivity firms and the exit of laggard incumbents. The latter induces reallocation of inputs and factors of production toward the most productive firms, reducing misallocation of resources across firms and activities. It also fosters firm upgrading, as leading firms invest in productivity-enhancing activities to escape competition.

In developing economies, more intense competition is associated with 2 to 7 percent higher sector-wide productivity growth. Empirical studies have linked the intensity of competitive pressures—measured by price-cost margins (PCMs)—to productivity growth in both advanced economies and developing economies. An early study from the United Kingdom shows that an increase of 10 percentage points in PCMs is associated with a 1.3–1.6 percent loss in TFP growth, on average.52 More recent evidence points to a larger effect in developing economies. Industry and firm data from South Africa over the period from 1980 to the early 2000s suggests that a 10 percent reduction in mark-ups would increase productivity growth by 2 to 2.5 percent per year.53 In Tunisia, a decrease of 5 percentage points in PCMs between 2000 and 2010 was linked to an additional 5 percent growth in labor productivity.54 In Turkey, a 10 percent decrease in average PCMs over the period between 2003 and 2008 was associated with an increase in labor productivity growth of 4.5 percent per year.55 Between 2007 and 2014, a 10 percent decrease in PCMs in Brazilian manufacturing sectors was associated with an increase in productivity growth of 3.4 percent per year.56 A study with firm data from 2010 to 2012 in Argentina suggests that the same degree of change in PCMs was linked to an additional 7 percent growth in labor productivity.57

Competition-driven price reductions can reduce poverty. Experimental evidence from a conditional cash transfer program for the poor in the Dominican Republic shows that competition in the retail market led

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52 Nickell (1996)
53 Aghion, Braun and Fedderke (2008)
54 World Bank (2014)
55 World Bank (2013)
56 Reis et al. (2018)
57 Martínez Licetti et al. (2018)
to 6 percent lower prices, benefitting low-income households.\textsuperscript{58} A simulation of the effect of market power in Mexico suggests that lack of competition costs households in the lowest income decile about 20 percent more than households in the highest decile.\textsuperscript{59} A similar simulation for Russia shows that introducing pro-competition reforms in telecommunications, air transport, utilities, and retail trade could reduce the national poverty rate by up to 3 percentage points—one-fifth of the national poverty rate in 2017 (13.2 percent).\textsuperscript{60}

Lack of competition due to state presence in the economy can limit a country’s growth. Economic distortions—often associated with state participation in the economy, as regulator (through competition policy), as seller of goods or services (through state-owned enterprises) or as buyer (through public procurement processes)—alter the conditions under which privately owned firms operate.\textsuperscript{61} For example, hefty investment by state-owned enterprises (SOEs) may contribute to capital misallocation, because state support is likely to lead to an inefficient rationalization in some industries, with relatively unproductive firms attracting too much investment.\textsuperscript{62} Moreover, SOEs tend to absorb a larger proportion of labor than necessary to produce a good or service. The unutilized capacity not only makes SOEs inefficient, but also crowds out inputs for productive privately owned firms. There are other channels through which state participation in the economy can contribute to misallocation. For example, procurement rules that do not foster competitive processes can discriminate in favor of specific groups, shifting resources toward low-productivity companies. The widespread use of single-source procurement or concentrating contract awards among a few firms can interfere with reallocating inputs toward more efficient incumbents or new entrants.\textsuperscript{63}

Firm capabilities are also important to foster aggregate productivity growth. Many firms are plagued by weak managerial practices, inefficient organization, sub-optimal use of their workforces, wasteful employment of materials and inputs, or poor efficiency on their production floors.\textsuperscript{64} Well managed firms—firms that efficiently organize their plants, effectively manage human and financial resources, develop strategic and marketing plans, innovate more, adopt better technologies, and track their performance systematically—tend to be more innovative, produce higher quality products, and export more. Empirical evidence for India shows that adopting better management practices raised average productivity by 11 percent through improved quality, efficiency and reduced inventory.\textsuperscript{65} Recent evidence based on a sample of 34 countries shows that differences in management practices account for about 30 percent of TFP differences both between countries and within countries across firms.\textsuperscript{66}

Links to MNCs also improve firm productivity through several channels. They accelerate adoption of better managerial tools in local firms through knowledge transfer. By observing foreign firms or through hiring former MNC employees, domestic firms may learn about procedures that improve the quality and standardization of their products, their marketing skills, and the reliability of their shipments.\textsuperscript{67} Evidence

\textsuperscript{58} Busso and Galiani (2014)
\textsuperscript{59} Urzúa (2013)
\textsuperscript{60} Background note prepared by the World Bank Group poverty team.
\textsuperscript{61} Hsieh and Klenow (2009)
\textsuperscript{62} Freund and Sidhu (2019); Bai, Hsieh and Qian (2006); Dollar and Wei (2007)
\textsuperscript{63} “See the World Bank Group’s Markets and Competition Policy Assessment Tool (MCPAT)”. “Strengthening Argentina’s Integration into the Global Economy”. World Bank Group.
\textsuperscript{64} For further discussions on this issue, see Iacovone and Qasim (2013).
\textsuperscript{65} Bloom et al. (2018)
\textsuperscript{66} Bloom, Sadun and Van Reenen (2017)
\textsuperscript{67} Haskel, Pereira, and Slaughter (2007); Keller and Yeaple (2009); Poole (2012); Balsvik (2010)
shows that a one standard deviation increase in foreign presence in downstream sectors is associated with a 15 percent rise in the output of each domestic firm in supplying industries.68

This report examines four drivers behind Russia’ lackluster productivity performance. It pays special attention to two external drivers—competition and state participation in the economy—that are key determinants of productivity growth through the reallocation and entry-exit channels. It also focuses on two internal drivers—managerial capabilities and linkages to MNCs—that are important determinants of productivity growth through the within channel. While innovation and technology adoption may play roles in determining firm productivity, they are both functions of managerial capabilities. In addition, innovation and technology adoption are often influenced by linkages to MNCs or access to foreign markets.

The focus on competition and the role of the state in the economy, in particular, align with national priorities. The Government of the Russian Federation recently issued an Executive Order, On State Competition Policy Guidelines (Order of 21 December 2017 No. 618). The subsequent National Plan and Roadmaps on Competition pursue the goal of promoting competition and focus on reducing state participation in the economy. The plan focuses predominantly on reducing “anti-competitive actions by public bodies.” As part of this effort, the government is also amending its antitrust framework through the 5th Antimonopoly Package. Empirical evidence and policy recommendations in this report can directly inform policy actions under the various strategic initiatives on competition.

2. Competition to Reduce Misallocation and Encourage Efficient Entry-Exit Dynamics

Raising economic growth through the development of frictionless economies is an important goal of any strategy to increase productivity growth and generate new (and better) jobs. Ideally, a well-functioning economy would ensure that physical and human capital flow to those firms that can use them most productively, grow most rapidly, and create the most jobs. This means, for example, that returns on an additional unit of physical investment should be equal across all firms: no productivity gains can be reaped by taking resources from one firm and giving them to another. However, economic distortions and market failures—product market regulation (PMR) or procurement rules that tilt the playing field—exist in all economies to greater or lesser degrees. These distortions often introduce frictions that impede the efficient allocation of resources (e.g., labor, capital, and materials) from low-productivity to high-productivity firms.69 They also dynamically alter firms’ incentives to become more competitive by innovating or adopting new technologies or better managerial practices, affecting their capacity to grow over the life cycle.70

The renewed global interest in productivity growth has emerged together with global concerns about a lack of product market competition. The concern is the result of recent evidence on increasing markups, especially in advanced countries. Higher markups can signal increases in market power. However, they can also reflect firms’ optimal choices to survive in contestable markets. This happens as firms increase their PCMs through vertical differentiation (e.g., quality upgrading, advertising, branch name investments, or cost-reducing innovations) or changes in their cost structure to take advantage of new technologies

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68 Javorcik (2004)
69 Hsieh and Klenow (2009)
70 Hsieh and Klenow (2014)
(e.g., increases in fixed costs to reduce marginal costs). There is a heated debate about this issue. Whether or not markup increases are related to higher aggregate efficiency or quality upgrading, a rise in markups may have non-trivial distributional effects.

In the short run, competition may have ambiguous effects on productivity. However, it often increases productivity in the long term. The impact of domestic competition on innovation has an inverted U-shape: firms competing “neck and neck” with frontier firms will innovate, seeking room to escape competition. On the other hand, firms too far from the frontier may find profits so low that they will not or cannot upgrade, and thus exit the market if they cannot compete anymore. Exposure to trade may induce only the most productive firms to enter the export market, simultaneously forcing the least productive firms to exit. In the long run, an industry’s response to foreign competition shifts resources toward the most productive firms, increasing aggregate productivity. Pro-competitive reforms like trade liberalization also promote the arrival of MNCs in upstream industries. They often intensify competition in the input-supplying sector and provide incentives for local input producers to become more efficient or upgrade the quality of the goods or services they supply. Dynamically, lack of product market competition may dampen investments in intangible assets like managerial skills and innovation. It also discourages business dynamism.

Global competition concerns have reignited the debate about state presence in the economy. Although state presence in the economy is sometimes justified by the need to correct market failures or pursue specific strategic or social objectives, it can also be distortionary. Several factors have recently led to a re-evaluation of the role of the state in the economy. First, evidence shows that global market concentration has increased in markets with strong participation of Chinese SOEs. Second, concerns have emerged about the presence of SOEs in sectors where there is not an economic rationale for it. In those sectors, SOEs may crowd out private investments and contribute to capital misallocation. Third, the aftermath of the global financial crisis placed a renewed emphasis on fiscal policy and fiscal risks, calling into question the fiscal implications of subsidizing SOEs or acting as their lender of last resort when they are financially distressed. Concerns about fiscal implications are related to the fact that SOEs often underperform relative to private-owned or foreign-owned firms. They are also more likely to be financially distressed than their private sector counterparts. Soft budget constraints, weak incentive mechanisms, low managerial capabilities, and political goals explain why, on average, SOEs are less profitable than domestic private-owned or foreign-owned firms. The following sections discuss some of these issues in detail.

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71 De Loecker and Eeckhout (2018)
72 Aghion et al. (2005)
73 Melitz (2003); De Loecker (2011)
74 Arnod and Javorcik (2009)
75 Bloom and Van Reenen (2007)
76 Freund and Sidhu (2017)
77 World Bank (2014b)
78 Richmond et al. (2019)
79 Richmond et al. (2019)
80 Melecky and Sharma (2019)
81 Bloom, Sadun, and Van Reenen (2015); Dollar and Wei (2007); Harrison et al. (2019)
2.1 Competition Market Outcomes

Russia has been taking positive steps toward trade liberalization since 2012, when it became a member of the World Trade Organization (WTO). While Russia’s most-favored nation (MFN) tariff was 7.4 percent\textsuperscript{82} in 2013, the second highest (after Brazil) among BRIC\textsuperscript{83} countries, it fell to 4.5 percent in 2017—the biggest decline in tariffs among the same group of economies (Figure 19). Moreover, the country’s effectively applied tariff (AHS) was 3.6 percent\textsuperscript{84} in 2017—lower than the average of 6.1 percent for the other BRIC countries (Figure 20). Despite improvements in recent years, however, Russia’s tariffs are still above those of countries like the United States, Mexico, and Singapore.

![Figure 19. Most Favored Nation Tariff, Weighted Average for All Products (%)](image)

![Figure 20. Effectively Applied and Most Favored Nation Tariffs, Weighted Average for All Products, 2017 (%)](image)

Note: In current usage, most-favored nation (MFN) tariffs are what countries promise to impose on imports from other members of the WTO, unless the country is part of a preferential trade agreement (such as a free trade area or customs union). This means that, in practice, MFN rates are the highest (most restrictive) that WTO members charge one another. Some countries impose higher tariffs on countries that are not part of the WTO.


Note: The effectively applied tariff (AHS) is defined as the lowest available tariff. If a preferential tariff exists, it will be used as the effectively applied tariff. Otherwise, the MFN applied tariff will be used.

Source: WITS.

Foreign direct investment (FDI) inflows have recently fallen, and the share of net FDI in Russia’s GDP is lower than expected given its GDP per capita. In 2017, the country’s net FDI was a mere 1.8 percent of GDP, placing Russia among the countries with the lowest FDI as a share of GDP (Figure 21 and Figure 22). Moreover, FDI inflows fell by 68 percent between 2013 and 2014—a dramatic change from growing by 89 percent between 2009 and 2013. Between 2014 and 2017, FDI in Russia went primarily to sectors like agribusiness (e.g., dairy and animal products), manufacturing (e.g., clothing, cosmetics, and industrial

\textsuperscript{82} Weighted average for all products.

\textsuperscript{83} Brazil, Russia, India, and China.

\textsuperscript{84} Weighted average for all products.
machinery), and real estate (e.g., construction). It came primarily from China, France, Germany, the United Kingdom, and the United States.

Figure 21. Net FDI Inflows, Average 2015–17 (% of GDP)

Figure 22. Evolution of Net FDI Inflows (Current US$ Billion)

Source: Data from World Development Indicators (WDI).

Recent global markup estimation shows that Russia’s average markups remain high despite declining from 2009 to 2016. (See Table 2; see Annex 1 for methodological details and caveats on markup estimation). On average, Russia has among the highest markups globally, together with Bolivia and several African countries. Although high, markups in Russia have decreased. This contrasts with the trend in advanced economies, where markups increase; and developing economies, where they remain high. In Russia, state-owned, large, and exporting firms charge higher markups than other firms (Figure 23).

Table 2: Markup analysis in the Russian economy, by industry

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Economy-wide</td>
<td>1.92</td>
<td>1.47</td>
<td>-2.50</td>
<td>-2.96</td>
<td>1.39</td>
</tr>
<tr>
<td>Agriculture, mining, and construction</td>
<td>1.75</td>
<td>1.37</td>
<td>-2.98</td>
<td>-3.37</td>
<td>1.37</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.56</td>
<td>1.98</td>
<td>-2.39</td>
<td>-2.98</td>
<td>2.00</td>
</tr>
<tr>
<td>Services</td>
<td>1.57</td>
<td>1.17</td>
<td>-2.21</td>
<td>-2.64</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Source: Author’s own elaboration (see annex for the description of the methodology and caveats).

Note: The analysis excludes the following sectors because of data issues: chemical products, pharmaceuticals, financial, and insurance activities

85 De Loecker and Eeckhout (2018)
Figure 23. Markup Heterogeneity across Firms

(a) Age group

(b) Size group

(c) Ownership type

(d) Export status

Source: Author’s own elaboration.

High markups are also in line with investors’ perceptions and international rankings that confirm low intensity of competition. Even though Russia has marginally improved in the perception of the intensity of competition in its markets, perceptions of competition remain lower than in peer countries in the region and among the BRICS\textsuperscript{86} group (Figure 24). The World Economic Forum’s Global Competitiveness Index reveals a deterioration in the perception of the effectiveness of Russia’s anti-monopoly policy (Figure 25).\textsuperscript{87} The Economist Intelligence Unit’s tracker shows that the perception of business risks related to competition is also higher in Russia than in all comparator economies. (See Figure 26)

\textsuperscript{86} Brazil, Russia, India, China, and South Africa

\textsuperscript{87} Based on the Global Competitiveness Index’s score on “Effectiveness of Antimonopoly Policy,” which fell from 3.53 in 2016 to 3.47 in 2017. The score is on a scale of 0 (least effective) to 7 (most effective).
Figure 24. Intensity of Local Competition, 1–7 (Best)


Figure 25. Effectiveness of Anti-Monopoly Policy, 1–7 (Best)

Source: Global Competitiveness Index.

Figure 26. Business Risks Related to Weak Competition Policies by Component, October 2019

Note: OECD Top 5 is an average score of the following countries: the Netherlands, United Kingdom, Austria, Denmark, and New Zealand.

Source: Economist Intelligence Unit (EIU) risk tracker.
2.2. Competition and (Mis)Allocation: Main Drivers and Welfare Effects

The Government of the Russian Federation acknowledges the benefits of fostering competition and market contestability. It has taken important steps to improve the regulatory framework and strengthen the institutional capacity of regulators. Over time, authorities have reformed the country’s competition legal framework to create more contestable markets and empower the regulator. For example, in 2013, the government introduced the Competition Development Standard (CDS), which requires sub-national governments to create action plans and target indicators to achieve a more competitive economic environment. In 2018, it launched a National Plan for Competition Development.

2.2.1 Direct State Participation in the Economy

State participation in the economy may distort the level playing field. State participation in the economy has often been justified by specific strategic or social objectives. However, because the state acts simultaneously as market player and arbitrator, it may distort the playing field. According to the OECD, a regulatory framework based on competitive neutrality is one in which (i) “public and private enterprises face the same set of rules” and (ii) “contact with the State does not bring competitive advantage to any market participant.” Neutrality principles thus require that, when SOEs engage in economic activities, they do so without any advantage or disadvantage relative to other SOEs or privately owned firms. This means that laws and regulations should not discriminate between these firms and their market competitors. If the neutrality principles are, however, not implemented in practice, allocative inefficiencies may emerge, as labor, capital, and other resources flow to firms that may not be the most productive. Lack of neutrality could also discourage privately owned firms from making the investments necessary to become more productive. It could also deter the entry of high-productivity firms, permitting the survival of laggard incumbents.

The Russian government has high direct participation in the economy, posing a risk to competitive neutrality. About 55 percent of the Russian economy was in state hands in mid-2015, with 20 million workers directly employed by the government. Moreover, the public sector, measured as the state’s share in value added, amounted to 33 percent of GDP in the same year, according a recent International Monetary Fund (IMF) working paper. The European Bank for Reconstruction and Development similarly estimates the state’s share at an average of 35 percent of GDP during 2005–10. In terms of employment, the Russia Longitudinal Monitoring Survey suggests the public sector accounts for 42 percent and SOEs for 17 percent of formal employment.

SOEs have a large presence in key sectors of the economy. Russia has a high number of sectors with SOEs relative to comparator economies, with at least one SOE in 39 key sectors, compared to a non-OECD

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88 For a previous assessment of the Competition Standard Implementation in Russia, see World Bank (2016), p. 97.
89 Organisation for Economic Co-operation and Development (2009)
90 Organisation for Economic Co-operation and Development (2015)
91 This is also below 10 other European countries on Rule of Law, according to the Worldwide Governance Indicators in 2011. (see Iacovone, Maloney and Tsivanidis, 2019). Lack of legal predictability can also lead to discretionary application of regulation and undermine competitive neutrality.
93 Di Bella, Oksana Dynnikova and Slavov (2019)
average of 25 and an OECD average of 23 (Figure 27). State control (through public ownership and direct involvement in business operations) explains 51 percent of overall restrictiveness of PMR in Russia, which is higher than that observed in other countries like China, Brazil, and Mexico (Figure 28). Moreover, direct government intervention as an economic actor in the country’s 15 most concentrated sectors is higher than in its 15 least concentrated sectors (IMF 2018). Based on the Survey of Occupational Wages (SOW), four sectors—transport and communications, manufacturing, business services, and electricity, gas and water supply—account for over 85 percent of all SOEs by employment (see Hasnain and Vodopyanov, 2019). While SOEs often operate in sectors with natural monopolies, SOEs in Russia also operate in sectors where private-sector participation and competition are typically viable. The government’s share, in terms of sales, is 14 percent in chemical production, 47 percent in air transport, and a surprising 40 percent in management consulting (IMF 2018).

**Figure 27. Benchmark Number of Sectors with SOE Presence**

**Figure 28. Restrictiveness of PMR: Decomposition by Sub-Indicator**

Russia’s SOEs are the largest economic actors in many of the markets in which they operate. The government’s National Champions Policy aimed to facilitate creating large and profitable companies by providing so-called national champions with special assistance from the government. For example, the National Champions Policy promoted vertical integration—the ownership or control by a firm of distinct stages of the production process—as a way to strengthen selected SOEs. Russian national champions include Rosselhozbank, Sberbank, and VTB in banking; Gazprom, Rosneft, and Transneft in energy;...
Rosatom and Rosnano in technology; Aeroflot and Russian Railways in transportation; Avtodor in construction; and United Aircraft Corporation in the machinery and equipment sector.96

Several of Russia’s SOEs operate in fully commercial sectors, despite the lack of an economic rationale for it, thus crowding-out private investments.97 Governments may have valid public policy objectives in creating SOEs for certain commercial activities that are either not profitable or where one or few operators are most efficient (e.g., due to economies of scale, network effects, or large fixed costs). SOEs that are present in markets that do not feature any of these traits could contribute to a lack of competition, become a fiscal burden for the public sector, and crowd-out private investments. In Russia, there is no clear rationale for state participation in 26 percent of sectors where the government controls at least one firm. Examples of these sectors include accommodation, food and beverage service activities, construction, media, and machine building (Figure 29).

Figure 29. Distribution of SOEs by Sector and Level of Competition

Note: Sectors reviewed by the PMR with SOE participation in Russia. “Other” includes the following: insurance, reinsurance, pension funding, financial services (except central banking), and human health.

Source: OECD PMR database. Classification based on World Bank Group MCPAT methodology.

Many SOEs are in network sectors. According to PMR data, SOEs are the largest companies in the electricity, gas, telecommunications, and transport sectors, which is common in many countries due to

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96 Djankov (2015)
97 The term, “fully commercial” refers to the nature of the sector (given its cost structure and potential competition). It does not relate to the definition of “commercial firms” in the Russian Civil Code, which includes companies in network sectors.
the social relevance and high investment requirements in these sectors (Figure 30). However, many countries have also privatized SOEs in these markets, because granting residual control and cash-flow rights to private shareholders allows operators to focus on long-term objectives that could increase operational efficiency. In particular, many firms in segments where competition is viable, such as electricity generation, have been privatized in many countries.

**Figure 30. Extent of SOE Presence in Key Network Sectors**

<table>
<thead>
<tr>
<th><strong>Electricity</strong></th>
<th><strong>Gas</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is the incumbent SOE the largest player?</strong></td>
<td><strong>Is the incumbent SOE the largest player?</strong></td>
</tr>
<tr>
<td>Import</td>
<td>NA</td>
</tr>
<tr>
<td>Generation</td>
<td>yes</td>
</tr>
<tr>
<td>Transmission</td>
<td>yes</td>
</tr>
<tr>
<td>Distribution</td>
<td>yes</td>
</tr>
<tr>
<td>Supply</td>
<td>yes</td>
</tr>
<tr>
<td><strong>In what percentage of countries is this the case?</strong></td>
<td><strong>In what percentage of countries is this the case?</strong></td>
</tr>
<tr>
<td>78%</td>
<td>56%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Telecom</strong></th>
<th><strong>Transport</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is the incumbent SOE the largest player?</strong></td>
<td><strong>Is the incumbent SOE the largest player?</strong></td>
</tr>
<tr>
<td>Fixed-line network</td>
<td>yes</td>
</tr>
<tr>
<td>Fixed-line services</td>
<td>yes</td>
</tr>
<tr>
<td>Mobile services</td>
<td>no</td>
</tr>
<tr>
<td>Internet services</td>
<td>no</td>
</tr>
<tr>
<td><strong>In what percentage of countries is this the case?</strong></td>
<td><strong>Operation of railroad infrastructure</strong></td>
</tr>
<tr>
<td>42%</td>
<td>Operation of railroad infrastructure</td>
</tr>
<tr>
<td>28%</td>
<td>yes</td>
</tr>
<tr>
<td>32%</td>
<td>yes</td>
</tr>
</tbody>
</table>

*Note: “NA” reflects the PMR questionnaire response “sector does not exist.”

*Source: OECD PMR Database.*

**The governance of several SOEs is worse than that of private-owned firms, which could lower their productivity.** Russia exhibits poor governance and restrictive PMR related to public ownership and involvement in business operations (Figure 31 and Figure 32). The poor governance is associated with the fact that many SOEs are neither incorporated as joint stock companies nor subject to private company law. Moreover, their ability to access financing not available to private firms (e.g., loans guaranteed by the state or preferential loans from state-controlled banks or the state itself) allows them to sustain poor performance. SOEs also tend to be managed by line ministries instead of independent public holding entities, with the government intervening in the strategic decision-making of SOEs (e.g., regarding mergers and acquisitions as well as restructuring plans). Improving the governance of SOEs could help

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98 Ordover, Pittman and Clyde (1994)
improve their overall performance (Di Bella et al. 2019). While many SOEs in Russia suffer from poor performance, there are some noteworthy exceptions, such as Sberbank (Box 1) and Gazprom.

**Figure 31. PMR Score in SOE Governance**

![Graph showing PMR scores in SOE governance for various countries](image)

*Note*: Score on a scale of 0 (least restrictive) to 6 (most restrictive).

*Source*: OECD PMR Database.

**Figure 32. State Control Sub-Indicator Decomposition**

![Graph showing state control sub-indicator decomposition for various countries](image)

*Note*: Score on a scale of 0 (least restrictive) to 6 (most restrictive).

*Source*: World Bank Group PMR database.
Box 1. Case Study of Russia’s Largest State-Owned Bank

Sberbank, the successor of the Russian Imperial Savings Association established in 1841, is the oldest and largest bank in Russia and has a strong presence across Europe. After a centralized banking period during the Soviet era, Sberbank was created in the late 1980s as one of the specialized state-controlled banks in charge of operating the savings and loan system. After the dissolution of the Soviet Union, Sberbank was privatized in 1991 and organized as a joint stock company.

In general, and despite enjoying more market power, state-owned banks (SOBs) perform worse than their private counterparts, both in Russia and in comparable countries. Nevertheless, Sberbank has distinguished itself by its strong performance, even during periods of economic recession. In 2018, Sberbank reported record-high net profits, and its stellar performance seems to have continued in the first half of 2019.

Sberbank has implemented governance reforms and undergone restructuring in the last five years. In 2016, it announced plans to close up to half of its branches over the coming five years to strengthen its financial position. Sberbank has also been expanding its online services, and it has increased its efficiency by relying on technology rather than employees for making everyday business decisions.

Sberbank’s success might be attributable to its strong—if not dominant—position in the market. The number of licensed credit institutions in Russia has been declining in recent years. The number of credit institutions with the right to operate as banks fell from 830 in 2015 to 468 in May 2019. Sberbank dominates the sector with 92 million active retail clients and 2.4 million corporate clients. As the largest bank in Russia, it has 31.3 percent of the market in terms of assets and 44.7 percent in terms of retail deposits. Sberbank also appears to be the price leader in the market; the rest of the banks tend to follow the interest rates set by Sberbank, according to one of its private competitors.

Although Sberbank was partially privatized in the early 1990s, it still has close ties to the central government. The Central Bank of Russia has held half the shares plus one since 1993 and, today, is the only shareholder that owns more than 5 percent of the capital. The bank is also headed by a former Russian Minister of Economy, who has said there are no government plans for full privatization. Therefore, it is important that Sberbank’s operations follow the principles of competitive neutrality. Its profitability should be merit-based in a truly competitive environment and should not be influenced by any preferential treatment as an SOB. As Sberbank is looking to expand to other markets (it wants to create a financial ecosystem and provide non-banking services, possibly in education, healthcare, cyber security, and e-commerce), it will be important for authorities to ensure that the bank is not able to leverage any undue competitive advantages for dominance in other sectors.

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99 Sberbank “About Us”
101 Winning (2017)
102 Reuters (2019)
103 The Moscow Times (2016a)
104 The Moscow Times (2016b)
105 Central Bank of the Russian Federation (2019), Table 4
106 Sberbank (2019)
107 Winning (2017)
108 Sberbank “Shareholder Structure”
109 Institutional Investor (2016)
110 Winning (2017)
Box 2. The Market Structure of Key Network Sectors

Mobile Telecommunications

By the end of 2017, there were four major operators in the market: MegaFon, MTS, Beeline, and Tele2. MegaFon and MTS had the highest market shares (about 30 percent each), followed by Beeline (23 percent) and Tele2 (16.2 percent) (Figure 33 and Figure 34). This is the result of a period of market consolidation during which MegaFon acquired many regional mobile telecommunications operators. Tele2 Russia, originally related to the Swedish-based Tele2, entered the market in 2001 and had 17 percent of the market share as of August 2019. State-owned Rostelecom holds a 45 percent stake in the company and plans to acquire the remaining shares.111

![Figure 33. Evolution of Mobile Market Shares](image1)

![Figure 34. Evolution of Mobile Market Concentration (Herfindahl-Hirschman Index)](image2)

Source: GSMA Intelligence 2019.

Source: GSMA Intelligence 2018.

Rail transport

The country’s vast railway network, which is one of the largest in the world, is vital to connect eastern and northern territories with the western part of the country. It is mainly used for long-haul cargo traffic but also for transporting passengers. Highways and national roads complement the freight and passenger railway links. The state-owned Russian Railways (RZD) holds a monopoly in specific market segments and accounts for 86.4 percent of freight volume and 95 percent of total passenger travel.113

Air transport

The airline Aeroflot has been an open joint-stock company since 1994, with 51 percent state ownership.114 Together with its branch affiliate Rossiya, Aeroflot was responsible for 50.2 percent of the total revenue passenger kilometers (RPKs) flown by Russian airlines and 43 percent of total passenger traffic in 2017. Aeroflot’s three key competitors—S7 (Siberia) Airlines, Ural Airlines, and Utair—were together responsible for 23 percent of total RPKs and 28 percent of all passengers in the same year.115 The bankruptcy of other major companies in the market (e.g., Transaero in 2015 and VIM Airlines in 2016–17), along with at least five smaller carriers,116 has helped Aeroflot increase its market share. For example, it gained access to commercially attractive routes following the Transaero bankruptcy,117 including fourteen international routes in 2019.118
Gazprom is an SOE that accounts for 64 percent of natural gas production in Russia (Figure 35). The company also has a monopoly on natural gas distribution via pipelines, domestic sales, and exports.\textsuperscript{119}


\textbf{Figure 35. Wholesale Market Share of Natural Gas Producers, 2017 (in %)}

\begin{center}
\includegraphics[width=0.5\textwidth]{figure35.png}
\end{center}

Source: MPlast.\textsuperscript{120}

It is important to ensure a level playing field in markets with heavy government involvement. Competitive neutrality is a principle according to which all enterprises—public or private, domestic or foreign—should face the same set of rules. In an environment of competitive neutrality, the government’s contact, ownership, or involvement in the marketplace, in fact or in law, does not confer an undue competitive advantage to any actual or potential market participant (Box 3).\textsuperscript{121} The effective adoption and application of competitive neutrality is important to lower the risk of anticompetitive behavior and economic distortions due to the participation of SOEs in the economy. SOEs often impose a burden on public finances, especially if political interference reduces their efficiency and drives rent-seeking behavior. Moreover, SOEs that are present in sectors where competition is viable tend to crowd out private investment. Finally, SOEs often enjoy certain privileges, such as access to finance not available to private firms or being exempt from antitrust regulations, that distort market outcomes.

\textsuperscript{111} Kodachigov and Yastrebova (2019)
\textsuperscript{112} The United States Department of Justice considers a market with a Herfindahl–Hirschman Index (HHI) of less than 1,500 to be a competitive marketplace, one with an HHI of 1,500 to 2,500 to be a moderately concentrated marketplace, and one with an HHI of 2,500 or greater to be a highly concentrated marketplace (DoJ 2010, 19).
\textsuperscript{113} See World Bank (2016) for a detailed description of the transport network and its productivity.
\textsuperscript{114} Aeroflot. “Company Profile.”
\textsuperscript{115} Federal Agency of Air Transport of Russian Federation (2019); Vedomosti News (2015)
\textsuperscript{116} Russian Aviator Insider (2019)
\textsuperscript{117} BBC News (2015)
\textsuperscript{119} Mirny (2018)
\textsuperscript{120} Ibid.
\textsuperscript{121} Organisation for Economic Co-operation and Development (2015), 4.
It is important that governments create effective regulatory frameworks to minimize the risks associated with the distortive effect of financial support to SOEs. Beneficiaries, both public and private, that receive state support enjoy comparative advantages over their competitors that are not necessarily associated with their efficiency. The effective control of government support measures is a necessary safeguard to ensure effective competition, free trade, and the efficient management of fiscal resources. In particular, state support measures can create a competitive advantage for SOEs, which can hinder long-term private-sector development. According to a 2014 survey by the Higher School of Economics, the share of SOEs receiving subsidies from the government is 60 percent, compared to 10 percent in the private sector. Investors perceive that the distortive effects of such aid are growing (Figure 37).

Box 3. Elements of an Effective Regulatory Framework based on Effective Competitive Neutrality

According to the OECD, a regulatory framework based on competitive neutrality is one in which (i) “public and private enterprises face the same set of rules” and (ii) “contact with the state does not bring competitive advantage to any market participant.” Competitive neutrality is based on the assumption that competitively neutral markets maintain level playing fields, which allow resources to flow to efficient producers, regardless of whether they are private-owned or state-owned.

The building blocks of competitive neutrality (Figure 36) include: (i) the state playing a subsidiary role to the private sector, i.e., focusing on providing only goods and services that the private sector cannot; (ii) the control of state support measures to SOEs in order to minimize anti-competitive market distortions; and (iii) specific measures to level the playing field between public and private operators, such as implementing regulatory neutrality or requiring SOEs to achieve a commercial rate of return.

Figure 36. Building Blocks of Competitive Neutrality


It is important that governments create effective regulatory frameworks to minimize the risks associated with the distortive effect of financial support to SOEs. Beneficiaries, both public and private, that receive state support enjoy comparative advantages over their competitors that are not necessarily associated with their efficiency. The effective control of government support measures is a necessary safeguard to ensure effective competition, free trade, and the efficient management of fiscal resources. In particular, state support measures can create a competitive advantage for SOEs, which can hinder long-term private-sector development. According to a 2014 survey by the Higher School of Economics, the share of SOEs receiving subsidies from the government is 60 percent, compared to 10 percent in the private sector. Investors perceive that the distortive effects of such aid are growing (Figure 37).

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122 Organisation for Economic Co-operation and Development (2009)

123 See RuFIGE survey, available at https://iims.hse.ru/en/rfige/about It should be noted, however, that this survey question does not identify state support provided in compensation of public service obligations.
The Government of the Russian Federation also heavily participates directly as a buyer. Public procurements amounted to approximately 29 percent of GDP in 2017. In the same year, the Federal Antimonopoly Service (FAS) considered over 89,000 complaints regarding the general government procurement process and 7,600 complaints concerning the procurement process of SOEs. The widespread use of single-source procurement and the concentration of contract awards with a few companies have facilitated anticompetitive conduct.

Box 4. Pro-Competition Tender Design

Contracting authorities play critical roles in ensuring competition in public tenders by: (i) enforcing public procurement rules and (ii) adopting the most appropriate and competitive procurement method, depending on the procurement rules.

Four questions underpin the design of competitive public tenders:

1) How to select the most competitive procurement method?

The level of competition in public procurement is determined by the procurement method. Contracting authorities should, therefore, minimize potential anticompetitive outcomes by (i) gathering information regarding market conditions, (ii) choosing the procurement method that best fits the market, and (iii) publishing the participation notice that announces the public tender. Among procurement methods, open procedures are

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124 According to the Ministry of Finance, the total value of public procurement in Russia was RUB 25.8 trillion in 2017, or 29.0 percent of GDP—a marked increase from 25.0 percent and 35.4 percent of GDP in 2015 and 2016, respectively. The OECD, by contrast, reports general government procurement as a share of GDP at around 10 percent in 2013–14. (No data are available for 2015 and 2016.) The difference arises from the incorporation of procurement volumes of public corporations. Source: FAS (2018).
The absence of a unified procurement framework for both private-owned and state-owned firms has resulted in SOEs often using procurement methods that do not ensure competition. Two main legal

2) How to design the terms of the tender to favor competition?

While drafting tender documents, contracting authorities should take into consideration the principles of equal treatment and non-discrimination of bidders, as well as the best possible conditions for competition. For example, quality requirements and certifications should not be hidden barriers to entry that benefit certain firms, such as local companies. This would be the case, for instance, if authorities were to require companies to present quality certifications issued by local authorities that non-local companies could not obtain. Moreover, eligibility should not be conditional upon bidders having a given legal form, because this would exclude operators that are otherwise capable of offering the required service. Instead, contracting authorities may require a specific legal structure after awarding the contract. Tender documents also should not include reference to types, brands, or technical specifications as eligibility conditions.

Award criteria should be objective and related to the subject matter of the contract. For example, any advantage to the current holder of the contract would lessen the competitive tension between the incumbent and other competitors. It is advisable to avoid: (i) inappropriate weighting, (ii) inadequately reflecting the impact of the proposed price on the budget assigned for the project, and (iii) limits on prices, fees, and other basic characteristics of the contract.

The duration of the contract should reflect the nature of the services, the characteristics of the financing, and the need to periodically open to a competitive process. On the one hand, excessively long terms, even within legal limits, pose entry barriers for new operators that will be unable to enter the market during the life of the contract. On the other hand, overly short durations may not enable investors to achieve attractive returns within the duration of the contract.

3) How to avoid anticompetitive decisions during the tendering process?

The contracting agency can also foster competition during the opening, evaluation, and award of bids by ensuring that all interested parties have equal access to information and an ability to remedy errors, as well as by making sure that all procedures are public and transparent.

4) How to avoid anticompetitive decisions after the tendering process?

Ex-post amendments to a contract affect the competitive character of the initial call for proposals. Anticompetitive effects may be reduced for supervening modifications by (i) clarifying admissible modifications in the tender terms, (ii) claiming liability for defective performance if the contractor is responsible for any deficiencies in the project design, and (iii) avoiding the inclusion of new services or goods not directly attributable to unforeseeable circumstance, among other means. For complementary provisions of services, authorities can increase competition by limiting the application of modifications only to cases in which it is justified and duly reasoned. Moreover, price adjustments need to have an accurate ex-ante estimation of the contractor’s compensation, consider the market price for the goods or services, be determined by specific formulas, and aim to ensure financial viability of the contract. Finally, bidders should be forced to disclose subcontracting arrangements in the tender to be checked by the contracting authority.

Source: EFI Markets and Competition Policy Team, World Bank Group. For further details, see Annex 2.
frameworks govern public procurement in Russia: (i) Federal Law No. 44-FZ, which sets out comparatively transparent and competitive principles for the procurement of public goods, works, and services for federal, state, and municipal authorities;\(^{125}\) and (ii) Federal Law 223-FZ, which determines the procurement policies of state corporations and other SOEs.\(^{126}\) The latter only sets out the general principles of the procurement process and allows SOEs to adopt their own procurement rules, which may not be in line with the pro-competition principles outlined above. For example, SOEs are allowed to use an unlimited variety of procurement methods. As of 2017, the Ministry of Finance estimates that there are about 5,000 different procurement methods. Internal procurement rules by SOEs are approved by the head of the respective procuring entity and do not require legal supervision from the federal government. Since 2017, SOEs no longer need to even disclose their contractors.\(^{127}\)

Reforms over the past few years have attempted to streamline public procurement methods and promote more competitive procedures, although loopholes remain. Since the end of 2017, some government units have been able to force other public entities to follow their “model procurement policies.” Starting in July 2018, Law No. 223-FZ established criteria for certain competitive procurement methods, including tenders, auctions, requests for quotations, and requests for proposals. However, unlike under Law No. 44-FZ, entities may still determine additional methods as long as they comply with the established criteria.\(^{128}\)

The procurement process of SOEs also suffers from limited competitive neutrality. In practice, many of Russia’s SOEs use ad-hoc procurement methods, most of which are not competitive. The lack of standardization and homogenization of procurement rules increases the risk of non-transparent and biased selection and the disqualification of bids. Non-competitive procurement methods were used for 96 percent of all tenders under Law 223-FZ.\(^{129}\) In 2017, Russia ranked in the mid-range of BRICS countries in terms of aligning public procurement regulation with international good practices related to: (i) bid submission and bid opening and (ii) evaluation and award (Figure 38). Even for contracts awarded under Law 44-FZ,\(^{130}\) the Ministry of Finance estimates that 35 percent of all open tenders, equivalent to RUB 2.5 trillion, were cancelled (i.e., all firms were disqualified) and turned into single-source procurements. While the use of open electronic tenders has led to an estimated budget savings of 6.7 percent, the share of e-tenders has still been reduced, and 30 percent of electronic tenders continue to be awarded through single-source procurements.

On average, over 70 percent of public procurement in Russia is carried out under the less transparent procurement framework established by Law 223-FZ (Figure 39). Only 12.7 percent of the total volume of government contracts are awarded to privately owned firms. Most contracts are awarded to SOEs, state unitary enterprises, joint stock companies with government participation, etc..\(^{131}\) Fewer small private

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\(^{125}\) Even under Law No. 44-FZ, competition can be strengthened. Among others, open tendering is not yet consistently the default method of procurement. There is also no restriction in splitting contracts to circumvent thresholds for open tendering, nor a preset timeline from the end of the bid submission to bid opening.

\(^{126}\) There are some exceptions by which some budgetary institutions may also elect to be regulated by 223-FZ provided certain conditions are met. While there is hence a certain fluidity in the definition and application of the two frameworks, broadly speaking, public authorities procure according to 44-FZ and SOEs under 223-FZ.


\(^{128}\) The Law Reviews (2019)

\(^{129}\) The Ministry of Finance identifies 31.3 percent as single-source and 65.4 percent as “other non-competitive methods.”

\(^{130}\) Federal Law No. 44-FZ

suppliers will likely be awarded public contracts in the future because new requirements imposed on bidders have further limited their participation. Effective July 2018, all bidders, including small and medium-sized enterprises (SMEs), have to make a full deposit (i.e., bid security) at the bidding stage for any procurement contract above RUB 1 million (US$15,000). Historically, SMEs have been exempted from part or all of the bid security.133

The lack of competition in public procurement is estimated to generate a fiscal burden equivalent to 1.5 percent to 2.0 percent of the country’s GDP, according to FAS. In 2017, FAS filed 360 bid rigging cases, conducted over 7,800 inspections related to public procurement, and uncovered over 15,000 violations of legal requirements in public tenders.135

Prices in non-competitive single-source tenders are usually higher than in the open market. Over the

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133 In 2017, the rules stipulated that the maximum amount of bid security should not exceed 2 percent of the maximum price of the contract for SMEs. (World Bank 2017, 38).
134 FAS (2018b).
135 These anti-competitive actions by the government in the procurement process included over 4,000 violations while placing information in the single electronic system, and over 1,300 violations in determining requirements of the procurement documentation, thereby limiting participation from additional competitors.
past three years, the accumulated loss due to single-source tenders is estimated to have reached RUB 557 billion—more than the annual expenditures of the federal health budget.\footnote{Abuzarov (2018)}

In the absence of a fully implemented regulatory framework based on competitive neutrality, the heavy presence of SOEs in Russian markets is likely to reduce competition. The enforcement of competitive neutrality is especially needed to prevent SOEs from undermining the market mechanism through which even concentrated markets can yield competitive outcomes. Moreover, the presence of PEPs that can influence policy design and achieve regulatory protection can contribute to weak contestability. Competitive pressure can also be undermined by firms that explicitly or tacitly collude in the market.

2.2.2 Policies to Foster a Level Playing Field

Russia’s productivity growth prospects will depend, among other things, on the country’s ability to remove economic distortions and level the playing field. This requires working simultaneously on the following three fronts: (i) revisiting some principles of the Competition Law of Russia and strengthening the enforcement capacity of the existing regulatory framework, (ii) amending product market regulatory frameworks that may inadvertently reinforce dominance or distort the level playing field and (iii) improving the mechanisms designed to promote competition at the sub-national level.

The Government of the Russian Federation collects data related to market competition and implements its competition policy through a variety of interlinked institutions. Besides the national agency entrusted with enforcing the Competition Law of Russia (FAS), the Analytical Center conducts a number of studies on competition in multiple markets and is involved in the ex-post analysis of FAS interventions. In addition, the government has created the CDS, along with an institutional governance framework, to promote competition in all of Russia’s regions (Figure 40). Additional public bodies and institutions have also been established to enforce the country’s new CDS. For example, inter-sectoral consumer councils focused on natural monopolies have been created in sixty-eight regions, and eleven regions have approved procedures to conduct a public technological and price audit of investments related to natural monopolies.\footnote{On the priority directions to develop competition in the regions of RF, State Council Report, 2018, https://fas.gov.ru/documents/622661}
Competition Law Principles and Competition Law Enforcement

Russia’s competition authority is actively trying to detect and deter anticompetitive practices. Over the last few years, FAS has been prosecuting cartel agreements and unilateral abuses of market dominance through its central and regional offices. It initiated more than 300 cartel investigations in both 2017 and 2018. In 2017, FAS found 329 cartel violations and issued sanctions worth US$32.8 million. A significant share of its investigations and convictions were based on leniency applications, which makes FAS unique compared to other competition authorities in the region. Of 847 cases related to abuse of market dominance opened in 2017, FAS found illegal actions in 516. High-profile cases tackled by FAS in the last few years have involved tech giants including Google, Apple, and Microsoft. In 2018, the courts reversed only 11 percent of cases brought forward by FAS. FAS claims to have won between 80 percent and 88 percent of judicial review procedures in 2017.

However, weaknesses in the existing regulatory framework may hinder the efficient functioning of markets. For example, extensive notification obligations may result in costly merger review processes, burdening not only affected parties but also the competition authority. Moreover, the Competition Law of Russia, especially some of its definitions, may inadvertently limit firms’ pro-competitive behavior, and several areas of the law may not be in line with international best practices or may prove challenging to

140 The 2018 and 2019 Global Competitiveness Report Handbook of Competition Enforcement Agencies reported 685 abuse of dominance investigations opened and 453 cases where companies acted illegally in 2017.
141 FAS (2019)
142 McConnell (2017)
implement. This is the case, for example, with the definition of “unjustifiably high/low prices for financial services” and “competitive prices of financial services,” both of which are based on subjective criteria. Additionally, the notion of “signs of restrictive competition” encompasses a number of market effects that may not be related to anticompetitive practices of market operators. Two specific areas of Russia’s regulatory framework need to be addressed to strengthen antitrust enforcement: (i) the structural definition of dominance and (ii) the treatment of vertical restraints.

The structural definition of dominance in the Competition Law of Russia remains at odds with international best practice. The law defines a company as dominant if its market share is above 50 percent. Even if this presumption might be rebutted by the circumstances of the case, using market shares to define dominance could create incentives for firms to remain below the threshold. For example, firms could avoid making efficient investments that would potentially lead to an increase in market share. Key factors to consider when determining a dominant position include barriers to entry and exit, the financial position of the company to act independently, the durability of market power over a period of time, and the existence of buyer power as a counterbalancing factor.

Moreover, the current treatment of vertical restraints can disincentivize adopting efficient business models and discourage the participation of SMEs. At present, a large share of vertical agreements are prohibited, including exclusive dealing, a practice that can have significant benefits and be an alternative to vertical integration. While the law offers a sort of block exception for some vertical restraints, these conditions remain restrictive nonetheless. As opposed to horizontal agreements, vertical agreements typically entail significant efficiencies as long as none of the parties holds a dominant position. However, if any of the parties holds a significant degree of market power, the anti-competitive effects may outweigh any efficiencies. Authorities, therefore, need to analyze the specific circumstances of each case to evaluate the costs and benefits of vertical agreements.

In this regulatory context, most investigations focus on the potential abuse of dominance. Many developing economies with mature competition agencies focus their investigations on cartel behavior, considering that ‘hard-core cartels’ are among the most egregious violators of competition laws and can cause substantial harm to businesses and consumers. The most comprehensive meta-analysis of

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143 Vertical restraints can reduce free riding downstream and provide incentives for optimal investment into pre-sale services, given that retailers can shift their costs to the upstream firm. (See generally Telser 1960, who argues for the use of resale price maintenance or territorial restrictions as a means to avoid free riding. However, similar effects are attached to quantity forcing devices such as single and multiproduct discounts.) A similar logic underlies moral hazard and hold-up problems. An upstream firm will want retailers to act in its best interest regarding price setting and sales efforts but cannot control for it. A vertical restraint can act as a mechanism to induce such efforts (Telser 1960).

144 European Union (2010)

145 The United States Supreme Court has, in the past decade, held that all intra-brand vertical restraints (those that restrain competition merely within the manufacturer’s brand) are subject to rule of reason rather than per se illegality analysis. This decision reflects the broad consensus among economists that many vertical agreements may be justified by procompetitive considerations and may not harm competition, although some effects-oriented scrutiny remains justified. The EU provides a block exemption regulation for vertical restraints as long as none of the parties has more than a 30 percent market share, and they do not contain certain types of severe restrictions on competition. The EU argues that vertical agreements generally “lead to an improvement in production or distribution and allow consumers a fair share of the resulting benefits.” Another example is Article 3(4) of the Competition Law of India that includes different types of vertical agreements where anticompetitive effects must be proven and are not merely presumed.

146 The International Competition Network defines cartels as agreements among competitors to restrict competition. In most jurisdictions, these agreements are illegal when they have the objective of fixing prices, restricting output, allocating (or dividing up) the market, or rigging bids. These are typically called ‘hard core cartels’ and are considered “the most harmful anticompetitive behavior” (Organisation for Economic Co-operation and Development 2000).
‘overcharge’ estimates that consumers pay, on average, 49 percent to 80 percent more when buying from cartels. Given that cartel behavior is usually considered anticompetitive *per se* and does not require an evaluation of potential effects or efficiency-considerations that could justify the harm to competition, cartel cases are less likely to be subject to a ‘Type 1’ error (i.e., a risk of unduly curtailing a pro-competitive or efficient behavior). By contrast, Russia’s competition authority stands out with its large number of investigations into potential abusive behavior by dominant firms (Figure 41 and Figure 42).

**Aggressively enforcing rules against the abuse of dominance without properly evaluating the effects and efficiency defenses could curtail pro-competitive behavior.** The willingness to curtail the actions of dominant firms may reflect their widespread presence in key markets. Understanding the origin of firms’ ability to exercise market power in markets that are typically contestable may point to potential reforms, such as removing barriers to access or limiting government interventions that reinforce dominance. However, by relying mainly on market share to define dominance, FAS may be punishing firms that have gained market share through purely competitive means.

![Figure 41. Number of Dominance Investigations Opened by Competition Authority per Enforcement Staff, 2018](source)

![Figure 42. Number of Dominance Investigations Resolved by Competition Authority per Enforcement Staff, 2018](source)

**Source:** Global Competitiveness Report.

Until recently, the majority of FAS decisions against anticompetitive behavior concerned the abuse of market power rather than cartels. Over the last three years, FAS has issued between 1,000 and 4,000 resolutions on anticompetitive behavior by private and public entities. While the majority of its cases have traditionally focused on the abuse of dominance and public authorities’ anticompetitive conduct, almost one-third of all its rulings in 2017 targeted agreements among competitors and concerted actions (Figure 43). This could reflect efforts to allocate resources to address the most harmful anticompetitive practices.
Russian competition authorities are also more likely than their peers in other countries to block company mergers. It is important that regulations of mergers not impede the natural process of entry, growth, and exit of businesses in a competitive business environment. To that end, competition authorities often use remedies to enable efficient market consolidation while curbing potential anticompetitive effects. Blocking mergers constitutes a last resource that is only used on limited occasions. FAS, however, has challenged and blocked a large number of mergers deemed capable of restricting competition (e.g., by creating or enhancing a dominant position) (Box 5, Figure 44, and Figure 45).\textsuperscript{147}

\textsuperscript{147} Competition authorities can impose behavior or structural remedies such as the partial divestiture of certain brands, to address the most serious risks that mergers pose to the competitive process without entirely blocking them, as they may be efficiency-enhancing and pro-competitive in other product groups or market segments.
Box 5. Examples of Mergers Blocked by FAS

RAIL INVEST/TRANSKAT

On January 14, 2017, FAS decided against the proposed acquisition by Rail Invest of copper producer TRANSKAT because of the unreliability of the data provided by the notifying party. FAS ruled that the information provided by the parties did not contain information about persons belonging to the same group of companies as the applicant or operating in the same product market as the target company.

Source: FAS (2017a)

Invest-Krovlya LLC/ ZNOIM JSC

On May 16, 2017, FAS ruled against the acquisition by Invest Krovlya LLC of Znoim JC—a producer of mineral insulation materials. It found that the proposed transaction would significantly increase Invest Krovlya’s market share for mineral rockwool to above 50 percent in certain federal districts. This, according to FAS, would create a dominant position and would lead to Invest Krovlya being able to affect the circulation of goods in the commodity market, restricting competition and infringing on the interests of third parties.

Source: FAS (2017b)

Taimyr Airlines/Nordavia Airline

In 2012, FAS blocked Norilsk-based Taimyr Airlines from acquiring a 47.8 percent stake in Nordavia Airline. It concluded that the deal could restrict competition and give Taimyr Airlines a dominant position on several regional routes, including Arkhangelsk-Naryan-Mar and Murmansk-Arkhangelsk. FAS also indicated that a further integration of airport and airline businesses could also restrict competition.

Source: FAS (2012); Global Competition Review (2017)
While ex-post assessments of FAS’ work are at an incipient stage, they have not been able to show a transformational impact. In a pilot exercise, the Analytical Center analyzed the effects of three of FAS’ decisions on the abuse of dominance: (i) a bus-station ticket surcharge (where a local bus terminal and station monopoly charged a fee not foreseen in the applicable transport regulation); (ii) an unreasonable high price for liquified gas in the Khanty-Mansiysk District; and (iii) a monopoly leading to high prices for domestic gasoline in the Lultinsky District. The estimated total savings for consumers as a result of these decisions was estimated at a relatively modest RUB 3.5 million (around US$53,000).

Nevertheless, FAS has successfully intervened and promoted competition through advocacy in several sectors. As the authority in charge of not only antitrust but also tariff regulation and public procurement supervision, FAS has intervened in numerous different markets to protect competition. For example, it promoted railway reform to allow for more private-sector participation; lowered roaming tariffs, inter-operator rates, and subscription tariffs in international telephony (Box 6); and supported commodity exchanges in the oil and gas sector. For its advocacy in the pharmaceutical sector, it recently won the Global Advocacy Contest hosted by the World Bank Group and International Competition Network.

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FAS conducted an advocacy initiative in 2017 to map and tackle restrictive regulations and anticompetitive behavior regarding roaming services in Russia. Based on its findings, FAS engaged with both public and private stakeholders to (i) promote adequate regulation of national roaming charges; and (ii) dissuade firms from abusing their dominant positions by charging subscribers from different regions roaming fees, including notifying companies about potential illegal conduct or even initiating enforcement proceedings. As a result, companies voluntarily changed their national roaming practices and dropped prices dramatically: between 2017 and 2018, fees for SMS were reduced by up to 2.5 times, for voice services up to 5 times, and for internet access up to 10 times. In December 2018, authorities adopted Federal Law № 527-FZ, which amended the Federal Law on Communications and incorporated key FAS recommendations.


FAS is currently preparing to update its competition legislation to address new challenges arising from the digital economy, although draft reforms raise concerns. FAS’ fifth anti-monopoly package contains two reform bills: (i) On Making Changes in the Federal Law on Protection of Competition and (ii) On Making Changes in the Code of Administrative Offences of the Russian Federation. These bills introduce new concepts, sanctions, and procedures aimed at addressing particular challenges to competition arising from new actors and business models in the digital economy, such as digital platforms. The proposed reforms incorporate some of the lessons FAS has learned from its recent cases involving the digital economy. However, they include narrow definitions of digital platforms and dominance, which may derail government efforts to support the development of the national digital economy. Moreover, it is unclear what market effects potential sanctions included in the package will have.149

Product Market Regulatory Frameworks

The regulatory framework in network sectors is still more restrictive than in OECD countries (Figure 46). For example, electricity generation is not vertically separated from electricity transmission and distribution, which can put companies focused only on electricity generation at a disadvantage compared to incumbents. The Government of the Russian Federation is liable for losses made by the state-owned railway company, distorting the playing field for market entrants. The country does not have any regional open skies agreements. In road transport, incumbent market players have been involved in strengthening or enforcing entry regulations. While Russia has taken steps to remove administrative barriers to entry and competition (e.g., implementing one-stop shops and reducing licensing requirements), regulatory weaknesses remain. One example is the lack of a ‘silence-is-consent’ rule that would ensure low-risk administrative procedures are automatically approved if the government fails to respond to a firm’s request on time.

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149 The draft federal law on amendments to the Code on Administrative offences proposes to restrict access to information systems and/or computer programs as a sanction for anticompetitive behavior.
Restrictive regulations in network sectors are limiting market entry, facilitating anticompetitive behavior, and tilting the playing field. There are barriers to entry in Russia’s electricity, gas, transport, and telecommunications sectors (Box 7). For instance, the country’s state-owned telecommunications company holds exclusive rights to service specific public client groups. In the air transport sector, bilateral air services agreements lack several internationally recognized freedoms, and domestic carrier status could be assigned under more competitive procedures. In oil and gas, the use of subsoil is restricted to foreign investors, and Rosneft, Gazprom, and Gazpromneft continue to have advantages over private firms in terms of access to attractive oil fields, regulatory and tax concessions, and the arbitrary administration of regulatory enforcement.

Box 7. Examples of Rules That Limit Entry or Distort the Playing Field in Network Sectors

Telecommunications

- In 2017, Rosstelecom was granted the exclusive right to supply Internet and fixed telephone services to public healthcare facilities across Russia.
- Since July 2018, telecommunications providers must store copies of all conversations, messages, and correspondences with clients in the last six months so they can be accessed by law enforcement agencies upon request. Moreover, 30 days of all clients’ Internet traffic history must be stored as of October 1, 2018. These requirements necessitated a considerable increase in the capacity of data centers and mandated operators to install designated equipment and software for information storage.

Air Transport

- Aeroflot charges international airlines for using trans-Siberian routes, which amount to between US$200 million and US$500 million per year. There is no public information on whether these payments only compensate loss-making service provision under public-service obligations on these
routes by Aeroflot, or whether they provide the airline with an advantage relative to competitors. A new airline may have no fewer than eight aircrafts in its fleet at the time of its launch, and it is not allowed to operate international flights for the first two years of operation.

Oil and Gas

- Federal legislation (i.e., the Subsoil law and the 2018 federal law “On the Procedure for Making Foreign Investments in Business Entities of Strategic Importance for the National Defense and Security of the Russian Federation”) effectively restrict the use of open tenders and foreign participation in relation to so-called “oil and gas deposits of federal significance.” For a deposit to be considered of federal significance, it must: (a) contain recoverable oil reserves of no less than 70 million tons; (b) contain gas reserves of no less than 50 billion cubic meters; or (c) require the use of land plots designated for defense or security purposes.
- Federal legislation (i.e., the Subsoil law and the 2018 federal law “On the Procedure for Making Foreign Investments in Business Entities of Strategic Importance for the National Defense and Security of the Russian Federation”) effectively restrict the use of open tenders and foreign participation in relation to so-called “oil and gas deposits of federal significance.” For a deposit to be considered of federal significance, it must: (a) contain recoverable oil reserves of no less than 70 million tons; (b) contain gas reserves of no less than 50 billion cubic meters; or (c) require the use of land plots designated for defense or security purposes.
- There are also oil and gas deposits of federal significance located in, or extending to, the continental shelf. The exploration and development of these deposits are reserved for Russian legal entities in which the Government of the Russian Federation holds more than 50 percent of the shareholding capital and have more than five years of experience in subsoil use operations on the continental shelf. This effectively limits offshore subsoil use to only Gazprom and Rosneft.


Russia’s services market regulations are also highly restrictive, especially in rail transport and logistics. According to the Services Trade Restrictiveness Index (STRI), the country’s regulations in rail freight transport services, logistics cargo-handling, and logistics storage and warehouse services are highly restrictive, mainly due to limits on foreign entry, barriers to competition, and weak regulatory transparency (Figure 47). Russian Railways is the sole manager of the country’s railway infrastructure and provider of locomotive traction services. Foreign companies, which can operate the rolling stock, depend on Russian Railways to provide locomotives. Likewise, logistics cargo handling and logistics storage and warehouse services are restricted to a statutory monopoly for airports, ports, roads, and rail terminals. Additionally, a public policy issued in 2017 made certain subsidies for the acquisition of rail transport equipment unavailable to foreign entities.

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151 Borisov (2018)

152 STRI indices are calculated on the basis of the STRI regulatory database, which contains information on regulation for the thirty-six members OECD and Brazil, China, Colombia, Costa Rica, India, Indonesia, Malaysia, Russia, and South Africa. The STRI database record measures on an MFN basis. Preferential trade agreements are not taken into account. Air transport and road freight cover only commercial establishment (with accompanying movement of people).
Despite efforts by national authorities to promote competition, concerns remain about the lack of sub-national commitment to the competition agenda. For example, some regions deliberately create discriminatory restrictions for entrepreneurs or goods from other regions. This distorts competition and creates artificial preferential conditions for local firms, which jeopardizes the efficient allocation of resources.\textsuperscript{153}

In 2013, FAS developed a CDS to encourage regions to promote a pro-competitive business environment. Under the CDS framework, a list of markets was targeted to promote contestability, including telecommunications, medical services, social services, housing and utilities, and passenger and land transportation. To encourage regional accountability, the framework presented a series of market indicators to help authorities measure the performance of each region in reaching pro-competitive outcomes. Based on its socio-economic conditions, each region defined a baseline, target, and action plan, which included a description of the activities the region would implement to achieve the agreed targets.

\footnotesize{\textsuperscript{153} Russian News Agency TASS (2018). President Putin said that he “agreed that in order to support business local administrations can and should use regional mechanisms. However, it is one thing when benefits are equally accessible to everyone, and it is another, when they deliberately create discriminatory restrictions for entrepreneurs from other regions, or ban import of goods.”}
The development of Russia’s CDS constituted the first step in making sub-national governments focus on the country’s competition agenda. Currently, the CDS functions mainly as a coordination, capacity-building, and data collection mechanism for multiple variables that may serve as rough proxies for competition intensity. However, a preliminary assessment shows that the existing framework often fall short of properly capturing market contestability, raising questions about its ability to effectively foster competition. Nevertheless, the CDS and its implementation can potentially inform sub-national governments about policy actions that can address binding constraints on competition in key markets or sectors.

The success in using the CDS to improve regional competition has, however, been limited (Figure 48). The country’s low success rates in reaching targets related to the CDS have raised questions about whether the CDS approach is the right framework to foster competition in the country’s regions. Concerns regarding the existing framework include (i) the rationale for the selection of indicators to track competition performance; (ii) the rationale to select indicators where several regions have already achieved envisioned targets; (iii) lack of a common methodology that standardizes the approach regions use to measure each indicator; (iv) lack of compliance with specific, measurable, achievable, relevant, and time-based goals to construct key performance indicators; (v) difficulties in collecting the data needed to measure each indicator; and (vi) weaknesses in the approach to create comparable rankings across regions.

Moreover, a recent reform of the CDS perpetuates the conceptual shortcomings in the original design. As part of the implementation of the National Competition Plan, the government has updated the legal framework for the CDS. The updated framework provides a list of specific indicators to be met by 2022 in a pre-determined set of forty-one product markets. Out of these, local government units must choose thirty-three markets as targets for their individual roadmaps. As in the previous framework, however, the indicators do not accurately reflect business realities and cover public and social services sectors in which competition is less of a priority. Moreover, local authorities also often do not appear to have the regulatory mandate or guidance needed to achieve their targets local authorities are not provided with guidance on what they potentially could do to achieve their targets.

2.2.3 Distortions and Welfare Effects

Economic distortions, like lack of product market competition, may have non-trivial welfare effects—higher prices, lower quality, and less variety—than in a frictionless economy. Intersectoral linkages could amplify these effects, when competition is absent in upstream markets. Further, these distortions could disproportionately affect the poor when they are present in goods or services that represent a large proportion of the consumption basket of low-income families.

Market Outcomes in Sectors Affected by Restrictive Government Regulation and Intervention

Several of Russia’s markets do not supply competitive price-quality offers relative to comparable markets in other countries. According to Rosstat and FAS,\(^{155}\) for example, domestic retail petroleum prices do not move along with global prices. There is evidence that Russia’s national oil companies have tried to compensate their export losses by raising domestic prices.\(^{156}\) The state-owned Russian Railways is reportedly failing to meet market demands for railway services, and Aeroflot was forced to increase the average price of domestic and international flights by 32 percent and 66.8 percent, respectively, between 2011 and 2016. Data from 2017 suggest that Russian travelers purchase plane tickets for popular international destinations at almost double the price compared to travelers from neighboring Ukraine and Baltic countries.\(^{157}\) According to one estimate, only 5 percent of Russia’s population travel by air.\(^{158}\) The country’s air freight market is also negligible, and air connectivity is particularly low in eastern regions, even though the government subsidizes flights in remote regions.\(^{159}\)

Higher prices may be the result of anticompetitive conduct or distorted market dynamics. For example, many of Russia’s smaller market players in key sectors, such as telecommunication and air transport, have exited markets or merged with larger firms, increasing market concentration. According to data from the Global System for Mobile Communications Association (GSMA) and the Nomura Research Institute (NRI), the number of telecommunications companies operating in the country’s sizeable market fell from twelve in 2000 to six in 2017. The share of firms that compete with the largest firms in the market declined from 41 percent to 1.1 percent in the same period. In the oil and gas sector, SOEs increased their share of the oil production market from 20 percent in the early 2000s to 56 percent in 2013, with Rosneft accounting for 48 percent of total oil production. Moreover, the share of other airlines (except the top five) in Russia’s aviation market declined from 39 percent in 2008 to 12 percent in 2012, according to the Federal Aviation Transport Agency.\(^{160}\) The few airlines that obtained commercial air operator certificates in recent years were all subsidiaries of Aeroflot, Pobeda, or Azimuth Airlines (which leases Russian-built aircrafts through the State Transport Leasing Company).\(^{161}\) In terms of quality, another example involves

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\(^{155}\) FAS (2018c)
\(^{156}\) FAS (2018c)
\(^{157}\) Eremina (2017)
\(^{158}\) Analytical Center for the Government of the Russian Federation (2013)
\(^{159}\) World Bank (2017)
\(^{160}\) Analytical Center for the Government of the Russian Federation (2013)
\(^{161}\) In 2018, Rusavia claimed that only 2 certificates had been granted over the “last several years” (http://www.rusaviaindsider.com/insight-facing-challenges-russias-changing-civil-aviation-regulations/). According to Lukyanov et al. (2018, Table 1), in 2015 and 2016, authorities issued 4 and 2 certificates, respectively.
mobile telecommunication. While the country’s mobile telecommunications prices are lower compared to OECD and world averages, the speed of data transmission is comparatively slower.

**Box 8. Market Outcomes in Mobile Telecommunications and Air Transport**

**Mobile Telecommunications**

While Russia’s telecommunications prices are lower than OECD and world averages (Figure 49), the speed of data transmission is comparatively slower which could be associated with heavy traffic control (Figure 50). The country ranked 93rd out of 140 countries on the Speedtest Global Index in October 2019 and significantly lower than the average of OECD and even some neighboring countries.

**Figure 49. Mobile Broadband Effective Price per Minute, 2017 (RUB)**

**Figure 50. Mobile Broadband Speed, 2017 (Download, Mb/s)**

*Source: GSMA Intelligence 2017.*
Air Transport

According to Rosstat and FAS, the average price for domestic and international flights increased by 32 percent and 66.8 percent, respectively, between 2011 and 2016, which was significantly above inflation (Figure 51). One online search engine used airline data from September and October 2017 to calculate that Russian travelers buy airline tickets to popular international destinations at almost double the price compared to travelers from neighboring Ukraine and Baltic countries. Also, air fares on domestic routes of comparable distance are higher for routes where there is less competition. For example, ticket prices for routes from/to Moscow operated by three or fewer companies are often at least twice as expensive compared to routes with five or more companies, according to the Analytical Center (Competition in the Aviation Market 2013) (Figure 52).

![Figure 51. Comparable Average Prices to Popular International Destinations, 2017 (RUB Thousands)](image)

![Figure 52. Average Prices for Domestic Airlines vs. Companies in the Market, Oct 2013](image)

Source: Russian Media Survey (gazeta.ru).

Note: Booking Week in Advance.

Source: Analytical Center.

Simulated Welfare Gains from Pro-competition Reforms

A recent World Bank study, based on the use of the WELCOME (Welfare and Competition) TOOL, quantifies the welfare gains from pro-competitive reforms in specific markets, including air travel, telecommunication services, food and clothing. Box 9 presents details of the assumptions made for

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162 Eremina (2017)
164 Eremina (2017)
165 This is a statistical software interface that enables the estimation of distributional effects of changes in market competition through the price mechanism. WELCOM tool renders estimates of welfare distribution impacts of changes in market structure from three specific types of non-competitive markets: monopoly, oligopoly and partial collusive oligopoly.
166 The estimates of this study have limitations because of the characteristics of the data used and the nature of the exercise. Despite its well-known quality, the RLMS is only a national survey and it has no regional representativeness and, although quite
the counterfactual exercises. In the case of air travel, the study finds that moving from a partial collusion leader firm to a fully competitive market would render gains of RUB 42 for households in the poorest quintile of the distribution up to gains of RUB 164 for households at the top of the distribution. The gains in welfare are likely to come from the expansion of the use of services as opposed to price reductions. Counterfactual exercises for telecommunication services-mobile phones and internet services-show that moving from an oligopoly to full competition would render small welfare gains (due to very low price-elasticity of demand and low share of household consumption expenditures). These are monetary gains of up to RUB 92 for the bottom quintile households in the bottom quintile and RUB 213 for those at the top quintile. Together, these two sectors could theoretically lead to a reduction of little more than half a percentage points in the poverty rate and a negligible 0.2 Gini points.

In the case of food and clothing retail, estimated monetary gains can go up to RUB 111 (RUB 335) for households in the first quintile of the distribution and up to RUB 889 (RUB 1,114) in the fifth quintile for the case of clothing (food) retail. These changes would lead to a reduction of up to a half percentage point (due to clothing retail) and 1.4 percentage point (due to food retailing) in the national poverty rate. Again, inequality, as measured by the Gini coefficient, would change in only 0.8 Gini points.

Box 9. Assumptions Underlying the Simulation of Impact of Pro-Competition Shocks on Welfare Distribution in Russia

Freije-Rodriguez, Mungai, and Matytsin (2019) simulate the distributive effects of a competition-induced price decline due to changes in the market structure of three markets: air transport, mobile telecommunications, and retail trade. They use stylized models of competition to estimate how much the price could decline if pro-competition reforms were implemented in each sector. For example, the simulation assumes that the air transport sector is characterized by a Stackelberg (1934) market structure, with a “leader” firm that has 30 percent of the market and a series of smaller, “follower” firms, which face a residual demand. It then simulates consumers’ reaction to a shock that changes the market structure from the leader-follower scenario to a perfectly competitive one, where prices equal marginal costs. The following table summarizes the assumptions and main results of the simulation:

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theory, is not as granular as would be desired to identify narrowly defined consumption items. Finally, these results are upper bounds defined from theoretical principles. However, the study gives clear orientation of orders of magnitude and areas of focus toward pro-poor, pro-competition policy reforms.
<table>
<thead>
<tr>
<th>Sector</th>
<th>Share of total expenditure</th>
<th>Market model</th>
<th>Price elasticity</th>
<th>Absolute changes in poverty rate and Gini Index</th>
</tr>
</thead>
</table>
| Retail (food)      | 25                         | Leader firm with 10 percent of the market and a series of smaller, “follower” firms | -0.82            | Poverty rate: -1.4  
Gini Index: -0.7 |
| Retail (clothing)  | 15                         |                                                                             | -0.87            | Poverty rate: -0.5  
Gini Index: -0.1 |
| Transport          | 1.9                        | Air transport: leader firm with 30 percent of the market and a series of smaller, “follower” firms | Air transport: -0.9 | Poverty rate: -0.1  
Gini index: 0 |
| Mobile telephony   | 1.6                        | 3-firm oligopoly                                                              | -0.5             | Poverty rate: -0.3  
Gini Index: -0.1 |
| Internet services  | 0.9                        |                                                                             |                  | Poverty rate: -0.1  
Gini Index: -0.1 |

There are at least three caveats to this analysis: The simulation assumes a constant elasticity of demand across all household types independently of their income. It further captures welfare changes only for those currently purchasing the good. It does not consider that additional households may start consuming the good as a result of the price change. In addition, the analysis only considers changes in price. Competition may enhance quality and the ensuing welfare benefits are not captured.

3. Upgrading Firm Capabilities to Boost Firm Productivity

As we discussed at the beginning of this report, increases in productivity growth rates can be obtained through three different channels: (i) removing economic distortions to facilitate the efficient allocation of resources across firms, (ii) fostering efficient entry-exit dynamics, and (iii) upgrading firm capabilities.

The previous chapters discussed the role of the first two channels. Therefore, it is the objective of this chapter to talk about upgrading of firms’ capabilities. The analysis will focus, primarily, on two topics: the role of managerial upgrading and the importance of strengthening linkages to MNCs for product quality upgrading.

3.1 Management Practices in Russia: Drivers and Consequences for Firm Performance

Why Does Management Matter?

The persistence of productivity differences between firms within the same industry is striking and puzzling. For example, labor productivity for plants at the 90th percentile, within narrowly defined four-digit United States manufacturing industries, is four times as high as plants at the 10th percentile. Likewise, the difference in TFP is twice as high, when controlling for other factors.\(^{167}\) These differences persist over time and are robust to controlling for plant-specific prices in homogeneous goods industries. Such TFP heterogeneity is not an artifact of the United States establishment data but has also been documented in

\(^{167}\) Syverson (2011)
other countries. As an example, the average 90th to 10th percentile TFP ratio is over 5:1 in China and India.\textsuperscript{168}

\textbf{Varying rates of adoption of managerial practices are one of the reasons behind these differences.} Previous work explained these productivity differences by higher quality labor and capital, differential investment in information technology and research and development (R&D), learning by doing, firm structure, productivity spillovers, regulatory behavior, and differences in competitive regime.\textsuperscript{169} Recently, a cross-country study provided an alternative explanation: productivity differences reflect variations in management practices.\textsuperscript{170} We focus on management for three reasons: First, management practices are strongly correlated with firm productivity in several countries (e.g., the United States, Croatia, and Pakistan), and is robust to controlling for many other factors associated with productivity (e.g., exports and innovation). Second, while a frontier topic globally, there exists little evidence on managerial practices of firms in Russia and the relationship between management and productivity. Three, given the strong association with firm performance, it remains a challenge to understand the drivers of management and why these practices do not diffuse more readily. By focusing on management practices, we hope that our results will help shape a broader operational program in Russia on firm interventions to improve management. Although managerial and organizational practices are critical to firm outcomes, these practices are not well measured in administrative data on firms or the commercial data on companies’ accounts. Over the last decade, Bloom and co-authors have attempted to fill this gap in data by collecting comprehensive information on management practices in several countries (see Box 10).\textsuperscript{171}

\textbf{To quantify the importance of management for the performance of firms in Russia, we developed a survey on firm capabilities, including management practices.} This chapter benchmarks management in Russia against other countries, quantifies the link between management capabilities and firm performance (e.g., sales per employees and employment growth), and summarizes the drivers of better management practices, based on a survey of nearly a thousand manufacturing firms in five regions: Central (excluding Moscow oblast and Moscow city), Northwestern (excluding Leningrad oblast and Saint Petersburg city), Southern, Volga, and Ural.\textsuperscript{172}

\textsuperscript{168} Hsieh and Klenow (2009)
\textsuperscript{169} Syverson (2011)
\textsuperscript{170} See Bloom, Sadun, and Van Reenan (2017). In addition, Bloom, Brynjolfsson, et al. (2019) suggest that management practices account for about one-fifth of the dispersion in TFP across firms within countries, and nearly 30 percent of the differences across countries. Thus, firm- and sector-specific factors are at least as important as the general business environment in shaping managerial performance.
\textsuperscript{171} See, for example, Bloom, Brynjolfsson, et al. (2019).
\textsuperscript{172} During consultations it became clear that the authorities were more interested in learning about manufacturing firms that are less exposed to structured management practices. Hence it was agreed to have the survey on management practices for SMEs located in the specified federal districts, and not including Moscow city and Oblast as well as Saint Petersburg. Grover and Torre (2019) find that size, age and having exported in the prior year is positively and significantly associated with the probability of responding to the survey. Thus, based on these statistics one may get an impression that management score in Russia is overstated. However, it should also be remembered that larger cities like Moscow and St. Petersburg are not covered, which are more likely to have firms exposed to structured management practices. Finally, given that Ruslana database, which is the sample frame for the management survey, is not a representative sample, it is difficult to establish the direction and extent of the bias.
Box 10. Measuring Management capabilities

Bloom and co-authors have significantly advanced the empirical foundations for measuring management practices across firms and countries. Management quality is measured using a standard survey, the Management and Organizational Practices Survey (MOPS) that uses a multiple choice based evaluation tool that defines 16 key management practices in three broad areas: (i) performance monitoring—collecting and analyzing information, on daily activities of the firm for continuous improvement, (ii) target setting—using and stretching short- and long-run targets, (iii) performance incentives—rewarding high-performing employees, and retraining or moving underperformers. For example, the performance monitoring section of the survey asked, “How frequently were performance indicators tracked at the establishment?” with response options ranging from “never” to “hourly or more frequently.” The target setting section of the survey delves into the design, integration and realism of production targets. More specifically, the survey asked, “What was the time-frame of production targets?”, with answers ranging from “no production targets” to “combination of short-term and long-term production targets.” Finally, the incentives section of MOPS examines the non-managerial and managerial bonus, promotion and reassignment/dismissal practices. For example, the survey asked, “How were managers promoted at the establishment?”, with answers ranging from “mainly on factors other than performance and ability (e.g. tenure or family connections)” to “solely on performance and ability”).

Firm responses to questions on managerial practices are aggregated into a single management score in two steps. First, the responses to each of the management practice question are normalized on a 0–1 scale: the response which is associated with the most structured management practice is normalized to 1, and the one associated with the least structured is normalized to zero. More structured management practices are those that are more specific, formal, frequent or explicit. Second, the management score is calculated as the unweighted average of the normalized responses. Thus, the final score on a firm’s management practice is scaled from 0 to 1. Such surveys have been conducted in the United States, the United Kingdom, Canada, China, Japan, Mexico, Pakistan and Russia.

Management Capabilities: How does Russia Compare with Other Countries?

Similar to the findings in other countries such as the United States, Croatia, Mexico and Pakistan, management practices across Russian firms are very heterogeneous. Of the 978 manufacturing firms surveyed in the five regions in Russia, 947 of them have more than 10 non-missing responses that allows for computing a more precise management score. The average management score for manufacturing

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173 This approach has been used in Bloom, Brynjolfsson, et al. (2019).
175 See Bloom, Brynjolfsson, et al. (2019) for the United States; Bloom, Iacovone, et al. (2019) for Mexico; Grover, Iacovone, and Chakraborty (2019) for Croatia; and Lemos et al. (2016) for Pakistan. Although Mexico and Pakistan may not be the best comparator countries for Russia, comparisons with other transition countries can be drawn from earlier work by Bloom, Schweiger, and Van Reenan (2011). The European Bank for Reconstruction and Development (EBRD) and the World Bank conducted a survey on Management, Organization and Innovation (similar to MOPS) for 10 transition economies, including Russia. The results of the face-to-face interviews conducted with 1,874 factory managers were benchmarked against Germany and India. This data suggests that on an average management practices in Russia is similar to that of India, a developing country whose GDP per capita was slightly higher than Uzbekistan. Management in Russia is worse than most transition countries including Belarus, Ukraine, Serbia, Bulgaria, Lithuania, Poland and the benchmark economy, Germany. Only Kazakhstan and Uzbekistan score worse than Russia on management score (Bloom, Schweiger, and Van Reenan 2011).
176 We consistently use this set of 947 firms for the analysis henceforth.

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firms in the surveyed regions in 2017 was 0.432—that is, on an average, the surveyed firms were 43 percent of the way to the frontier of structured management practices (Figure 53). The spread is large, however. Looking at the extreme ends of the distribution in Figure 53, it is clear that a large share of the surveyed firms are poorly managed. Only 3.5 percent of firms have management scores over 0.75 while a similar share have a management score of 0. Nearly 60 percent of the surveyed firms adopted less than 50 percent of overall structured management practices. A comparison with Croatia, which has a higher overall management score (0.54), shows that Russian firms’ performance is held back primarily by a left tail of poorly-managed firms (Figure 53).177

![Figure 53. There is large heterogeneity in adoption of structured management practices](image)

Source: Survey of Management Practices in Russia (Grover and Torre, 2019) and Croatia (Grover, Iacovone, and Chakraborty 2019).

Russian firms are particularly behind in using performance monitoring systems. Figure 54 shows that an average Russian manufacturing firm in the surveyed regions is closer to its counterpart in Mexico (average score 0.42) and Pakistan (average score 0.44) but farther from structured management practices adopted in Croatia (0.542) and in United States (average score, 0.61).178 Among the components of management scores, an average surveyed Russian firm scores much lower on the structured management practices related to data driven performance monitoring relative to Croatia, Mexico, Pakistan and the United States. By comparison, adoption of structured management practices on incentives and targets for human resources and target setting for an average surveyed firm is higher in Russia than in Mexico.179

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177 For comparison, in the United States, 18 percent of establishments have scores higher than 0.75, and barely a quarter have scores lower than 0.50.

178 It is worth recalling, though, that although most of the lagging regions in Russia are not surveyed, nonetheless, bigger cities and agglomerations such as Moscow, Moscow Oblast, Saint Petersburg and Leningrad Oblast are covered by the survey.

179 This interesting finding is explored more in Annex table A.2, where we compare the average score of firms surveyed in Russia in each of the sixteen questions on management practices to the scores of the United States firms as detailed in Bloom, Brynjolfsson, et al. (2019).
How Much Does Management Matter for Firm Performance in Russia?

Adoption of structured management practices are associated with higher of labor productivity and TFP. This is shown in Figure 55, which presents unconditional correlations of firm performance measures by each decile of management scores. The figure suggests that, relative to other firms, those in the higher deciles (e.g., 9th and 10th deciles) of the management score distribution are more likely to be found in the top quartile of sales per worker and TFP. Moving from the 1st to the 10th decile in management score (from 0.152 to 0.675) is associated with an 87 percent increase in sales per worker.182 The analogous associated increase in value added per worker is close to 30 percent, while in TFP it is about 13.5 percent. Overall,

180 Although Lemos et al. (2016) compare the results obtained from Pakistan with those from the United States, the definition of data driven performance monitoring includes question 8 in Bloom, Brynjolfsson, et al. (2019), while this question is excluded from the incentives and targets sub-index. Following Lemos et al. (2016), we compare the results from Russia with those from the United States as well.

181 Bloom, Brynjolfsson, et al. (2019) exploit the panel variability in their sample of United States firms and show that the quality of recall information correlates with the survey respondent’s tenure in the company. In our work, when restricting the analysis to surveyed firms with respondents working in the firm in both 2012 and 2017, we find that the change in the average management score is 0.006. This further confirms the lack of change in management practices among surveyed firms during this period.

182 The associated increase in TFP is small (12 percent) because overall, TFP varies much less across firms than sales per worker (see Table 2). The 90-10 ratio in TFP is 2.53 whilst in sales per worker it is 22.67.
the figure illustrates the strong positive correlation between management practices and firm performance.

**Figure 55. Higher deciles of management score have larger shares of better performing firms**

![Firm performance and management score](image)

*Note:* This figure plots the share of firms in the top quartile of sales per worker (left panel) and in the top quartile of the TFP index (right panel) by decile of the management score.

In order to systematically test this positive relationship between management capabilities and firm performance, we start from a standard production function\(^{183}\):

\[
Y_i = A_i K_i^\alpha L_i^\beta I_i^\gamma e^{\delta M_i + \mu X_i + \sigma}
\]

Where \(Y\) is output (or firm’s total sales), \(A_i\) is TFP (excluding management practices), \(K_i\) denotes the firm’s capital stock (in our case, its fixed assets), \(L_i\) is employment, \(I_i\) are intermediate inputs, \(X_i\) is a vector of additional factors such as the employees’ education, and \(M_i\) is the management score.

Dividing by employment and taking logs we obtain the following equation that can be estimated with our dataset:

\[
\log \left( \frac{Y_i}{L_i} \right) = \alpha \log \left( \frac{K_i}{L_i} \right) + \gamma \log \left( \frac{I_i}{L_i} \right) + (\alpha + \beta + \gamma - 1)L_i + \delta M_i + \mu X_i + f_s + \theta_d + u_i
\]

Where we have substituted \(A_i\) by a set of sector (NACE\(^{184}\) 2-digit) fixed effects \(f_s\) and district fixed effects \(\theta_d\), and a stochastic residual \(u_i\). Standard errors are clustered by the broad sector-region at which our

\(^{183}\) This approach has been used in Bloom, Brynjolfsson, et al. (2019).

\(^{184}\) NACE (for the French “nomenclature statistique des activités économiques dans la Communauté européenne”), is the standard industry classification system in the European Union.
sample was stratified. The estimation output for ordinary least squares (OLS) regression is presented in columns (1) to (3) of Table 3, where management score is presented as a z-score.

The results in Table 3 suggest that management capabilities are positively and significantly associated with firm performance, whether measured as gross sales per worker, TFP, value added per worker or employment growth. When looking at unconditional correlations (columns 1, 5, 9 and 13), a one standard deviation increase in management score is associated with a 0.327 increase in log sales per employee, a 0.051 increase in log TFP, a 0.114 increase in log value added per employee, and a 0.069 increase in log employment growth. Said differently, if the management practices of an average Russian firm improved by a magnitude similar to that experienced in a recent pilot by World Bank and Stanford researchers in India (i.e., by about 38 percentage points), sales per employee would increase by 68 percent, and productivity (measured as value added per worker) would increase by 22 percent.\(^{185}\) For ease of representation, we present results from unconditional estimations in Figure 56.

These estimation results are conditional correlations that are consistent with the management as technology model, but they are not to be taken as causal. However, the randomized controlled trial (RCT) evidence in Indian textile firms showed that increasing World Management Survey-style management scores by one standard deviation in management caused a 10 percent increase in TFP.\(^{186}\) This estimate is consistent with the increases in value added per worker for Russia in column (9) of Table 3. Other well identified estimates of the causal impact of management practices include the RCT evidence from Mexico\(^{187}\) and the management assistance natural experiment from the Marshall plan that allowed managers of Italian firms to learn management practices from the United States.\(^{188}\)

Another interesting finding in Table 3 is that the type of management practices affects productivity indicator in distinct ways. Columns 2, 6, 10 and 14 of Table 3 show the unconditional correlation of the two sub-types of management practices—those related to data driven performance monitoring and those relating to incentives and targets. Data driven performance monitoring has a stronger association with increased sales per worker and employment growth, while incentives and targets have a stronger association with increased TFP and increased value added per worker. Data driven performance monitoring includes specific practices that help managers define their key performance indicators (e.g., inventory, sales, absenteeism) and appropriately track them over time, while incentives management practices relate to how managers and non-managers are awarded bonuses and promotion.

The association of management capabilities with firm performance is weaker when controlling for input intensity of capital, labor and materials, and for the firm’s global linkages.\(^{189}\) The drop in the magnitude of coefficients in the conditional results is somewhat expected: if management practices are considered as another input to production in a Cobb-Douglas framework, then it becomes complementary to all other factors. Hence, improved management practices will be associated with greater physical and human capital intensity, so that controlling for these will reduce the coefficient on management practices.

\(^{185}\) Bloom et al. (2013)
\(^{186}\) Bloom et al. (2013)
\(^{187}\) Bruhn, Reddy, and Ruiz Ortega (2018)
\(^{188}\) Giorcelli (2019)
\(^{189}\) A firm is defined to be globally linked if it is either an exporter, a supplier of a foreign firm or is foreign owned.
Table 3. Higher managerial capabilities among Russian firms are associated with superior firm performance

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
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<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
<th>(12)</th>
<th>(13)</th>
<th>(14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Sales per worker</td>
<td>0.027</td>
<td>0.026</td>
<td>0.051</td>
<td>0.038</td>
<td>0.114</td>
<td>0.047</td>
<td>0.069</td>
<td></td>
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<tr>
<td>Log TFP index</td>
<td></td>
<td></td>
<td>0.007</td>
<td>0.004</td>
<td>0.013</td>
<td>0.023</td>
<td></td>
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<tr>
<td>Log VA per worker</td>
<td>0.003</td>
<td>0.003</td>
<td>0.019</td>
<td>0.003</td>
<td>0.003</td>
<td>0.025</td>
<td>0.020</td>
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<tr>
<td>Log Emp. Growth (2012-17)</td>
<td></td>
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<td></td>
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<tr>
<td>Management score: total</td>
<td>0.243</td>
<td>0.003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>(2-score)</td>
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</tr>
<tr>
<td>Management score: Data-driven performance monitoring (2-score)</td>
<td>0.157**</td>
<td>0.027</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.047)</td>
<td>(0.038)</td>
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<tr>
<td>Management score: Incentives and targets (2-score)</td>
<td>0.095**</td>
<td>0.019</td>
<td></td>
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<tr>
<td></td>
<td>(0.023)</td>
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</tr>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Control for firm’s global linkages</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Sector dummies</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>District dummies</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>906</td>
<td>906</td>
<td>778</td>
<td>778</td>
<td>778</td>
<td>778</td>
<td>778</td>
<td>778</td>
<td>744</td>
<td>744</td>
<td>344</td>
<td>344</td>
<td>344</td>
<td>358</td>
</tr>
<tr>
<td>$\sigma^2$</td>
<td>0.053</td>
<td>0.056</td>
<td>0.988</td>
<td>0.988</td>
<td>0.014</td>
<td>0.016</td>
<td>0.167</td>
<td>0.198</td>
<td>0.02</td>
<td>0.02</td>
<td>0.19</td>
<td>0.19</td>
<td>0.602</td>
<td>0.605</td>
</tr>
</tbody>
</table>

Notes: Clustered standard errors at the district and large sector level in parentheses. Input variables are log capital per employee, log materials per employee (excluded for VA per worker and employment growth) and log employment. Control for firm’s global linkages are dummy variables for exporter status and foreign supplier status.

Significance: * p<0.10, ** p<0.05, *** p<0.01.

Figure 56. Better management capabilities among Russian firms are associated with superior firm performance, with magnitudes comparable with other countries

What Drives Management Quality, and How Can it be improved?

Individual or group-based consulting interventions can help firms significantly improve management practices and boost productivity. For example, an experiment with 17 textile firms in India provides a proof-of-concept that intensive individualized consulting can deliver lasting improvements in the practices of badly managed firms. The intervention did succeed in changing management practices such that the treated plants increased their use of the 38 identified practices by 37.8 percentage points on average during the treatment period (an increase from 25.6 percent to 63.4 percent) resulting in productivity improvements by 17 percent.²⁰⁰ Although this intervention improved management and firm performance,

²⁰⁰ Bloom et al. (2013)
it came at a cost of approximately $75,000 per treated firm. This high cost is likely to be prohibitive for many SMEs to finance themselves, and for governments seeking to scale this up for assisting a large number of firms. To address this concern, a recent study tested two alternative approaches for improving management among firms producing auto parts in Colombia.\textsuperscript{191} The first uses intensive and expensive one-on-one consulting, while the second draws on agricultural extension approaches to provide consulting to small groups of firms at approximately one-third of the cost of the individual consulting services. Their results show that both approaches lead to improvements in management practices of a similar magnitude (8–10 percentage points), so that the new group-based approach dominates on a cost-benefit basis.\textsuperscript{192} This points to the potential of group-based approaches as a pathway to scaling up management improvements.

**Competition is another channel that usually facilitates improvements in management.** In Mexico and the United States, manufacturing firms improve their management scores with age—presumably through a combination of learning (firms get better with age) and selection (over time, badly-managed firms exit). However, firms in Russian manufacturing do not seem to improve with age (Figure 577). Following similar analysis in Mexico\textsuperscript{193} and the work regarding the life cycle of firms, this finding appears to be indicative of inefficient allocation of resources in Russian manufacturing where badly managed firms continue to survive and clearly, market selection is not operating perhaps due to the lack of pro-competitive conditions.\textsuperscript{194} A similar lack of relationship between firm age and management score has been observed in Croatia.\textsuperscript{195}

\textbf{Figure 57. Management capabilities in Russia are uncorrelated with firm age}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{management_capabilities.png}
\caption{Management capabilities in Russia are uncorrelated with firm age}
\end{figure}

\textsuperscript{191} Iacovone, Maloney, and McKenzie (2019)
\textsuperscript{192} Their results suggest that group-based intervention led to increases in firm size over the next 1.5 years, including a statistically significant increase in employment, while the impacts on firm outcomes are smaller and statistically insignificant for the individual consulting.
\textsuperscript{193} Bloom, Iacovone, et al. (2019)
\textsuperscript{194} See Hsieh and Klenow (2014). In the United States, it is well known that “up-or-out” dynamics in which unsuccessful firms exit or are bought out by more successful competitors who absorb the labor and capital released by exiting firms drives productivity and business dynamism (Haltiwanger, Jarmin, and Miranda 2013). Selection dynamics do not seem to work that way in Russia—badly managed firms continue to survive.
\textsuperscript{195} Grover, Iacovone, and Chakraborty (2019)
Exposure to foreign firms and markets likewise helps improve management. Firm characteristics may play a key role in explaining variations in management score (Table 4). The finding of a positive association of management capabilities with firm size and the share of employees with professional degree is in agreement with the literature: doubling firm size is associated with an increase in management score by about 0.05. More importantly for the purposes of this chapter, both unconditional and conditional correlations suggest that, in line with prior studies, global exposure or foreign linkages is positively correlated with management score (Figure 58). These linkages could be identified in the form of backward linkages with foreign firms or those that are exporting internationally. To explore this further, we can combine the 2017 data with the recall information for 2012. Focusing first on exports, we classify firms into three groups: those that didn’t export in 2012 and 2017 (never exporters), those firms that didn’t export in 2012 but did so in 2017 (became exporters), and those firms that exported in both years (always exporters). We can also do an analogous classification for suppliers of foreign firms: those that didn’t supply to a foreign firm in 2012 and 2017 (never suppliers), those firms that didn’t supply to a foreign firm in 2012 but did so in 2017 (became suppliers), and those firms that did it in both years (always suppliers). The left panel of Figure 599 compares those groups whose foreign exposure didn’t change: in 2017, those that always exported had a significantly higher management score than those that never did, and similarly those that were always suppliers to foreign firms with the respect to those that never did. The right panel of Figure 59 compares the management scores in 2012 and 2017 for those firms that changed their foreign exposure, and it is evident that firms that switched to becoming exporters or suppliers to foreign firms witnessed a significant increase in management capabilities—particularly the ones that became exporters.

Sector and district fixed effects are not statistically significant, implying that the variation in management capabilities across districts and sectors is accounted for by differences in firm composition rather than district- or sector-specific factors. Although management practices are crucial for the performance of medium and large firms, the link between management and performance extends throughout the size distribution in the United States and Mexico (Bloom et al., 2016; Bloom, Iacovone, et al., 2019). In Bloom, Iacovone, et al. (2019), only four questions from the United States MOPS were selected for microenterprises. The correlation between the management score calculated with this subsample of questions and the overall management score for SMEs and large firms is 0.86, indicating that this short score is a good measure of management practices. This result is similar to McKenzie and Woodruff (2017) who find an important role for management in micro-firms in developing countries.

The explanatory power of firm characteristics in unconditional correlations is limited. The relationship with foreign ownership is positive and significant in an unconditional setting, but the variable loses significance in a joint estimation. Within exporters, the export destination makes no difference: the management score is statistically the same across those that export to CIS countries, to the EU, or to the rest of the world. There are very few firms that became non-exporters—15 out of 978 firms in total; 13 out of 578 firms if we restrict the respondent’s tenure to 6 years or more and we drop these firms from this analysis. A pseudo-panel fixed effect regression shows that this effect is statistically significant; becoming an exporter is associated with an increase in management score of 0.04.
Table 4. Firms that are larger, globally linked or in more competitive environments have better managerial capabilities

<table>
<thead>
<tr>
<th>Dep. var.: Management score, 2017</th>
<th>(1)</th>
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<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log (employment)</td>
<td>0.045***</td>
<td>(0.009)</td>
<td>0.042***</td>
<td>(0.011)</td>
<td>0.039***</td>
<td>(0.011)</td>
<td></td>
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<tr>
<td>Log (age)</td>
<td>0.008</td>
<td>(0.005)</td>
<td>0.000</td>
<td>(0.009)</td>
<td>0.000</td>
<td>(0.009)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Exporter</td>
<td>0.057***</td>
<td>(0.013)</td>
<td>0.049**</td>
<td>(0.016)</td>
<td>0.040**</td>
<td>(0.016)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign owned or foreign supplier</td>
<td>0.139***</td>
<td>(0.021)</td>
<td>0.106***</td>
<td>(0.028)</td>
<td>0.104***</td>
<td>(0.027)</td>
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<tr>
<td>Low concentration sector</td>
<td>(0.016)</td>
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<tr>
<td>Low concentration sector</td>
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<tr>
<td>More than 20% of non-managers with degree</td>
<td>0.041***</td>
<td>(0.011)</td>
<td>0.033***</td>
<td>(0.012)</td>
<td>0.033***</td>
<td>(0.012)</td>
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<td>More than 80% of managers with degree</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.026*</td>
<td>0.005</td>
<td>0.002</td>
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<td>No</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
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<td>913</td>
<td>941</td>
<td>941</td>
<td>794</td>
<td>893</td>
<td>741</td>
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<tr>
<td>$R^2$</td>
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<td>0.001</td>
<td>0.025</td>
<td>0.04</td>
<td>0.002</td>
<td>0.011</td>
<td>0.004</td>
<td>0.083</td>
<td>0.098</td>
</tr>
</tbody>
</table>

Notes: Low concentration sectors are those large industry-federal district sectors where the Herfindahl index is in the bottom 25%. Clustered standard errors at the district-large sector level in parentheses. Significance: * p<0.10, ** p<0.05, *** p<0.01.

Figure S58. Globally linked and larger firms have better managerial capabilities
Figure 59. Management capabilities improve with global linkages

Note: the left panel plots the average management score in 2017 of firms in four groups: “never exporters” (didn’t export in either 2012 or 2017) or “never suppliers” (didn’t supply a foreign firm in either 2012 or 2017) and “always exporters” (exported in both 2012 and 2017) or “always suppliers” (supplied a foreign firm in both 2012 and 2017). The right panel plots the average management score of firms in 2012 and 2017 for two groups: “became exporters” (didn’t export in 2012 but did so in 2017, “became suppliers” (didn’t supply a foreign firm in 2012 but did so in 2017).

These findings are in line with the recent work on drivers of management practices in the United States. One study uses information on the entry of “Million Dollar Plants” (MDPs)—large investments for which both a winning county and a runner-up county are known. Comparing the counties that “won” the large, typically multinational plant versus the county that narrowly “lost,” the study finds a significant positive impact on management practices. Importantly, the positive spillovers only arise if the plant is in an industry where there are frequent flows in managerial labor from the MDP’s industry, suggesting that the movement of managers is a mechanism through which learning occurs. We conjecture that this is the channel through which global exposure affects management capabilities in Russia as well, although our data does not allow us to control for an endogenous productivity process.

3.2 FDI and Quality of Exports in the Russian Federation

Even if foreign firms operating in Russia represent a small portion of the overall number of firms in the economy, their presence can have notable spillover effects on domestic firms through industrial value chains. This sub-section focuses on the spillover effects of foreign firms on the quality of exports of domestic Russian firms. It provides evidence of a positive relationship between the quality of products exported by local firms and the presence of foreign affiliates in the upstream (input-supplying) industries.

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202 Bloom, Brynjolfsson, et al. (2019)
203 See De Loecker (2013). Our results do not rule out the possibility that higher productivity might cause exporting. In unreported analysis, we interact management score with a set of firm characteristics, which served as controls in the full specification in table 3. Focusing on sales per worker as the main performance variable of interest, interactions with variables measuring global exposure suggests that the importance of management practices is heightened for firms that are externally linked—in fact, for exporters the cumulative effect of an increase in management score is almost six times as much as that of non-exporters; the effect is similar when expanding the definition to include those which are suppliers of a foreign firm or are foreign owned.
This relationship exists when quality of exports is measured both by unit value or another measure that relies on information on prices and physical quantities to infer quality, based on the insight that the ability of an exporter to sell a larger quantity at a given price should imply higher quality (Khandelwal et al. method). 204

**MNCs play central roles in fostering the aggregate productivity of host countries.** Their know-how, technology and marketing experience represent a powerful source of knowledge for local firms in host countries. MNC presence can facilitate performance improvements in local firms through a number of channels. First, the presence of foreign affiliates in the upstream (input-supplying) industries may provide local producers with more diverse and higher quality intermediates and capital goods and in this way allow them to increase their productivity, upgrade the quality of their products and broaden their product range. 205 The presence of FDI may also have an indirect effect: by increasing the competition in the input-supplying sector, it may induce local input producers to become more efficient or upgrade their production processes and thus offer more technologically advanced inputs. 206

Second, in their quest for cheaper and higher quality inputs, MNCs in the downstream (input-sourcing) industries may provide their local suppliers with expertise, training and incentives for quality improvements, and possibly even cooperate on development of new and higher quality products. Many MNCs subject their potential suppliers to technical audits and require improvements in performance or product quality as a pre-condition for receiving a contract. The resulting product upgrading and improved performance may then be reflected not only in the domestic firms’ sales to the MNCs but also in the local firms’ exports. 207

Finally, domestic firms may learn from MNCs operating in the same industry. Either by observing the foreign firms or through hiring former MNC employees, they may learn about procedures that improve the quality and standardization of their products, their marketing skills and reliability of their shipments. 208 FDI inflows also increase competition in the domestic market, which may force local firms to either improve or to exit.

**Domestic firms may also learn about the profitability of various export opportunities by observing their foreign peers’ exports, and this knowledge may persuade them to make investments into quality upgrading, developing new products or even moving to different broad product categories.** For instance, a study on Mexico demonstrates that the presence of exporting foreign affiliates in the same region reduces the costs of exporting for producers. 209 Using detailed Chinese trade statistics, another study finds

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204 Khandelwal, Schott and Wei (2013)
205 For instance, Javorcik, Keller and Tybout (2008) report that small Mexican producers meet with their input suppliers (usually foreign affiliates) every six months to learn about the possibilities of upgrading their products. Suppliers provide the necessary inputs and often prepare a new formula for the product based on these inputs.
206 Amiti and Konings (2007), Bas and Strauss-Kahn (2015) and Goldberg et al. (2010) provide evidence on the importance of access to imports of diverse and high-quality inputs for productivity, export quality and product scope, respectively.
207 There is substantial anecdotal evidence suggesting that these effects take place. A survey among Czech manufacturing firms analysed by Javorcik (2008) shows that 40 percent of domestic suppliers receive some kind of assistance from their MNC customers, including personnel training (19 percent), provision of inputs (10 percent), help with quality assurance (10 percent) and help with finding export opportunities (7 percent). Even more remarkably, half of domestic firms selling to MNCs report they have had to improve product quality in order to become suppliers. Moreover, Javorcik, Lo Turco, and Maggioni (2018) show that presence of MNCs stimulates domestic firms in the supplying sectors to introduce more complex products where complexity is measured using an indicator due to Hidalgo and Hausmann (2009). Javorcik (2004) documents spillovers from FDI to the supplying industries.
208 See, for instance, Haskel, Pereira, and Slaughter (2007), Keller and Yeaple (2009), Poole (2012), and Balsvik (2010).
209 Aitken, Hanson and Harrison (1997)
that the presence of foreign affiliates is associated with more and higher unit value trade transactions by Chinese firms in the same sector.210 Another shows that it stimulates new export connections by Chinese exporters.211 In a closely related study on Romania, there is evidence of a positive relationship between the quality of products exported by firms and the MNC presence in the upstream (input-supplying) industries and to a lesser extent in downstream (input-sourcing) industries and the same industry.212

This chapter’s analysis uses detailed customs data recording Russian firms’ exports, 10-digit Harmonized System product classification (HS10), destination country and year. The period of analysis is 2012–2016, which is determined by the data availability. The export data are combined with firm-level balance sheets and ownership information. Although the balance sheet information covers 2007–2016, the ownership information is available only for 2012 and 2015. Thus, the analysis focuses on a long difference. Quality upgrading, defined as within-product improvements in export quality, is measured in two ways. First, the focus is on unit values of exports.213 Second, the approach of Khandelwal et al. which combines information on prices and physical quantities to infer quality, based on the insight that ability of an exporter to sell a larger quantity at a given price should imply higher quality.214 The empirical strategy follows the literature on FDI spillovers and relies on the assumption that domestic firms are more likely to buy inputs from foreign affiliates if foreign affiliates account for a larger share of output in the upstream industries (i.e., the industries from which the domestic firms source inputs).215 Similarly, it is assumed that domestic firms are more likely to supply foreign affiliates when foreign affiliates account for a larger share of output in their downstream industries, i.e., the industries to which they sell inputs, according to the Russian input-output tables. Finally, it is expected that the effect of foreign affiliate presence on domestic firms in the same sector will increase with the foreign affiliate share in the sectoral output. Appendix 4 presents methodological details.

The main empirical specification relates the change in the quality of product \( p \) exported by firm \( j \) operating in sector \( s \) to country \( c \) in year \( t \) to the change in the presence of foreign firms in the same, upstream and downstream sectors over time. FDI variables typically enter with a one year (or even a longer) lag because it takes time for the knowledge spillovers to take place. Using lags also mitigates endogeneity concerns. Thus, the specification will be:

\[
\ln \Delta \text{Export Quality}_{j|p|c|t} = \theta_1 \Delta \text{Own FDI}_{s,t-1} + \theta_2 \Delta \text{Upstream FDI}_{s,t-1} + \theta_3 \Delta \text{Downstream FDI}_{s,t-1} + u_{j|p|c|t}
\]

The dataset is constrained in terms of foreign ownership information, thus the final specification will relate changes in unit values between 2013 and 2016 to the changes in FDI presence between 2012 and 2015.216 Standard errors are clustered by industry, which is the level of aggregation of the FDI variables.

210 Chen and Swenson (2007)
211 Swenson (2008)
212 See Javorcik and Bajgar (forthcoming). Using cross-country data, Harding and Javorcik (2012) find that sectors targeted by national investment promotion efforts tend to subsequently increase the unit values of exports.
213 Despite their shortcomings, export unit values have been extensively used as a proxy for quality, see, for example, Schott (2004), Hallak (2006), Bas and Strauss-Kahn (2015).
214 Khandelwal, Schott and Wei (2013)
216 Focusing on a three-year difference means that only surviving flows are taken into account. A very similar analysis performed by Javorcik and Bajgar (forthcoming) in the context of Romania shows very similar patterns for estimation in levels, first, second, third and long differences.
The baseline results, presented in Table 5 below, show a positive and statistically significant relationship between improvements in the quality of products exported by Russian firms and the increasing presence of foreign affiliates in the supplying sectors. In other words, the greater the change in the foreign output share in industry s, the greater the quality improvement in Russian firm exports in industries supplied by s. This relationship is statistically significant when the proxy for foreign presence enters by itself as well as in the full specification including all three FDI proxies. This result holds both when the quality of exports is proxied with unit values and when the measure based on a method that, combines information on prices and physical quantities to infer quality is used. The magnitude of the estimated effect is economically meaningful. A one-standard-deviation increase in FDI presence in upstream sectors is associated with a 3.4 percent increase in the unit value of exports. The corresponding magnitude for the alternative quality measure is 2.8 percent. As for the other proxies for FDI presence, although the estimated coefficients are positive, they do not reach conventional significance levels. For ease of representation, Figure 60 illustrates the results of the full specification in a rope-ladder plot.

217 Khandelwal, Schott and Wei (2013)
218 The calculations are based on the results from column 4.
Table 5. Baseline Results

<table>
<thead>
<tr>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
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<tbody>
<tr>
<td>Δ In Unit value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Own FDI lagged</td>
<td>0.116</td>
<td></td>
<td></td>
<td>0.167</td>
</tr>
<tr>
<td></td>
<td>(0.132)</td>
<td></td>
<td></td>
<td>(0.132)</td>
</tr>
<tr>
<td>Δ Upstream FDI lagged</td>
<td></td>
<td>0.980***</td>
<td></td>
<td>1.116***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.204)</td>
<td></td>
<td>(0.250)</td>
</tr>
<tr>
<td>Δ Downstream FDI lagged</td>
<td></td>
<td>0.500</td>
<td></td>
<td>-0.119</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.670)</td>
<td></td>
<td>(0.710)</td>
</tr>
<tr>
<td>Observations</td>
<td>9,862</td>
<td>9,862</td>
<td>9,862</td>
<td>9,862</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.001</td>
<td>0.004</td>
<td>0.000</td>
<td>0.006</td>
</tr>
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</table>

Δ Khandelwal et al. quality measure

<table>
<thead>
<tr>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Own FDI lagged</td>
<td>0.177</td>
<td></td>
<td></td>
<td>0.221</td>
</tr>
<tr>
<td></td>
<td>(0.141)</td>
<td></td>
<td></td>
<td>(0.154)</td>
</tr>
<tr>
<td>Δ Upstream FDI lagged</td>
<td></td>
<td>0.790**</td>
<td></td>
<td>0.930**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.413)</td>
<td></td>
<td>(0.387)</td>
</tr>
<tr>
<td>Δ Downstream FDI lagged</td>
<td></td>
<td>0.511</td>
<td></td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.941)</td>
<td></td>
<td>(0.931)</td>
</tr>
<tr>
<td>Observations</td>
<td>9,961</td>
<td>9,961</td>
<td>9,961</td>
<td>9,961</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.001</td>
<td>0.002</td>
<td>0.000</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Notes: The sample includes only exports of local firms. Standard errors, clustered at industry level, are presented in parentheses. ***, **, * denote significance at the 1%, 5% and 10% level, respectively.

Source: Javorcik and Poupakis (2019)

Figure 60. FDI presence in upstream sectors is associated with increase in export quality

This positive relationship holds for exports to OECD and non-OECD countries. It is statistically significant for both measures of export quality and the estimated magnitudes are very similar to those found in the baseline specification (see Table 6). For ease of illustration, Figure 61 shows the results of the full specification in a rope-ladder plot when using change in unit value as the measure of export quality.
Table 6. Distinguishing between exports to OECD countries and exports to other destinations

<table>
<thead>
<tr>
<th></th>
<th>Exports to non-OECD countries</th>
<th>Exports to OECD countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Δ ln Unit value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Own FDI lagged</td>
<td>0.043 (0.198)</td>
<td>0.067 (0.181)</td>
</tr>
<tr>
<td></td>
<td>0.238** (0.114)</td>
<td>0.348*** (0.121)</td>
</tr>
<tr>
<td>Δ Upstream FDI lagged</td>
<td>0.942*** (0.231)</td>
<td>1.180*** (0.323)</td>
</tr>
<tr>
<td></td>
<td>1.108*** (0.377)</td>
<td>1.272*** (0.269)</td>
</tr>
<tr>
<td>Δ Downstream FDI lagged</td>
<td>-0.187 (0.783)</td>
<td>-0.910 (0.863)</td>
</tr>
<tr>
<td></td>
<td>1.418 (0.936)</td>
<td>0.828 (1.056)</td>
</tr>
<tr>
<td>Observations</td>
<td>6,064</td>
<td>6,064</td>
</tr>
<tr>
<td></td>
<td>6,064</td>
<td>6,064</td>
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<tr>
<td></td>
<td>6,064</td>
<td>6,064</td>
</tr>
<tr>
<td></td>
<td>3,798</td>
<td>3,798</td>
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<td></td>
<td>3,798</td>
<td>3,798</td>
</tr>
<tr>
<td></td>
<td>3,798</td>
<td>3,798</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.000</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>0.005</td>
<td>0.019</td>
</tr>
</tbody>
</table>

|                      | Exports to non-OECD countries | Exports to OECD countries |
| Δ ln Khandelwal et al. quality measure |                               |
| Δ Own FDI lagged     | -0.051 (0.103)               | -0.031 (0.105)            |
|                      | 0.416** (0.159)              | 0.504*** (0.169)          |
| Δ Upstream FDI lagged| 0.833** (0.374)              | 0.961** (0.445)           |
|                      | 0.662 (0.596)                | 0.977** (0.400)           |
| Δ Downstream FDI lagged| 0.020 (0.822)               | -0.592 (0.762)            |
|                      | 1.203 (0.925)                | 0.851 (1.025)             |
| Observations         | 6,122                        | 6,122                     |
|                      | 6,122                        | 6,122                     |
|                      | 6,122                        | 6,122                     |
|                      | 3,839                        | 3,839                     |
|                      | 3,839                        | 3,839                     |
|                      | 3,839                        | 3,839                     |
| R-squared            | 0.000                        | 0.002                     |
|                      | 0.000                        | 0.003                     |
|                      | 0.003                        | 0.014                     |

Notes: The sample includes only exports of local firms. Standard errors, clustered at industry level, are presented in parentheses. ***, **, * denote significance at the 1%, 5% and 10% level, respectively.

Source: Javorcik and Poupakis (2019).

Figure 61. Presence of foreign affiliates in upstream and in own industries matters for export quality when exporting to OECD countries
The presence of foreign affiliates in the same industry also matters, but only for the quality of goods exported by Russian firms to developed country markets. The estimated coefficients are highly statistically significant. This is true both when the FDI proxy enters by itself as well as in the full specification. The result holds for both measures of export quality. A one-standard-deviation increase in the FDI presence in the same sector is associated with a 5 percent and 7 percent increase in the quality of exports destined for OECD markets when the quality is proxied with unit values and the Khandelwal et al. measure, respectively.

Does the Source Country of FDI Matter?

When distinguishing between foreign firms from each group of countries, the results\(^\text{219}\) show a positive and statistically significant relationship between the change in *Upstream FDI from developed countries* and the quality of exports.\(^\text{220}\) The coefficients on *Upstream FDI from other countries* bear positive, but insignificant, coefficients.\(^\text{221}\)

Does Industry Concentration Matter?

*Industry concentration does not matter for the ability of firms to benefit from FDI spillovers.* When the Herfindahl–Hirschman Index (HHI) for each industry in 2012 is calculated and is interacted with the FDI variables, results show a positive and statistically significant coefficient for *Upstream FDI*\(^\text{222}\) but no additional effect coming from the concentration index, suggesting that it does not play a role in mediating the relationship between foreign presence and quality of exports.

Do Exports of Lower Relative Quality Benefit More?

*An increase in FDI in upstream industries is associated with a rising quality of exports by domestic firms and this effect is particularly pronounced for exports of relatively lower quality products.*\(^\text{223}\) In other words, presence of FDI in input-supplying industries promotes convergence. To calculate the relative quality of each export flow in 2013, we obtain the median unit value of exports of a given HS10 product by all firms (domestic and foreign) over all destination countries and take the ratio of the unit value of product \(p\) exported by firm \(j\) to country \(c\) in 2013 relative to the average unit value of product \(p\) exported by all firms to country \(c\) in 2013. The logged relative unit value is then interacted with our proxies for FDI presence. It also enters the estimating equation by itself. The results, based on unit values, are presented

\(^{219}\) See Table 5 in Javorcik and Poupakis (2019).

\(^{220}\) The ORBIS database contains information on the nationality of investors, which allows classifying FDI as originating from developed versus other countries. Germany, the United States and the United Kingdom are the top three source countries of FDI accounting for about 226, 126 and 104 foreign affiliates, respectively. This translates into about 21, 12 and 10 percent of foreign affiliates within the grouping, respectively. They are followed by Netherlands and Finland. The presence of FDI originating from the non-developed world is much smaller. In this group, China, Turkey and Belarus are the largest investors each with about 30 affiliates. They are followed by North Korea and Poland with 25 affiliates each.

\(^{221}\) However, a statistical test cannot reject the equality between the two. Thus, it is not possible to reject the hypothesis that the increase in all FDI, and not just FDI from developed countries, is associated with improving quality of exports.

\(^{222}\) See Table 6 of Javorcik and Poupakis (2019)

\(^{223}\) The estimates in column (4) of the top panel suggest that the overall impact of FDI presence in the input-supplying industries is positive for flows with relative unit values below 241 percent of the median (\(\exp(.89) = 2.41\)). This covers about 9,188 of 9,862 observations in the sample.
in the top panel of Table 7. The results based on the alternative quality measure have the same sign pattern, but only the coefficient on *Upstream FDI* is statistically significant.

**There is convergence in export quality (Table 7).** The negative coefficients on the relative export quality found in both the top and bottom panels suggest a decline in unit values of exports of relatively higher quality (or more precisely, exports with unit values above the median) and an increase in unit values of lower quality exports (exports with unit values below the median).\(^{224}\) This former effect may be related to the Ruble depreciation which took place during the period considered by this study and may have allowed exporters to lower their dollar denominated prices. For ease of illustration, Figure 62 shows the results on initial export quality, presence of FDI in upstream industry and the interaction of the two variables in a full specification setting using a rope-ladder plot.

\(^{224}\) It is helpful to recall that, by construction, the median value of the log of the relative export quality is zero.
Table 7. Does initial quality matter?

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<tbody>
<tr>
<td></td>
<td>Δ ln Unit value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>log Relative UV₂₀₁₃</td>
<td>-0.087*** (0.023)</td>
<td>-0.115*** (0.038)</td>
<td>-0.073*** (0.026)</td>
<td>-0.113*** (0.028)</td>
</tr>
<tr>
<td>Δ Own FDI lagged</td>
<td>0.127 (0.141)</td>
<td>0.177 (0.141)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Own FDI lagged x log Relative UV₂₀₁₃</td>
<td>0.044 (0.229)</td>
<td>0.072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Upstream FDI lagged</td>
<td>0.991*** (0.216)</td>
<td>1.032*** (0.265)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Upstream FDI lagged x log Relative UV₂₀₁₃</td>
<td>-0.711 (0.452)</td>
<td>-1.162*** (0.348)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Downstream FDI lagged</td>
<td>0.748 (0.674)</td>
<td>0.189 (0.744)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Downstream FDI lagged x log Relative UV₂₀₁₃</td>
<td>1.466* (0.787)</td>
<td>1.934*** (0.678)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>9862</td>
<td>9862</td>
<td>9862</td>
<td>9862</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.024</td>
<td>0.029</td>
<td>0.025</td>
<td>0.034</td>
</tr>
</tbody>
</table>

|                      | Δ Khandelwal et al. quality measure |         |         |         |
| log Relative UV₂₀₁₃ | -0.063*** (0.013) | -0.061** (0.025) | -0.053*** (0.016) | -0.068*** (0.022) |
| Δ Own FDI lagged     | 0.167 (0.160) | 0.222 (0.173) |         |         |
| Δ Own FDI lagged x log Relative UV₂₀₁₃ | -0.176 (0.128) | -0.18 (0.124) |         |         |
| Δ Upstream FDI lagged| 0.917* (0.473) | 1.108** (0.459) |         |         |
| Δ Upstream FDI lagged x log Relative UV₂₀₁₃ | -0.095 (0.564) | -0.268 (0.518) |         |         |
| Δ Downstream FDI lagged | 0.478 (0.822) | -0.108 (0.809) |         |         |
| Δ Downstream FDI lagged x log Relative UV₂₀₁₃ | 0.411 (0.969) | 0.494 (0.870) |         |         |
| Observations         | 6956    | 6956    | 6956    | 6956    |
| R-squared            | 0.008   | 0.009   | 0.007   | 0.012   |

Notes: The sample includes only exports of local firms. Standard errors, clustered at industry level, are presented in parentheses. ***, **, * denote significance at the 1%, 5% and 10% level, respectively.

Source: Javorcik and Poupakis (2019)
Figure 62. Foreign presence in upstream sector enhances export quality and more so for products with initial lower quality

4. Policy Recommendations

Increasing productivity and economic growth in Russia requires working simultaneously on two dimensions: (i) external drivers of productivity growth: reducing misallocation of resources and facilitating efficient entry-exit dynamics, and (ii) internal drivers of productivity growth: upgrading firms’ performance. This report has identified four main areas of intervention as top priorities to improve Russia’s productivity: (A) fostering competition and market regulation, (B) eliminating distortions associated with the direct intervention of the state in the economy, (C) improving managerial practices, and (D) increasing foreign exposure of Russian firms. The following paragraphs summarize the main policy recommendations related to each area. They are also summarized in Table 8.

4.1 Fostering Competition and Market Regulation and Eliminating Distortions Associated with Direct Interventions of the State in the Economy

While the Government of the Russian Federation has taken important steps to strengthen competition policy, weaknesses in design and implementation remain. Authorities recently developed a country-wide strategy to boost competition and reduce government involvement in the economy. However, the multitude of initiatives may not yield the expected results. For example, reforms outlined in the Roadmap on the Development of Competition fail to address actual challenges, such as cartel agreements. In some cases, they may even punish efficient firms that are expanding. Similarly, a recent reform of the CDS perpetuates the conceptual shortcomings in its original design. The list of indicators by which local government units are measured does not fulfill the standards for monitoring and evaluation of competition goals (e.g., targets of 20 percent private participation in waste management and building maintenance alike). In addition, it covers public and social services sectors in which competition is less of
a priority (e.g., psychological support for children with disabilities). Local authorities also often do not appear to have the regulatory mandate or guidance needed to achieve their targets.

The government can foster competition and eliminate distortions associated with the presence of the state in the economy by:

- **Redesigning the CDS to make the framework effective and align national and sub-national objectives.** To improve the impact of the CDS in the short term, authorities should do several things: (i) amend indicators to track not only market structure and private participation but also market outcomes, (ii) harmonize the approach to measure them, and (iii) provide the resources to collect the required data to properly measure the current indicators. In the medium term, the CDS should be overhauled to focus less on monitoring and more on setting the concrete actions local governments must implement to strengthen competition. CDS-related reforms should target sectors in which competition is critical to economic development (i.e., input or final product or services markets) rather than human services indicators (e.g., in education and health). They should include areas where local governments have more discretionary power to influence market dynamics through measures such as regulatory design and implementation or procurement. The Government of the Russian Federation should also consider implementing a program to evaluate the impact that the gradual reform of the CDS has on markets.

- **Updating Russia’s antitrust framework to reflect international best practices.** Authorities should revisit the definition of market dominance and use a more economic approach, simplify merger control requirements, treat vertical restraints on a case-by-case basis, and limit potential exceptions to unilateral anticompetitive conduct. The Government of the Russian Federation could also consider whether the ongoing revision of the law could be used to implement broader and more fundamental changes. In addition, the FAS and the Analytical Center can conduct additional ex-post assessments of the effects of FAS’ decisions to inform the selection and focus of FAS activities.

- **Limiting the procedural discretion with which companies—and SOEs in particular—procure goods and services.** As a first measure, and following the reform of July 2018, the government may provide further guidance and enforcement on competitive procurement methods to limit single-source procurement (under Law No. 223-FZ). In the medium term, it can amend the legal framework for procurement by SOEs to further limit options for non-competitive procurement methods. This can be done by making the list of pro-competitive procurement methods under Law No. 223-FZ exclusive and limiting the scope for SOEs to adopt other methods.

- **For SOEs in commercial sectors, considering divestiture and privatization in a transparent and competitive process.** SMEs for which there is no clear ownership rationale could be considered for privatization. Large SOE and conglomerates should be evaluated for organizational, financial, and other forms of restructuring. This would be a first step to improve their performance and potentially attract private investors.

- **For SOEs in network and strategic sectors, enforcing rules that encourage SOE to operate efficiently.** Where there is a rationale for direct state participation, the government can ensure that SOEs are encouraged to operate efficiently through various means, including restructuring, governance improvements and financial discipline. Russia may also follow international examples to move SOEs from line ministries to independent holding entities. Within network sectors, for those segments where private sector participation is viable (e.g. transport), rules should foster competitive neutrality.
• **Amending regulations in specific sectors that reinforce the dominance of incumbent firms, including SOEs, in upstream and downstream sectors.** The government can directly remove sector-specific barriers to firms contesting particular markets. For example, in the short term, the government may promote competition in critical product markets, such as pharmaceuticals and construction, by facilitating substitutability of products, use of standard contracts and unified licensing criteria. Similarly, in enabling sectors such as telecommunications and transport, the government may revisit the exclusivity rights granted to the state-owned Rostelecom to provide internet services to healthcare units. In the air transport sector, FAS and sector authorities can expand their efforts to ensure airlines have non-discriminatory access to airport facilities and services, such as jet refueling. In the medium term, they may also consider overhauling the “designated carrier” rule for international routes, which can reinforce the dominance of the flag carrier on some routes. In the railway sector, the Government of the Russian Federation may facilitate entry in freight services by enabling the creation of accessible and transparent cargo platforms. In the medium term, it should also consider fully separating the infrastructure and services segments of the state railway operator.

### 4.2 Supporting Firms’ Performance and Increasing Exposure to Foreign Firms

**Public initiatives to support improvement of managerial practices and increased foreign exposure can increase the performance and productivity of Russian firms.** The government should consider:

- **Assessing and restructuring existing government programs for firm productivity and growth.** An assessment of the main federal and local programs supporting firms’ growth and productivity is important to identify which programs are performing well and could be scaled up and which programs should be restructured or closed. The World Bank’s experience in implementing PERs of innovation and SME programs in a range of client countries has identified four important stages of such an assessment. First, mapping the full range of programs to capture total spending, confirm alignment with national and regional development priorities, and identify potential overlaps. Second, assessing the functioning of these programs by evaluating their origin, the extent to which they are addressing clearly identified market failures, the extent to which they are adequately targeted, and the extent to which they are deploying the most appropriate policy instruments. Third, reviewing the cost efficiency of the investment in these programs and interventions (i.e., breakdown of administrative vs program expenditure as well as participating firms’ performance on output indicators such as adoption of practices, additional sales, additional employment over the cost of the programs). Finally, and ideally, an impact evaluation comparing (otherwise similar) participating with non-participating firms would allow calculating the returns on investment of these programs to decide about expanding, restructuring or eliminating them.\(^{225}\)

- **Establishing new programs that support improving managerial practices.** The findings of the management practices survey conducted by the World Bank revealed that firms did not invest in adopting structured management practices primarily because they were unsure about the benefits of

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\(^{225}\) The World Bank facilitates knowledge diffusion and adoption of good practices through policy dialogue and advisory work. The World Bank has carried out innovation and SME PERs in more than 15 countries, including innovation policy reviews in Japan, Poland, Colombia and Chile and SME support reviews in Serbia, Ethiopia and Senegal. These PERs help client governments align their innovation/SME growth strategies and public spending on these programs with firm needs, strengthen the design and implementation of programs, and improve their efficiency and effectiveness. Their results have directly informed the design of lending operations and technical assistance programs.
these practices (70 percent), while other firms found the implementation to be too costly and were not aware of the most relevant management practices that will help them improve their performance (58 percent). Some firms also reported the lack of managerial and non-managerial skills needed for implementing these practices, while a few others reported unsuccessfully attempting adopt to structured management practices (35 percent). The challenges reported by these firms could be addressed by the following programs and interventions:

a. **First, addressing information barriers.** Managers are usually not aware that their companies’ management and organization is poor and don’t have a benchmark of “how things could be”. Accordingly, they tend to often over-estimate their managerial competence in the absence of information on good managerial and organizational practices. In other words, managers often “don’t know what they don’t know.“ This specific information gap could be addressed by a “light touch” intervention that provides an informative and effective diagnostic (or audit). Complementing this, a large-scale communication program could provide descriptive evidence about the extent to which improving managerial practices and organization leads (on average) to improving profits and firm’s performance overall (e.g., innovation, exports, and quality). For example, the agencies running firm support programs in countries such as the United States and the United Kingdom (the Manufacturing Extension Partnership, MEP, in the United States and the Manufacturing Advisory Service, MAS, in the United Kingdom) do not wait for firms to find them but proactively reach out through direct tele-sales and marketing activities. MAS and Productivity Alberta (a Canadian agency), for example, offer free productivity assessments and focused action plans for improving practices to enhance a firm’s capabilities.

b. **Second, information asymmetry barriers.** Firms, even when aware that their managerial practices and organization are deficient, do not know who to trust to help them. In fact, the provision of consulting services is characterized by significant information asymmetries between “clients” purchasing the services and “consultants” providing them. A program that could help address these issues would involve setting up a system where consultants are certified or accredited, and a new client can have access to feedback provided by previous clients to assess the quality of the services being acquired. In other words, these interventions would reduce information asymmetries and make firms more likely to purchase these services. Setting up such a program might require that firms initially receive vouchers to purchase consulting services under the condition that they provide detailed feedback. For example, Singapore’s SPRING program offer a Singaporean $5000 voucher to upgrade and strengthen core business operations through consultancy project in innovation, productivity, human resources and financial management. Once a critical mass of firms participate, the accumulated feedback would help reduce the information asymmetries that other firms face. An alternative intervention, to reduce the problem of moral hazard which derives from the information asymmetries, would consist in

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226 Grover and Torre (2019)
227 The intervention could be as simple as the Japanese “Mirasapo” or “Site supporting the future of SMES and Microenterprises” Portal Site or Singapore’s “EnterpriseOne”, which is a comprehensive portal for information on support measures by government and public institutions.
228 The firm must be either below S100 million in turnover or <200 workers. It can use up to 8 vouchers over the course of its life and there is no follow up. Vouchers have usually been used in the context of jumpstarting innovation activities. Several countries, including Austria, Canada, Belgium, Denmark, Germany, the Netherlands, Ireland, and Sweden use low value Innovation Vouchers to support manufacturing SMEs. For example, Austrian SMEs receive a $7,000 voucher for a cooperation project with a research institution for preparatory studies, analysis of technology transfer, analysis of the innovation potential of a new technology through the “Innovationsscheck” program. NUTEK, the Swedish Development Agency, also provides funding to small businesses for the purchase of external services that help develop new products or services.
setting up a “performance premium” for consulting companies when their clients achieve specific milestones in terms of satisfaction and economic performance (e.g. jobs created, revenues growth, etc.). These types of performance payment schemes are common various areas of business markets as discussed by Essig et al. (2016). Similarly, these types of contracting arrangements are also common in other areas where provision of services is plagued by information asymmetries, such as health markets.

c. Third, uncertainty barriers. Firms may be unsure about investing in consulting services to improve their organizational or managerial practices because they are uncertain about the returns on these investments. In this context, the government could reduce the costs of “trying out” consulting services by setting up a system of grants and vouchers that are initially very generous and then decrease through subsequent usages. Thus, a primary goal of many countries’ SME support programs is to expose their firms to business support services to help them understand the value of structured management practices, including practices such as lean manufacturing and other quality control and continuous improvement processes. The objective is that demonstration projects will help firms realize the value in these services and will encourage them to procure such services on their own in the future. An alternative approach could involve offering “performance insurance” scheme where the insurance would be triggered in cases when the client firm is not satisfied with the services or in case certain minimum agreed milestones were not to be reached.

For each of the interventions proposed, the government needs to address various implementation issues:

a. Identify a coordinating agency. The coordinating agency would design the managerial programs, supervise their implementation, monitor results, and incorporate learning and continuous improvements. Different countries use diverse approaches and institutions to support firm capabilities, each aligned with the national objectives and specific institutional context. The United States and United Kingdom approach—spearheaded by the United States’ MEP and the United Kingdom’s MAS—intervene with firms to enhance SME manufacturers’ productivity by encouraging new technology adoption and boosting manufacturers’ skills and capabilities including operations and organizational management techniques.

b. Identify and effectively target beneficiary firms. Doing so will require defining criteria such as size, legal status, and export orientation. Having a clear target beneficiary will help make concerted effort in reaching out to a narrower set of firms. For example, Canada’s Industrial Research Assistance Partnership (IRAP) proactively seeks out what it regards as the SMEs with the highest growth potential and engages them; it does not receive applications, but rather chooses the group of firms it believes will benefit the most from its program. Japan has ended targeting and quotas by industrial sector and more generally there is an explicit focus on firms with export potential.

c. Identify suppliers of services. Identify consulting companies or individual consultants by defining criteria such as financial standing of the company, qualification and experience of the consultants, and minimum dedication to the program in terms of time and capacity to provide consulting

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229 For a detailed discussion of performance incentives in the context of health services see report by Rena Eichler, Ruth Levine, and the Performance-Based Incentives Working Group “Performance Incentives for Global Health” published by CGDev and available online here.

230 Both of these agencies operate locally through regional centers.
services. Often the supply of consulting services will be limited until a market is established and external (international) services may be available/exploited to develop domestic markets. For instance, Italy and Japan largely benefited from management extension from the United States after World War II through the Marshall Plan until they developed their own programs and institutions.\footnote{See for example the study by Giorcelli (2019)}

d. **Design the implementation phases of the program.** The implementation phases would include: (a) a diagnostic or audit of the beneficiary company, which the consulting firm will prepare in collaboration with the beneficiary firm, with the aim of identifying the main managerial challenges that the beneficiary firm is facing; (b) one or more group training sessions on management practices for beneficiary firms facing similar issues;\footnote{Iacovone, Maloney, and McKenzie (2019) show that group consulting in Colombian auto-parts producers is as effective as one-on-one management consulting in improving firm performance. Likewise, Maloney (2015) finds that in Japan there is now more of an emphasis on group interventions, partly due to cost considerations.} and (c) in depth individual consulting assistance for beneficiary firms that demonstrate the highest potential to become more productive, export and grow.\footnote{The United Kingdom’s MAS offers five levels of support services to SMEs: (i) Level 1 is a free helpline inquiry service, through which manufacturing and business experts are available to answer questions on a range of technical issues (ii) Level 2 is a free, one-day, on-site review to assess the firm’s operations and highlight opportunities to improve operational performance. (iii) Level 3 includes provision of general awareness training and networking events, including best-practice factory visits. (iv) Level 4 is MAS’s subsidized consultancy support (up to two weeks), referred to as “workouts” for improving processes in the firm (e.g. lean manufacturing processes, improving shop floor layouts and space utilization). (v) In Level 5 MAS acts as a broker for “non-manufacturing queries, such as financial, human resources, marketing, legal, or environmental issues,” to other providers and programs within the United Kingdom’s suite of Solutions for Business to help firms discover new markets, export globally, learn design principles, or secure financing for R&D activity.} For both Japanese productivity centers and in Singapore (also Australia), the initial diagnostic and improvement plan are free and basic mentorship is heavily subsidized. How seriously the firm undertakes those recommendations determines whether additional consulting at state expense is forthcoming. In Japan, the firm pays a third of the cost of the consulting intervention and this is often part of a loan with a Bank that already has a business plan for the firm, while in Singapore’s SPRING program, for example, the magnitude of the subsidy is sufficiently small that firms of over Singaporean $1 million do not find this program very interesting. In this way, there is a partial filtering of firms that are worth investing in and thus these programs facilitate the targeting of potentially high-growth firms.

\begin{itemize}
\item[231] See for example the study by Giorcelli (2019)
\item[232] Iacovone, Maloney, and McKenzie (2019) show that group consulting in Colombian auto-parts producers is as effective as one-on-one management consulting in improving firm performance. Likewise, Maloney (2015) finds that in Japan there is now more of an emphasis on group interventions, partly due to cost considerations.
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\item[234] The funding models for countries’ management extension services vary considerably. While national governments often provide a portion of funding, with matched funding coming from local regions and recipient firms, in Japan funding of the Kohsetsushi Centers comes entirely from the provincial government. Likewise, while most countries expect recipient firms to participate in at least a portion of the cost, Japan strives to offer free- or low-cost services to SMEs through its Kohsetsushi Centers. Consultations with Japanese SMEs are free, although the cost of using the facilities is shared.
\end{itemize}
• **Promoting investment climate reforms that reduce the costs of FDI and introducing investment promotion policies targeted toward industries supplying export-oriented sectors.** Investment climate reforms that reduce the costs of FDI require identifying specific bottlenecks that foreign firms face, including policy constraints and bureaucratic procedures to enter Russian markets, affecting all firms or firms that intend to enter specific industries. Broader investment climate policies should be complemented by investment promotion activities that encompass facilitating visits of prospective investors, matching prospective investors with local partners, helping obtain permits and approvals, preparing project proposals, conducting feasibility studies, and servicing investors whose projects have already become operational. Attracting FDI in specific sectors is likely to lead to greater FDI inflows than less intense across-the-board attempts to attract investment. Analysis of FDI targeting activities in 56 countries indicates that priority sectors receive more than twice as much FDI as sectors not targeted by investment promotion agencies (IPAs). The government should not offer tax breaks or subsidies to foreign investors because evidence demonstrates that they are not effective.

• **Setting up supplier development programs to maximize opportunities of linkages and spillovers between foreign and local firms.** Successful supplier development programs require various elements. First, they need to be demand driven. It is crucial to start from the demand of foreign firms in order to guarantee sustainability. If local firms get supported to upgrade when a clear demand is lacking, the consequence is likely to be a backlash against the program and lack of interest in the future. Second, once a clear demand from foreign firms is identified and quantified as specific quality requirements and prices, the program needs to consider a phased approach. A large number of companies can apply for an initial diagnostic and only a selected group, which passes certain milestones jointly agreed upon with foreign buyers, can be moved to the second phase where they receive support to upgrade their production and organization. After this phase, another filter would be applied, in conjunction with foreign buyers, to select those companies that receive support to go through required certification processes, or even further to receive financial assistance to upgrade their machinery to be able to expand scale and upgrade quality. Third, the program needs to have a strong monitoring system that collects data on performance and feedback in real time to continuously adjust to market demands.

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235 While the magnitude of the effect of sector specific targeting on efforts to attract FDI by IPAs may seem large, it is not implausible. We do not delve deeper into these recommendations in the context of Russia as this was not the central aim of this report.
<table>
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<th>Channel</th>
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<td>External drivers of productivity growth:</td>
<td>(A) Fostering competition by (i) improving the CDS, (ii) continuing to align the antitrust legal framework to international good practices, and (iii) limiting single-source procurement</td>
<td>- Amend results framework to focus on market outcomes instead of market structure.</td>
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<td>(1) Addressing misallocation (reallocation channel) and (2) facilitating entry/exit of high-productivity firms (entry-exit channel)</td>
<td>(B) Eliminating distortions associated with the direct presence of the state in the economy by (i) revisiting the need for SOEs in commercial sectors and (ii) amending sector-specific rules that reinforce dominance of incumbents, including SOEs</td>
<td>- For SOEs in commercial sectors: Consider divesting and privatizing small and profitable SOEs in a transparent and competitive process.</td>
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<td>- Streamline merger control system.</td>
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<td>- Further limit single-source procurement through implementing guidelines.</td>
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<td>Internal drivers of productivity growth:</td>
<td>(C) Upgrading firms’ managerial practices, including performance monitoring, target setting, and performance incentives. Particular emphasis should be put on performance monitoring</td>
<td>- Evaluate rigorously and restructure if needed existing government programs for firms’ productivity and demand growth (e.g., export promotion). This could be done through World Bank Public Expenditure Review of Innovation and Productivity Programs methodology and impact evaluations, which help measure the effects of existing initiatives.</td>
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<td>(3) Improving within firm productivity: supporting firms’ performance upgrading (within channel)</td>
<td>(D) Strengthening linkages between local and foreign firms</td>
<td>- Promote investment climate reforms that reduce the cost of FDI.</td>
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<td>- Introduce investment promotion policies targeted toward industries supplying export-oriented sectors.</td>
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Annex 1 – Estimation of Markups and (Revenue-based) Total Factor Productivity

Data to estimate markups in Russia was very limited. Thus, the estimates should be taken with caution and cannot be compared with those provided in recent studies like De Loecker and Eeckhout (2019).

Methodology

In order to estimate firm markups, we use Orbis\textsuperscript{236} data for the period 2008–2017 and follow the methodology developed by De Loecker and Warzynski (2012), where markups are the ratio of the production elasticity of the flexible input to the expenditure shares in that inputs. The De Loecker and Warzynski (2012) method requires estimating a production function in order to recover the output elasticity corresponding to the flexible input. This requires using data on output, as well as inputs like materials and factors of production like labor. We selected labor as the flexible input due to lack of information on material costs and we use the average annualized sector wage from the Russian Federal State Statistics Service (Rosstat) to calculate the share of labor expenditures. Wage values have been converted to United States dollars, which is the currency denomination of the other variables in the Ruslana database, using yearly average market exchange rates from the International Monetary Fund.

Further, since we do not observe firm-level prices, we deflate output and the wage bill by the two-digit NACE gross value-added price indices (from Russia KLEMS\textsuperscript{237}), and capital by the economy-wide (implicit) price index for gross fixed capital formation (from the WDI). Thus, our measure of productivity is revenue-based TFP (TFPR).\textsuperscript{238} TFPR was estimated assuming a translog production function (at two-digit NACE revision 2 level of aggregation). The estimation procedure follows Ackerberg, Caves, and Frazer (2015), which corrects for endogeneity of input choices and collinearity.

We exclude all data for firms whose dates of incorporation result in non-positive age values. We also drop firms with non-positive values of operating profits, defined as the difference between operating revenue and cost of goods sold. We further exclude firm-year observations where the ratios of the cost of goods sold and the wage bill variables to operating revenue is greater than or equal to one. To remove outliers, we trimmed the labor-, capital-, and wage- to-operating revenue ratio by 1 percent on each side of the 2-digit industry-year distributions. We restrict the sample to firms that appeared during all the period of analysis.

\textsuperscript{236} Ruslana is the Orbis company financial dataset for Russia, Ukraine, and Kazakhstan.

\textsuperscript{237} KLEMS stands for capital (K), labour (L), energy (E), materials (M) and service (S) inputs. The data are available at \url{http://www.worldklems.net/data.htm}.

\textsuperscript{238} While we do not have physical quantities or detailed price indices to convert revenues into physical output, De Loecker and Warzynski (2012) show that using revenue data to recover markups only potentially affects the estimated markup but not the temporal changes in the markup.
Annex 2 – Pro-Competition Tender Design

Contracting authorities play a key role in ensuring competition in public tenders by: (i) enforcing the rules on public procurement; (ii) adopting, within the different possibilities available under public procurement rules the most procompetitive alternatives.

Four Key Questions Underpin the Design of Pro-Competition Public Tenders

1. **How to select the most pro-competitive procurement procedure?** The procedure that contracting authorities choose determines the competition conditions of a tender. Therefore, contracting authorities should minimize potential anticompetitive impacts (i) by gathering information regarding market conditions and choosing the procedure that best fits the market; and (ii) by publishing the participation notice that announces the tenders.

   - **Open procedures** are the most pro-competitive as all companies having the required capacity and quality are eligible to participate. Hence, when choosing any other procedure, contracting authorities should adequately justify their decision and carefully weigh the potential on competition.

   - **Restricted procedures** imply that only some candidates will be invited to participate in a tender. Competition is enhanced when contracting authorities invite more than the legal minimum number.

   - **Direct contracting** might also take place under certain circumstances. Since this type of contract eliminates competition during the procedure, it would be necessary to limit this procedure to exceptional cases and ensure that competition exists to identify and select the contractor.

   - **Special procedures** can be defined on the basis of the timeframe or of their nature. For instance, Framework agreements concluded for a maximum period of time on the basis of either open or limited tender procedures. Once concluded, framework agreements do not allow the inclusion of new enterprises during the life of the agreement. This feature may be associated with the creation of entry barriers to operators not participating in the agreement. Therefore, when this special procedure is chosen, contracting authorities should clearly specify (i) the reasons why this procedure is being used; (ii) the duration of the agreement; (iii) any possible extension of the maximum term of the agreement.

1. **How to design the terms of the tender to favor competition?** While drafting tender documents, contracting authorities should take into consideration the principles of equal treatment and non-discrimination of bidders, as well as the best possible conditions of competition. Indeed, those principles should be included in the elements of the tender documents:

   - **Eligibility to bid.** Eligibility criteria are included in the terms of the tender and they may significantly impact competition. The tender documents may foresee:
Quality requirement and quality certifications. When justified by the subject matter of the contract, technical and professional quality are evidenced by ad hoc documents, or, for contracts worth more than a certain value threshold, by the requirement that bidders would be rated and classified within a given group, subgroup and category. However, these requirements should not become a hidden entry barrier to benefit certain firms, such as local companies. This could be the case if authorities require companies to present quality certifications issued by local authorities that non-local companies could not obtain. In order to incentive bidders to participate in the tenders, post-qualification (awarded bidder presents documents for eligibility after tender takes place) is typically preferred to pre-qualification (all potential bidders present qualifying documents prior to the tender in order to be able to participate).

Specific legal structure. Eligibility should not be conditional upon bidders having a given legal form as this would exclude operators not meeting such requirement but otherwise capable of offering the required service. Instead, a specific legal structure might be required after the contract has been awarded.

Territorial discrimination. Any provision allowing for a differentiated treatment on the basis of nationality, language, domicile or territory of the selected bidder would breach the principle of non-discrimination of bidders.

Unnecessary or excessive technical and economic requirements. Reference to types, brands or technical specifications as eligibility conditions should not be included in the tender documents. Likewise, requirements amounting to a disproportionate economic burden for bidders may also become an entry barrier and thus limit competition.

Award criteria should be objective and related to the subject matter of the contract, these criteria should be clear, adequately weighted and included in the terms of the tender. Therefore, contracting authorities should pay special attention to:

Assuring equal treatment and non-discrimination of bidders. Any advantage to the current holder of the contract would lessen the competitive tension between the current holder and other competitors. Similarly, including experience among the award criteria would typically benefit incumbents. Instead, experience should only be included among the qualification criteria but not the award criteria.

Adequate weighting of the basic variables. The elements taken into account when scoring bids as well as their weight reflect the importance and priority of the basic variables relevant for the completion of the contract. To this aim, the method used for evaluating the bids needs to allow for a sufficiently broad margin for competition in each of the basic elements. Moreover, these criteria should not imply a rescoring of the qualification criteria. Therefore, when defining the criteria, it is advisable to avoid: (i) inappropriate weighting; (ii) inadequate reflection of the impact of the offered price on the basic budget assigned for the project; (iii) establishment of limits on prices, fees and other basic characteristics of the contract; (iv) excessive weighting given to criteria of negligible importance for the provision of the contract, or that impose additional costs on the bidder in relation to the current holder of the contract.
- **Precision in the definition of the criteria.** The elements that will be taken into account need to be specified by describing the criteria and indicating the points to be allocated to each element.

- **Other aspects.** Contracting authorities guarantee transparency throughout the different phases of the procurement process.

  ▪ **Duration of the contract** should be established by taking into account the nature of the services, the characteristics of the financing and the need to open to a competitive process periodically. On the one hand, excessively long terms, even within legal limits, pose entry barriers for new operators who will not be able to enter the market during the life of the contract. On the other hand, overly short durations may hinder the achievement of a return on the investments required to perform the contract. Competition risks related to the duration of the contract may be reduced by avoiding (i) lengthy periods or in the case of PPPs/concessions by adapting the duration to the time needed to recover the investment; as well as (ii) successive extensions that may foreclose the market for long and potentially indefinite length of time, in particular for concessions involving public works and management of public services.

2. **How to avoid anticompetitive decisions during the tendering process?** The contracting agency fosters competition also during the opening, evaluation and awarding of the bids by ensuring the following:

  ▪ **Provision of equal access to information.** All the technical information relevant for formulating the bids and performing the contract correctly are published in the tender terms. This should minimize the need for pre-bidding meetings with potential bidders. Such meetings should either be avoided or conducted individually as collective meetings can be used for coordination among bidders.

  ▪ **Ability to remedy errors.** If administrative formalities become unnecessary or excessive in relation to the contract, they may act as an entry barriers. As a consequence, errors regarding either the accreditation of data or the characteristics of the company at the time when the bidding deadline expired can be remedied, whereas those involving the accreditation of something that did not exist on the expiry date, or referring to the content of the bids, should not be remedied.

  ▪ **Public and transparent procedural formalities.** Competition is fostered when call for tenders are publicized in the various official government gazettes or on online tools. However, too much transparency during the bidding process might actually enable coordination/collusion among bidders. To this end, it is preferable to avoid publishing a reference price for the tender, keep the bids sealed and not to divulge the identity of bidders during the tender.

3. **How to avoid anticompetitive decisions after the tendering process?** Ex-post amendments of a contract affect the competitive character of the initial call for tenders and introduce changes in the contract or price that alter their nature. Their main aim is to obtain a return on a contract for which the bid price was too low. Possible ex-post modifications may occur as follows:

  ▪ **Supervening modifications.** Amendments to the contract are usually justified on grounds of public interest arising from unforeseeable causes, provided their necessity is duly reasoned in the administrative file and used within the limits of the law. Anticompetitive effects may be reduced by (i) including the elements for which subsequent modifications may be admissible in the tender
terms; (ii) preparing the tender terms applying the utmost effort to minimize the risk of a later revision; (iii) claiming liability for defective performance if the contractor is responsible for any deficiencies in the project design; (iv) avoiding the inclusion of new services or goods not directly attributable to the unforeseeable circumstance; (v) monitoring the amendments occurred and disclosing them in the annual report; (vi) analyzing the percentage variations of the modified contracts as compared to the initial budget.

- **Complementary provisions of services.** Their use is justified by the existence of the existence of unpredictability requirements and, hence, imply that a new contract is being made and awarded by a negotiated procedure without prior publication. In order to avoid their misuse (e.g. making more profitable a contract obtained by a low priced bid; introducing substantial changes to the contract; relying on them for any future unforeseeable circumstances), the application of complementary provisions are used only if expressly justified and duly reasoned.

- **Price modifications.** An accurate ex-ante estimation of the contractor’s compensation, having regard to the market prices for the goods or services that constitute the object of the contract, reduce the probability of price modifications, which are only possible when the terms of the tender do not specifically void them. Price revisions foster competition, if based upon specific formulas and are designed according to the need of ensuring the financial equilibrium of the contract.

- **Subcontracting** allows to reduce the costs and favors the participation of certain companies, such as SMEs. However, subcontracting may trigger the reduction of competition in the tendering phase, when certain companies that could have participated in the tender as bidders choose not to do so, or submit less aggressive bids, and opt to operate as subcontractors. To this aim, bidders should disclose subcontracting in the tender and subcontracting arrangements are checked by the contracting authority. In some instances, subcontracting bidders that participated in a public tender has been prohibited.
Annex 3 – Opportunities for Improving the Antitrust Legal Framework

The structural definition of dominance provided by the Competition Law of Russia remains at odds with international best practice. Critical amendments to the Competition Law of Russia in the past few years have modulated the formerly rigid approach toward dominant firms. The elimination of the register of dominant firms, the use of more dynamic criteria to establish dominance and the inclusion of safe harbors both qualitative (35 percent market share) and quantitative (RUB 400 million or around USD 6 million) beyond which a finding of dominance is unlikely constitute key measures to promote competition on the merits. However, Article 5 of the Competition Law of Russia recognizes as dominant those companies with a market share above 50 percent. Even if this presumption might be rebutted by the circumstances of the case, this approach still constitutes a risk as it might disincentivize investment and chill competition. Using market shares to define dominance is a problematic criterion and could lead firms just below the dominance threshold to avoid making efficient investments that could potentially result in them achieving a higher market share. Typically, barriers to entry/exit/expansion, the financial power of the company to behave independently, the durability of market power over a period of time or the existence of buyer power as a counterbalancing factor are key elements that need to be analyzed when establishing a dominant position.

The limitations in the current treatment of vertical restraints can disincentive efficient business models that encourage SME market participation. At present, a large share of vertical agreements is prohibited per se (Competition Law Article 11.2). This includes exclusive dealing, a practice that—in particular absent market power by any of the parties—may have significant benefits and offer an alternative to vertical integration. Even if Competition Law Article 12 offers a sort of block exception for vertical restraints that constitute “written commercial concessions”; agreements where none of the parties have more than 20 percent market share; and agreements where parties are not dominant and have less than RUB 400 million (around USD 6 million). These conditions remain nonetheless restrictive. As opposed to horizontal agreements, vertical agreements typically entail significant efficiencies as long as none of the parties holds a dominant position. Vertical restraints can reduce free riding at the downstream level and provide incentives for optimal investment into pre-sale services given that retailers can shift their costs to the upstream firm. A similar logic underlies moral hazard and hold-up problems. An upstream firm will want retailers to act in its best interest regarding price setting and sales efforts but cannot control for it. A vertical restraint can act as a mechanism to induce such efforts. As long as parties face enough competition, the efficiency-enhancing effects of vertical restraints typically outweigh any anti-competitive effect. However, a significant degree of market power by any of the parties will shift this balance. To that end, analyzing the specific circumstances of the case would be critical to understand both potential anticompetitive harm as well as potential efficiencies from vertical restraints.

239 See generally Telser (1960) re the use of resale price maintenance or territorial restrictions as a means to avoid free riding. However, similar effects are attached to quantity forcing devices such as single and multiproduct discounts.

240 Telser (1960)


242 The United States Supreme Court has, in the past decade, held that all intra-brand vertical restraints (those that restrain competition merely within the manufacturer’s brand) are subject to rule of reason rather than per se illegality analysis. This decision reflects the broad consensus among economists that many vertical agreements may be justified by procompetitive justifications and may not harm competition at all, but that some effects-oriented scrutiny remains justified. The EU provides a
The ability to grant exemptions to abuses of dominance may result in the permissive treatment of practices with unavoidable anticompetitive effects. Following successful international examples, Article 13 of the law establishes the possibility to grant exemptions to efficiency-enhancing agreements that do not constitute hard-core cartels. However, unlike most peer jurisdictions, the same Article also offers the possibility to exempt abuses of dominance. This is controversial since abuses could not be efficiency enhancing. In other words, if the practice at stake is efficiency enhancing and fulfils the other criteria under Competition Law Article 13.1, it should not be considered an abuse in the first place.

Extensive notification obligations might result in costly merger review process burdening not only the parties, but also the competition authority. Article 32 of the Competition Law of Russia contains an extremely detailed list of information that merging parties need to provide to notify a transaction that might excessively burden the private sector and increase the costs of doing business.

Finally, definitions in the Competition Law of Russia might result in the undue limitation of pro-competitive firm behavior. Defining terms prospectively can alleviate uncertainty in the business community, reduce litigation expenses, and prevent unfortunate unintended results. Nevertheless, definitions can also reduce the flexibility of the law to be adapted to changing circumstances. This has led many legislators to effectively delegate that responsibility to courts and competition agencies. In Russia, the definition section (Competition Law Article 4) is quite extensive and some of the current content might not be in line with international best practice and/or create problems in terms of implementation. This is the case, for example, of “unjustifiably high/low prices for financial services” (Competition Law Article 4.12) versus “competitive prices of financial services” (Competition Law Article 4.13) which are based upon subjective criteria as well as the notion of “signs of restrictive competition” (Competition Law Article 4.17) which encompasses a number of market effects that might not necessarily be related to anticompetitive practices of market operators. In this context, it is important to determine what the goal of defining these and other terms is and whether adding such definitions to the law implies a true value added for the overall Russian competition regulatory framework.

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block exemption regulation for vertical restraints as long as none of the parties has more than 30 percent market share and they do not contain certain types of severe restrictions of competition since they generally “lead to an improvement in production or distribution and allow consumers a fair share of the resulting benefits.” Another example is Article 3(4) of the Competition Law of India that includes different types of vertical agreements in the list of agreements where anticompetitive effects must be proven and are not merely presumed.
Two proxies are used for the quality of exports. The first proxy is the unit value (i.e., the monetary value divided by the physical weight). The focus is on a very narrow product definition, namely HS10 products. Although unit values are a commonly used proxy for product quality, they may be contaminated by high markups. Therefore, another proxy is used, a measure suggested by Khandelwal, Schott and Wei (2013) which builds on the work of Khandelwal (2010). The latter paper combines information on prices and physical quantities to infer quality, based on the insight that ability of an exporter to sell a larger quantity at a given price should imply higher quality. Both proxies are defined at the firm-product-destination-year level. The two measures of quality are tightly related. Across the sample, their correlation is 0.90 in levels and 0.78 in differences.

A firm is defined as foreign owned if the global ultimate owner (GUO) reported by ORBIS is foreign or if it has at least one foreign shareholder with more than 10 percent equity share.

Industry FDI presence is defined based on the standard formula used in the literature:

\[
Own FDI_{st} = \frac{\sum_{j \in J_s t} f_{jt} Y_{jt}}{\sum_{j \in J_s t} Y_{jt}}
\]

where \(j\) denotes firm, \(s\) 3-digit NACE sector and \(t\) year, \(f\) is an indicator variable for foreign owned firms and \(Y\) is the operating revenue. Given the limited availability of the ownership information, the measure \(Own FDI\) is available at two points in time, namely in 2012 and 2015.

In order to capture vertical spillovers from FDI in the input-sourcing sectors, the assumption is that a domestic firm is more likely to supply foreign affiliates and benefit from vertical spillovers if foreign affiliates account for a larger share of output in the downstream industries, i.e., industries supplied by the industry of the domestic firm as detailed in the 2011 Russian input-output table. Following Javorcik (2004), sales of inputs within the firm’s own sector are excluded because this effect is already captured by the \(Own FDI\) variable. This means that the proxy will be capturing a lower bound on the effect of FDI in the input-sourcing industries.

Similarly, access to inputs produced by foreign affiliates is proxied by assuming that a Russian firm is more likely to buy inputs from a foreign affiliate if foreign affiliates account for a larger share of output in the upstream industries, i.e., industries from which the industry of the domestic firm sources inputs. Input purchases within the same sector are excluded, so that the coefficient on \(Upstream FDI\) should be interpreted as a lower-bound estimate.

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243 In other words, high unit values may reflect high markups rather than superior quality.

244 A company’s GUO is the individual or entity at the top of the corporate ownership structure, controlling at least 25.01 percent of that company.

245 Capital from ‘tax havens’ is excluded when defining foreign ownership. The following countries are treated as ‘tax havens’: Anguilla, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Cook Islands, Curacao, Cyprus, Dominica, Gibraltar, Guernsey, Guyana, Hong Kong, Isle of Man, Jersey, Liberia, Lichtenstein, Luxembourg, Macao, Malta, Marshall Islands, Mauritius, Monaco, Montserrat, Nauru, Samoa, San Marino, Seychelles, Singapore, St. Kitts and Nevis, St. Vincent & Grenadines, Taiwan, Turks and Caicos Islands, US Virgin Islands.

246 The data used include ownership information for 2012, 2015 and 2016. Given the timing of the export data, the focus is on ownership in 2012 and 2015.