



European Bank
for Reconstruction and Development

DIVERSIFYING RUSSIA

Harnessing regional diversity





About this report

The EBRD seeks to foster transition towards open market-oriented economies and promote private entrepreneurial initiative in central and eastern Europe, the Baltic states, south-eastern Europe, the Commonwealth of Independent States and Mongolia. To perform this task effectively, the EBRD needs to understand the key remaining transition challenges that these countries face.

Russia, the largest economy where the EBRD operates, faces a very specific and difficult challenge – the task of diversifying its economy, ending its heavy reliance on exports of oil, gas and other minerals. This publication looks in detail at policies that can help to achieve economic diversification. It pays particular attention to Russia's regional diversity and uses evidence from a number of surveys conducted jointly by the EBRD and the World Bank, including the Business Environment and Enterprise Performance Survey and the Life in Transition Survey.

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Preface

Breaking dependence on natural resources

As much of the rest of the world struggles to cope with the fragmentation of manufacturing value chains and strives to move up the value-added ladder, Russia continues to rely on a largely commodity-based growth model. But for all its extraordinary endowments, the country does not have sufficient reserves to sustain economic growth solely on the basis of the extraction and refinement of natural resources. And even if it did, international experience suggests that commodity-based policies lead to weaker growth in the longer term. Moreover, such policies are very often associated with weak institutions and unequal distribution of income and wealth.

A range of policies have been tried with a view to diversifying the Russian economy. The pioneering Gref programme under the first Putin administration contained a broad range of measures designed to stimulate both the entry of new firms and the growth of existing small and medium-sized enterprises. Putin's second term saw determined state-led efforts to stimulate innovation and kick-start strategic non-commodity industries. The Medvedev presidency was then marked by the global financial crisis. While it broadly curtailed direct aid to specific sectors, the balance sheets of state-backed financial institutions expanded dramatically. President Medvedev also launched a number of high-profile initiatives aimed at stimulating innovation.

Despite these efforts, the Russian economy is arguably more dependent on natural resources today than it was at the turn of the millennium. The government's heavy investment in the promotion of high-tech industries has yielded only limited results. While China and India have both managed to dramatically increase the percentage of exports of goods and services accounted for by information and communication technology, the corresponding shares have hardly changed at all in Russia. Barely 20 per cent of Russia's manufacturing exports are products with high skill content.

President Putin has now been elected for a third term and a new government is in place. This report takes a close look at the challenges that the new administration faces, basing its assessment on a unique dataset drawn from a range of recent surveys and literature. Based on a research project involving a large team of Russian and international economists, it sheds light on the strengths and weaknesses of the measures attempted to date and outlines the key elements of a strategy to diversify the Russian economy. While there is no "silver bullet", the report puts forward a combination of "horizontal" policies aimed at improving the general climate for innovation and broad-based growth and "vertical" policies tweaking existing state-led initiatives in order to increase the likelihood of diversification succeeding.

Horizontal policies should focus on improving the general business environment in the country. Given that Russia is commonly depicted as a centrally run monolith, the extraordinary variation in the business environment across the country's regions is striking. This diversity suggests that policy initiatives

at the federal level will face serious challenges, but also that institutional development could be promoted through the transfer of experience and competition between regions. That opportunity has not been lost on the government, and considerable effort has recently gone into improving the measurement of performance and strengthening incentives for regions to improve the local investment climate. The report strongly endorses this approach and suggests ways in which this could be developed further. It also suggests means of strengthening the implementation of federal reforms at the regional and local levels – namely improvements in the transparency of local government and the establishment of feedback mechanisms for businesses and individual citizens.

Federal policies must also place greater emphasis on skill formation. Russia has a long tradition of high-level research and a culture of excellence in its secondary schools and universities. However, the overall quality of education still does not compare to that seen in the world's finest education systems and there are strong signs that it has deteriorated over the last decade. More needs to be done to link education with the needs of industry, and industry must be given incentives to improve vocational training. Importantly, Russia also needs to open its borders to skilled migrants.

Generally, access to finance has improved in Russia, but there are still significant financing gaps at the initial stage of the innovation cycle. The government should aim to take minority stakes in privately managed funds, rather than attempting to launch or majority-own investment funds. The grant programme run by the Russian Foundation for Basic Research is an important step forward in terms of achieving a more effective allocation of resources. Private-sector participation in the governance of such programmes is critical in bridging the divide between universities and industry.

Harnessing potential

Much of the debate about innovation in Russia concerns the issue of finding resources. Consequently, people often overlook the fact that demand for innovation is also critical. Companies and organisations must have incentives to innovate. Much of this demand comes from firms competing on the international stage. In Russia, the number of exporting firms is very small, as the economy is dominated by government and monopolies – and government monopolies – with limited pressure to innovate. This vicious circle of small numbers of internationally competitive companies, limited pressure to innovate and little need to innovate needs to be broken.

Given the extent of these challenges, it is understandable that successive Russian governments have tried state-led policy initiatives with a view to breaking the country's dependence on natural resources. The report discusses several of these projects and develops some general principles to bear in mind when



assessing and potentially modifying them. The overall objective must be to harness the state's catalytic potential while ensuring that decisions are made in a transparent way and ultimately lead to a sustainable structure consistent with a well-functioning market economy. This requires engagement with private investors at an early stage and a willingness to ultimately cede full control to the private sector.

The EBRD has tried to play a role in some of these state-led projects and could get involved in future projects in order to promote these objectives. We worked with the Russian Venture Company at an early stage and have recently engaged in fruitful cooperation with Rusnano and Vnesheconombank (VEB) on the basis of memoranda of understanding. I will now sketch out a way forward for the major state-led initiatives on the basis of this report and the EBRD's own experience.

The Russian Venture Company, which was originally modelled on the successful state-led formation of a venture capital industry in Israel, experienced serious problems when it was first established. It has since gone through a series of different guises, but has now returned to its original format as a fund of funds and currently backs 12 funds investing in more than 100 companies. The emphasis here must be on creating transparent governance and bringing in private investors, preferably investors with significant international experience.

The highly ambitious Rusnano, which was originally founded in order to foster the establishment of a high-tech niche in the nanotechnology industry, was transformed into a national innovation framework by its dynamic CEO Anatoly Chubais. While the design of this national framework might have been somewhat different had it been conceived as such from the very beginning, Rusnano now has strong management and significant capital,

and has attracted some of the finest talent in the country. Its management aspires to follow international best practices in terms of investment standards and has declared its intention to eventually privatise the fund. The immediate aim is to bring in external investors and open up its governance, but the long-term objective must be for the government to reduce its stake to less than 50 per cent of the fund's share capital.

VEB has rapidly expanded its activities since it was re-formed as Russia's state development bank around five years ago. Since then, its management has been striving to build competence and adopt state-of-the-art procedures for investment.

Understandably, the government uses the bank to solve specific problems, using VEB even more than the majority state-owned commercial banks. However, VEB should also continue seeking to co-invest alongside private-sector investors in order to enhance both transparency and investment practices.

Investing in innovation

The most recent of these high-profile state-led initiatives is VEB's Direct Investment Fund, which was set up with a view to co-investing alongside leading international investors. The Direct Investment Fund has established informal links with a number of highly qualified potential co-investors and has now made its first investments. It has invested, alongside private partners, in the unified Moscow Stock Exchange and the power generating company OGLK-5. However, it is still too early to say how successful it will be in meeting its objective of generating significant foreign direct investment across a range of sectors. Nevertheless, having competent management and now a stronger supervisory board and international advisory board increases its chances of eventually finding experienced international private-sector partners who can help to attract skills and foster innovation.

Finally, Skolkovo Innovation City – the “Russian Silicon Valley” – is probably the most high-profile and ambitious government project fostering innovation and diversification. The Massachusetts Institute of Technology has been contracted to build a local campus, attracting investment from some of Russia's finest research universities. A number of global leaders in high-tech industries have pledged to help build five science clusters. Tax and other legal exemptions have been granted, creating an attractive environment for investing companies. However, efforts should be made to extend these conditions to the rest of the country.

Getting these state-led initiatives to deliver will take significant effort and resources, and success is not guaranteed. Ultimately, the success of Russia's diversification efforts rests on its ability to harness the country's tremendous regional diversity, improve the overall business environment and re-establish educational excellence on a par with advanced economies. Only then will Russian and foreign investors commit sufficient capital and skills to break the country's dependence on natural resources.

A handwritten signature in black ink, appearing to read 'Erik Berglöf'.

Erik Berglöf
Chief Economist
EBRD

Overview

Leveraging regional diversity for economic growth

Sustainable long-term growth in Russia requires economic diversification to reduce the country's dependence on natural resources. To achieve this, Russia needs to broaden and refocus its diversification strategy. This requires much greater efforts to improve education and skills, as well as the business environment, at both the regional and the national level. Russia's enormous regional diversity can be leveraged in order to achieve these aims. While there is also a need for targeted policies in support of innovation, these should focus on improving incentives for market-relevant research and development and complementing private sector-led sources of finance for early-stage firms.

1. Introduction

Few discussions of Russia's economic policy in the last decade have neglected to refer to the need for the country to alter the composition of output and trade. Sometimes the policy objective has been termed "diversification", and on other occasions it has been called "modernisation". But whatever the terminology used, Russian policy-makers have always stressed that a radical shift away from a natural resource-based economy is a central policy goal. During the 2012 presidential campaign, former and future president Vladimir Putin reaffirmed the Russian authorities' commitment to stimulating the non-commodity sectors of the economy, improving the business climate and making the economy more attractive for foreign direct investment (FDI). At the same time, he conceded that, despite significant reform initiatives over a number of years, "until now, no significant change has occurred".¹

Indeed, in 2012 Russia remains highly dependent on its natural resources. Oil and gas now account for nearly 70 per cent of total goods exports, and the structure of exports has narrowed somewhat since the mid-1990s. Oil and gas revenues also contribute around half of the federal budget. The non-oil fiscal deficit has averaged more than 11 per cent of GDP since 2009, while the oil price consistent with a balanced budget is now in the region of US\$ 115 per barrel and rising. The economy also remains highly energy-intensive, not least because of the persistent under-pricing of energy seen until recently. And unlike other leading emerging markets, Russia has failed to sustain large inflows of capital and much-needed FDI. In 2011 capital flight totalled more than US\$ 80 billion.

This report seeks to understand why more progress has not been made, basing its assessment on careful analysis of potential barriers to successful diversification in Russia. It reaches three main conclusions. First, despite significant efforts to improve the business environment and strengthen competition in Russia, implementation in this area has not been particularly successful because top-down reform initiatives have paid insufficient attention to the enforcement of new laws and regulations, particularly at the regional and local levels. Second, government initiatives aiming to develop new high-technology sectors have had a disproportionate focus on the funding of innovation, but neglected skills and education, which are essential for structural change. Third, while a case can be made for the state having a role in the promotion of innovation, the government's interpretation and implementation of this role has, for the most part, been skewed, with insufficient emphasis on areas such as improvements in the quality of government-

¹ Vladimir Putin, "Russia needs more technology and less corruption", FT Beyond BRICS, 30 January 2012.

funded research, incentives to commercialise this research, and the development of private sources of early-stage and innovation financing.

Progress in these areas is challenging, but by no means impossible. Indeed, the shortcomings identified in this report have increasingly been recognised by the Russian authorities themselves, who have begun to broaden and adjust their diversification strategy as a result. State-led efforts to promote innovation have been extended in the last two years. There has been a greater emphasis on skills, efforts have been made to attract foreign co-financing, and a broader view has been taken of the sectors that are worth funding. In addition, new and promising efforts are being made, led by the Agency for Strategic Initiatives, with a view to improving the business environment.

The report contains a number of specific ideas and recommendations that could be of assistance in the next phase of Russia's diversification efforts. These are summarised below. Beyond these specifics, a recurring theme in this report relates to Russia's enormous regional diversity, which we document in some detail. From the perspective of reform efforts, this can complicate matters, but also represents an opportunity. There are opportunities, for example, in the area of skills and education, where regions can (and have begun to) collaborate with companies in setting up training programmes, or with regard to the business environment, where regions (particularly regions that are not rich in natural resources) may have (or be given) incentives to compete. Furthermore, the gap between federal legislation and regional implementation can be helpful if

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it is used to establish federal rules that monitor and incentivise implementation – particularly by fostering transparency and creating feedback mechanisms for both businesses and individuals.

The report is based on a host of evidence collected in Russia over the past decade, particularly the last three years. Perhaps the most important contribution in this respect lies in its harnessing of evidence from Russia's regions. This includes evidence on the regional implementation of federal legislation designed to foster firm entry, which is based on annual surveys conducted by the Centre for Economic and Financial Research (CEFIR) since autumn 2002 for 20 of Russia's regions. The report



also draws on a new nationally and regionally representative survey of the business environment and firms' performance, which was conducted by the EBRD and the World Bank in 2011-12 and looked at the situation in 37 Russian regions.

The remainder of this overview summarises the main findings of the report, sometimes combining material from a number of chapters, but broadly retaining the sequence in which analysis is presented in the main report. A concluding section describes the main policy implications.

2. Why diversify?

There is no strong economic argument as to why diversification is necessarily advantageous. Indeed, most policy discussions relating to countries' economic strategies are concerned with specialisation – more precisely, the question of how to achieve more productive specialisation. Empirical evidence suggests that specialisation is most pronounced at either end of the income spectrum. When countries are rich, they tend to be more highly specialised, but the same is true of countries that are poor and largely agricultural. Middle-income countries such as Russia, however, tend to be more diversified in terms of both output structures and trade. Cross-country evidence indicates that specialisation begins occurring, on average, at an income level that is significantly higher – around 65 per cent higher – than that currently seen in Russia.

In a nutshell, the argument in favour of diversifying Russia lies in the fact that excessive dependence on the natural resource sector – Russia's main area of specialisation at present – is undesirable. Thus, diversification is necessary as an intermediate stage allowing the development of new industrial capabilities, potentially providing a platform for future specialisation in Russia. These areas should initially complement – and in time replace – natural resources as the main driver of Russia's growth. Underlying this view is a body of international evidence suggesting that, while natural resources can play an important role in giving societies a developmental "push", they are rarely associated with strong long-term growth. They are also less likely to create jobs, given the high capital intensity typically observed in natural resource sectors. In addition, Russia's natural resource wealth may not be large enough to achieve and sustain high levels of per capita income in the long term. New deposits may be discovered in the future, but these are likely to be in remote, inhospitable areas with high extraction and transportation costs.

There are two main reasons why exports of natural resources may not be conducive to growth in the long run. First, fluctuations in commodity prices result in macroeconomic volatility, which discourages investment across the economy, not just in the natural resource sector. Second, and most importantly, it is much more difficult to improve the business climate if the economy is dependent on natural resources, as the presence of natural resource revenues encourages rent-seeking behaviour and weakens constituencies that support institutional reform. This, in turn, undermines growth in non-commodity sectors.

Hence, diversification is necessary as a means of improving the business environment. But a better business environment is also a necessary precondition (although by no means the only one) for diversification. In the conclusion, we return to the central question of how Russia can break out of this vicious circle.

3. How diversified is Russia?

Russia's output structure may, at first sight, appear to be reasonably diversified. However, the export structure – which indicates the areas in which a country's products are competitive in international markets and, to some extent, predicts a country's growth potential – tells a different story. Not only are Russian exports highly concentrated in natural resources, this concentration has increased over time: the shares of oil, gas and other minerals in Russia's exports are higher today than they were 15 years ago. This is partly a reflection of higher international commodity prices, but even when measured using constant prices, the share of commodity exports has, if anything, increased somewhat over the years.

As a result, the range of exported goods where Russia enjoys a comparative advantage is limited at present. Moreover, it is concentrated in product areas that are poorly connected to potential new higher-value-added exports in terms of the technological inputs and skills required to produce them. This makes economic diversification particularly challenging and may provide a rationale for an active role on the part of the state. It highlights, in particular, the need to pursue policies that will help to establish a much broader skill base, with a view to successfully bridging the gap between the existing skill set and the skill set needed in order to move over to innovative exports (a gap that exists in terms of both technical skills and management skills).

Analysis at regional level suggests that specialisation has also been on the rise within individual regions. However, diversification at the level of Russia as a whole does not necessarily require economic diversification in individual regions. On the contrary, Russia's enormous regional diversity could be leveraged in order to achieve economic diversification, as individual regions develop their own comparative advantages and specialise with a view to reaping the economic benefits of clustering.

That said, the experience of the last two decades suggests that such discovery of new comparative advantages may not



potentially be applied in parts of Russia. The one thing that these different approaches have in common is their willingness to tolerate greater diversity in the supply of education, often with the state remaining responsible for the provision of finance and oversight of the curriculum. In certain regions, there is already evidence of some such steps being taken. In Kaluga, where an automotive cluster has been formed, investors have been hampered by the poor state of the vocational training system. In response, they have joined forces with the regional government to set up training centres. These are largely state-funded, but have also received financial support from the firms in question. Complementary measures – such as tax incentives encouraging workers and firms to take up training opportunities – can also be helpful.

At the same time, the significant skills gaps that the report documents could, in part, be addressed by means of a more flexible and open set of migration policies. At present, Russia operates a restrictive migration regime, which, combined with linguistic and cultural barriers, strongly limits the employment of highly skilled migrants. While other countries actively seek to attract talent, Russia has effectively spurned this option, leaving other countries (with some degree of success) to attract Russian talent instead.

6. Fostering and funding innovation

Since the mid-2000s, the Russian government's modernisation strategy has focused heavily on the promotion of innovation, particularly in high-technology areas, using a set of policy instruments – such as technology parks and dedicated non-bank financing vehicles – that have been adopted fairly widely in other countries. However, despite pockets of success, survey and other evidence suggests that although incumbent firms do introduce new products and processes (which may occasionally be associated with productivity improvements), there is still a real paucity of entrants and survivors in innovative sectors, notably in the high-technology areas that the government has targeted.

There are a number of reasons why innovation – particularly the shift towards new, higher-value-added areas of activity – has not yet taken off in Russia. For a start, the supply of high-quality research from public-sector institutions remains limited and is unlikely to improve in the foreseeable future. Until recently, little attention was paid to the critical need to link research with demand in the market. Indeed, for research conducted in public institutions, the incentives and vehicles facilitating this process have been largely absent. The legal framework has recently begun to evolve in the right direction, but recent changes are yet to yield results. The incentives for private companies to invest in research and development (R&D) also remain limited, whether in terms of tax or because of the general nature of the business environment. There is clearly scope for further fiscal incentives for innovation, so long as these remain simple in terms of design and target specific activities, rather than broad sectors.

Moreover, an economy's ability to innovate will always be determined by the skills and capabilities available, which are, in turn, fundamentally shaped by its education and training system. In Russia, as noted above, the quality of education and training has failed to improve – and has, in some instances, deteriorated. The quality of management is also likely to have had an adverse impact. In this respect, experience in other countries shows unequivocally that foreign companies tend to be major drivers of innovation, often in collaboration with local companies. The

scarcity of this kind of investment in Russia has, predictably, had a detrimental impact.

The Russian government's approach is based on the view that the lack of innovation reflects a market failure that is best addressed by means of appropriate public policy. This initially saw the directing and funding of innovation in certain predetermined sectors and technologies (such as nanotechnology). More recently, though, effective eligibility criteria have been relaxed in order to cover a wider range of areas. Such "vertical" or "sectoral" industrial policies have, however, had very mixed results in other countries, particularly when the emphasis has been on public-sector functions, rather than facilitating collaboration between the private and public sectors. This can be seen most clearly in the financing of innovation. Recently, greater attention has been paid to establishing a business environment that facilitates innovation, but reforms in this area remain incomplete and are yet to bear fruit.

The cornerstone of public policy in the field of innovation has been the provision of public funding. The most prominent examples of such policy efforts are Rusnano, a state-owned fund co-financing investment projects in the nanotechnology sector, and initiatives such as the Russian Venture Company and the Direct Investment Fund. As in other countries, the profile of the companies supported by means of government funding looks to be skewed towards relatively mature, low-risk activity, rather than truly innovative activity. This may be perfectly consistent with both commercial viability and the objective of modernising the relevant industry, but may not necessarily address the perceived shortfall in terms of innovation.

Although government finance has occasionally proved to be a successful catalyst, fostering innovation and, in particular, the growth of a venture capital industry, for every Israel there are countless examples of countries that have tried and failed to use and manage public resources in the service of innovation and/or diversification. Furthermore, most successful instances of government involvement in venture finance have seen governments investing in privately managed funds. In Russia, the usual risks surrounding government involvement in venture funding will need to be managed carefully. These include a lack of transparency, an absence of neutrality when allocating resources, the introduction of multiple objectives and weak governance. Recently, attempts have been made to mitigate such risks by strengthening the governance of state-sponsored financing vehicles and seeking to co-finance projects with foreign strategic and institutional investors.

An economy's ability to innovate will always be determined by the skills and capabilities available, which are, in turn, shaped by its education and training system.



A further question concerns the impact that such public funding of innovation has on private-sector funding and investment. At this stage, it is not possible to see with any accuracy whether recent initiatives have led to additional investment in R&D or pushed out private investment and funding. Given the scale of the resources invested in Rusnano, it is likely that some crowding-out has occurred. However, this experiment with public venture funding is a relatively recent development, so it is difficult – if not impossible – to evaluate at this stage. It will be important in the future for an open, rigorous and independent evaluation of these public venture funds' activities to be carried out and for the government to send a signal affirming its intention to gradually cede majority ownership of entities such as Rusnano to private investors.

Furthermore, evidence indicates that private-sector funding for early-stage companies or initiatives in Russia is largely – if not entirely – absent. Early-stage investing, as practised in some advanced economies by “angel investors” and spin-offs from multinational firms, is still largely lacking in Russia. The fact that this remains the case may be directly related to the wider factors that have, among other things, deterred multinational firms from operating in Russia and undermined incentives for private agents to invest in local ventures.

Although incumbent Russian firms, including SMEs, have had greater access to organised credit (principally through bank finance), external funding for R&D can still be highly problematic. At the same time, specialist finance for start-ups and small innovative firms has remained very scarce. To address these limitations, small grants for researchers could be complemented by grants for entrepreneurs. Taking an idea to market depends

not just on the quality of the innovation, but also on the business model and the strategy adopted. Consequently, small grants at an early stage can be particularly beneficial if they provide entrepreneurs with access to business support services and advice. The constraining factor in Russia, as in many emerging markets, remains the fact that this support is limited and/or skewed mainly towards the provision of physical infrastructure (such as industrial or techno-parks). Rather than trying to direct matters through a government agency or ministry, a better solution would be to establish an independent authority with governance shared between the government (as the initial provider of funding) and representatives of the private sector in the form of both local and international firms. It is obviously essential that the procedure followed when allocating grants be transparent, expeditious and subject to oversight and subsequent evaluation.

Although innovators need assurances that funding will remain available throughout the cycle, their ability to securely derive rents from their innovation is also a critical consideration. Patent protection and the ability to enforce contracts play a central role in this regard. In neither instance is the situation in Russia particularly supportive. In this context, legislation passed in December 2011 with a view to establishing an intellectual property rights court by 2013 is a step in the right direction.

7. Conclusion

The Russian government is right to make economic diversification and modernisation a high priority. Moreover, this report agrees that the state has an important role to play in supporting the diversification of the economy. At the same time, the report also shows that, despite significant state-led efforts since the mid-2000s, the Russian economy has not diversified, many sectors continue to suffer low levels of productivity, and shifts into higher-value-added activities have been limited. In particular, attempts to establish competitive high-technology sectors – not least by means of state support – have, as yet, borne relatively little fruit. And in the arena that provides the greatest incentives for innovation and the toughest test of viability – export markets – the evidence shows that relatively few Russian firms compete internationally, with very few doing so in higher-value-added sectors.

Diversification in Russia has had limited success so far, partly because reform efforts have not been able to effectively address fundamental obstacles to private sector-led firm entry, innovation and growth, and partly because state-led innovation initiatives have been slow to address impediments to innovation outside their main focus area (namely the funding of high-technology projects). If it is to be successful, Russia's modernisation strategy must be both adjusted and broadened.

First, the state must adjust its focus with respect to direct support for innovation. While access to finance has generally improved in Russia, financing gaps at the earliest stage of the innovation cycle show that there is no alternative to the development of a private venture funding industry. To achieve this, the state must stop taking centre stage when it comes to the financing of innovation and take up a supporting role. Looking at experience in other countries, governments' involvement in venture finance has been most successful when they have taken minority stakes in privately managed funds, rather than attempting to start or majority-own investment funds. Grant programmes (such as the programme run by the Russian Foundation for Basic Research) can be useful, particularly if they are also directed at entrepreneurs, rather than just research activities. International experience suggests that such programmes work best if they are subject to a governance structure that includes strong private-sector representation. And beyond the provision of finance, there remains significant scope for enhancing both private and public-sector incentives encouraging market-relevant R&D – for example, by adjusting the way that R&D expenditure is treated for tax purposes, by providing researchers in government-funded institutions with a wider range of options as regards the commercialisation of their inventions, and by improving the quality of public-sector research.

Second, the government's modernisation strategy needs to place greater emphasis on education and skills. The evidence in this report points to a deterioration in the quality of skills and human capital, including a limited supply of high-quality management skills. This particularly affects innovative companies. Although limiting or eradicating these constraints is far from straightforward – particularly in a very large country with significant regional variation – the broad policy direction and options are fairly well understood. They involve decentralisation, empowerment and the diversification of supply. This need not imply privatisation (as greater diversity in the supply of education can be reconciled with state funding and government oversight of the curriculum), merely a move away from a purely public-sector operation. Transparency through public participation and feedback mechanisms – not least input from potential future employers – is also essential.

Last, but not least, the role of the state needs to be reduced or refocused in those areas where it currently has the most detrimental impact on firm entry and growth – namely, all areas where there is the potential for corruption and other forms of rent-seeking (including licensing, inspections, tax administration and customs). Effective reform in this area is difficult, as it involves the state reforming itself – akin to a man pulling himself up by his own bootstraps. This is hard to achieve in any country, but is particularly difficult – as research shows – in countries with significant revenues from natural resources.

Russia's best hope in this and other areas (such as skill creation) may be its regional diversity and opportunities to exploit the relationship between its federal and regional levels of government. Regional diversity can lead to competition on the basis of the quality of local government, particularly for regions that are not rich in natural resources and are therefore dependent for their revenues on the creation of vibrant non-commodity-related tax bases. Constructive competition between regions can be further incentivised through mechanisms for the allocation of federal transfers. Reforms at the federal level can also be used to limit rent-seeking at the regional level. Indeed, this was the intention of laws passed in the early and mid-2000s aimed at liberalising firm entry and reducing inspection requirements. With respect to such reform efforts, the main conclusion of this report is that top-down legislation is not enough. It needs to be supplemented by a strategy promoting enforcement. The single most important tool in this respect is transparency – the establishment of information channels that monitor enforcement and invite public feedback. By the same token, the roadmaps for the improvement of the business environment that are currently being drawn up by the government's Agency for Strategic Initiatives are a promising development, but it is crucial that this initiative be extended right down to the level of individual regions – work that is now beginning.

In time, efforts along the lines described in the previous paragraph should bear fruit beyond the confines of economic diversification by improving the quality of government institutions. This will, in turn, have a broader impact on growth and the general quality of life in Russia. There is little reason to question the old adage of an open society being best suited to creative and productive activity. To paraphrase former president Dmitry Medvedev, "the task is to create a country that Russians themselves want to live in".

The Russian government
is right to make
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Box 3.2 was prepared by Mykhailo Oliinyk.

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