

110765-RU

DOCUMENT OF
THE WORLD BANK GROUP

FOR OFFICIAL USE ONLY

RUSSIAN FEDERATION
SYSTEMATIC COUNTRY DIAGNOSTIC: PATHWAYS TO INCLUSIVE GROWTH

DECEMBER 16, 2016
EUROPE AND CENTRAL ASIA REGION

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS

Exchange Rate Effective December 6, 2016

Currency Unit – Ruble

US\$ 1 = Ruble 63.9242

FISCAL YEAR

[January 1 – December 31]

ABBREVIATIONS AND ACRONYMS

ALMP	Active labor market programs	GCI	Global Competitiveness Index
ANS	Adjusted net savings	GDP	Gross domestic product
ASI	Agency for Strategic Initiatives	GOST	State standard (<i>gosudarstvennyy standart</i> in Russian)
AVTODOR	Russian Highways State Company	GNRI	Global Networked Readiness Index
B40	Bottom 40 percent of the income distribution	GMM	Generalized Method of Moments statistical methodology
BEEPS	Business Environment and Enterprise Performance Survey	GRECO	Group of States against Corruption
BRICS	Brazil, Russia, India, China, and South Africa (emerging economies)	GVC	Global value chains
CBR	Central Bank of Russia	HBS	Household Budget Survey
CIT	Corporate income tax	ICT	Information and communications technology
ECD	Early childhood development	IEA	International Education Association
DAI	Digital Adoption Index	IFC	International Finance Corporation
DIA	Deposit Insurance Authority	IFFs	Illicit financial flows
EACU	Eurasian Customs Union	IFRS	International Financial Reporting Standards
EBRD	European Bank for Reconstruction and Development	INDC	Intended Nationally Determined Contributions
ECA	Eastern and Central Europe	IT	Information technology
EEU	Eurasian Economic Union	LCA	Latent class analysis
FAS	Federal Antimonopoly Service	LFS	Labor Force Survey
FBS	Federal Bailiff Service	LITS	Life in Transition Survey
FDI	Foreign direct investment	LNG	Liquefied natural gas
FTS	Federal Tax Service	LPI	Logistics Performance Index
MFN	Most favored nation	RVC	Russia Venture Corporation
MIGA	Multilateral Investment Guarantee Agency	RZD	National railway company
NCD	Noncommunicable disease	SCD	Systematic Country Diagnostic
NDC	National Defined Contribution	SEZ	Special economic zone

NPLs	Nonperforming loans	SMEs	Small-and medium-sized enterprises
NTB	Nontariff barriers	SOE	State-owned enterprise
NTM	Nontariff measure	SPS	Sanitary and phytosanitary
OECD	Organization for Economic Co-operation and Development	STI	Science, Technology, and Innovation
OOP	Out-of-pocket	T60	Top 60 percent of the income distribution
PAYG	Pay as you go	TBT	Technical Barriers to Trade
PCM	Price-cost margin	TFP	Total factor productivity
PIACC	Program for the International Assessment of Adult Competencies	TFPQ	Physical TFP
PIRLS	Progress in International Reading Literacy	TFPR	Revenue TFP
PISA	Program of International Student Assessment	TVET	Technical and vocational education and training
PIT	Personal income tax	VAT	Value-added tax
PPP	Purchasing power parity	VEB	Vnesheconombank
PPPs	Public-private partnerships	WDI	World Development Indicators
R&D	Research and development	WTO	World Trade Organization
RLMS	Russia Longitudinal Monitoring Survey		

IBRD	IFC
Regional Vice President: Cyril Muller Country Director: Andras Horvai Senior Director: Carlos Felipe Jaramillo/Ana Revenga Practice Manager: Miria Pigato/Carolina Sanchez Task Team Leader: Birgit Hansl/ Emily Sinnott	Global Client Services Vice President: Dimitris Tsitsiragos Regional Director: Tomasz Telma Regional Strategy Head: George Konda Task Team Leader: Iuliia Mironova

Acknowledgments

The Russian Federation Systematic Diagnostic: Pathways to Inclusive Growth was written by a team co-led by Birgit Hansl (Lead Economist) and Emily Sinnott (Senior Economist). It was prepared by a team from across the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC), under the guidance of Cyril Muller (Vice President, Europe and Central Asia), Dimitris Tsitsiragos (Vice President, Global Client Services, IFC), Andras Horvai (Country Director) and Tomasz Telma (Regional Director, IFC). The IFC contributions to the report were provided by a team from industry and advisory services departments led by Iuliia Mironova (Strategy Officer, IFC). Dorota Nowak (Country Program Coordinator) and George Konda (Regional Strategy Head, Principal Economist, IFC) provided guidance and support throughout the process.

The team appreciates the advice received throughout the preparation process from Ana Revenga (Deputy Chief Economist), Satu Kahkonen (Director), Miria Pigato (Practice Manager) and Carolina Sanchez Paramo (Practice Manager). Ambar Narayan (Lead Economist) from the SCD Advisory Group provided valuable insights on the report. We also thank the peer reviewers: Deborah Wetzel (Senior Director); Sergei Shatalov (Lead Strategy Officer); Luis-Felipe Lopez-Calva (Lead Economist); and Nancy Benjamin (Senior Country Economist) for their excellent comments and inputs.

Many staff contributed to this report, with inputs to specific chapters as well as the preparation of a series of background papers that helped inform this comprehensive diagnostic.

Chapter 1: Macroeconomic and Shared Prosperity Trends was led by Birgit Hansl and Emily Sinnott, with contributions from Aurelien Kruse (GMF09); Giorgia Demarchi (GPVGE); Mikhail Matytsin (GPV03); Markus Brueckner (GMF04); Olga Emelyanova (GMF09); and Irina Rostovtseva (ECCU1).

Chapter 2: Pathway One: Increasing Productivity for Diversified Growth was led by Birgit Hansl, with inputs from Sylvie Bossoutrot, (ECCU1); Rolf Behrndt (GMF09); Iuliia Mironova (CBCCE); Sergei Mytarev (CNGF8); Michael Edwards (GFM09); Juan Navas-Sabater (GTI09); Carlo Maria Rossotto (GTI11), Ana Paula Cusolito (GTCIE); Aurelien Kruse (GMF09); Mustapha Benmaamar (GTI03); Jung Eun Oh (GTI02); Daniel Alberto Benitez (GTI04); Natalija Gelvanovska (GTI09); Sanju Vaswani (CTTTT); Oleg Petrov (GTI09); Alexey Zhikharev (CA SEE); Justin Piers William Hill (GTCIE); Ljudmilla Poznanskaya (GTC10); Georgiana Pop (GTCTC); Gregory Kisunko (GGO15); Katerina Levitanskaya (GFM09); Kirill Vasiliev (GED03); Hernan Winkler (ECACE); Evgenia Epaneshnikova (GTI03); Tatyana Ponomareva (GTC10); Yanina Ermakova (ECCU1); Aleksandra Durova (GTI03); Mikhail Bunchuk (ECCU1); Olga Emelyanova (GMF09); Irina Rostovtseva (ECCU1); Greg Alton (CFG8); Kristina Turilova (CASSC) and Antonio Skarica (CBCCE).

Chapter 3: Pathway Two: Reducing Vulnerability by Deepening Human Capital Gains and Improving Access to Services was led by Emily Sinnott, with inputs from Aleksandra Posarac (GSP03); Ruslan Yemtsov (GSPDR); Zoran Anusic (GSP03); Aparnaa Somanathan (GHN03); Giorgia Demarchi (GPVGE); Sevil Salakhutdinova (GHN03); Mikhail Matytsin (GPV03), Dmitry Chugunov (GED03) Tigran Shmis (GED03) and Sergey Kozhukhov (CMGCS).

Chapter 4: Requisites: Fiscal Sustainability, Good Governance and Better Natural Resource Management was led by Birgit Hansl, with inputs from Amitabha Mukherjee (GGO15); Iuliia Mironova (CBCCE); Emilia Battaglini (GEN03); Marianne Grosclaude (GFA03); Aurelien Kruse (GMF09); Artavazd Hakobyan (GFA03); Rajul Awasthi (GGO28); Vladislava Nemova (GEN03); Eva Maria Melis (GGO15), Olga Emelyanova (GMF09), Simon Commander (ECACE); Izzah Akram Malik (GGO18), Natalia Kosheleva (CRKEU); Marina Frolova (CEUSB); Olga Schwartz (GGO15) and Irina Rostovtseva (ECCU1).

Chapter 5: Policy Priorities and Actions was prepared by Giorgia Demarchi (GPVGE); Emily Sinnott; Birgit Hansl, with support from Irina Rostovtseva (ECCU1).

The team would like to thank our counterparts in the Government of the Russian Federation, the private sector, academia and civil society, members of the World Bank Russia Country Team from all the World Bank Group Global Practices, and the IFC, who have participated in two substantive consultation events, and several follow-up meetings. We benefited greatly from their expertise and inputs in various forms.

TABLE OF CONTENTS

Overview	9
Setting the Stage	9
Pathway One: Increasing Productivity to Diversify Growth	13
Pathway Two: Deepening Human Capital Gains and Improving Access to Services.....	17
Requisites for Sustained, Inclusive Growth: Fiscal Sustainability, Good Governance, and Improved Management of Natural Resources	22
Policy Priorities Emerging from the Diagnostic.....	27
Chapter 1. Macroeconomic and Shared Prosperity Trends.....	31
Introduction.....	31
Macroeconomic Stability during the Commodity Boom.....	33
The Foundations of Stability and Growth.....	33
Gains from the Commodity Boom and Sound Macroeconomic Management	34
Russia’s Growth Drivers and Vulnerabilities.....	39
Macroeconomic Challenges after the Commodity Boom	41
Responding to a New Crisis	41
Emerging Risks to Macroeconomic Stability and Growth	43
Shared Prosperity during the Commodity Boom	50
Shared Prosperity after the Commodity Boom.....	54
Profile of the Poor and the Bottom 40 percent	59
Conclusion	64
Chapter 2. Pathway One: Increasing Productivity for Diversified Growth	67
Introduction.....	67
Evidence and Lessons from Past Productivity Growth.....	69
Benchmarking Russia’s Productivity	69
Productivity Dynamics	71
Economy-wide Productivity Constraints: Physical Infrastructure, Connectivity, and Energy.....	73
Physical Infrastructure Challenges.....	73
Connectivity: Transport, Logistics, and ICT.....	77
Energy: Electricity, Oil, and Gas	82
Economy-wide Productivity Constraints: Trade and Market Distortions	87
International Trade and FDI Competitiveness.....	87
Domestic Regulations and Competition	92
Access to Finance.....	97
Firm-level Productivity Constraints: Innovation Activity and Capacity	100
Innovation Challenges	100
Innovation Support System and Policy.....	104
Individual-Level Productivity Constraints: Skills.....	105
The Widening Skills Gap.....	105
Skills Development Policies	107
Conclusion	108
Chapter 3. Pathway Two: Reducing Vulnerability by Deepening Human Capital Gains and Improving Access to Services.....	111
Introduction.....	111

Restoring the Role of the Labor Market in Driving Shared Prosperity.....	113
Reallocation of Labor to Higher Productivity Activities Has Slowed	113
Informality Is Growing	116
Russia’s Aging Labor Force Requires Higher Individual Productivity.....	117
Need to Increase Equality of Opportunity and Support Regional Convergence	118
Policy Priorities for Labor Markets	118
Meeting the Human Capital Challenge across the Lifecycle	119
Aging Cut Short.....	119
National Averages Mask Much Worse Health Outcomes for Some.....	120
Public Health Spending Is Relatively Low	121
Health Policy Priorities.....	124
The Quality of Education Outcomes Falls after Primary School.....	125
Investment in Education Is Low.....	127
Inequality in Access to Quality Education Is Growing	128
Policy Priorities for Education across the Lifecycle	131
Enhancing the Impact of Social Protection Spending for Shared Prosperity	131
Using Public Spending and Taxes to Reduce Inequality	131
The Social Protection System	134
Pensions Have the Largest Impact on Reducing Poverty and Inequality	135
Social Assistance Spending Can Be Made More Efficient and More Effective	137
Future Pension Coverage, Adequacy, and Sustainability Is a Concern.....	141
Conclusion	144
Chapter 4. Requisites: Fiscal Sustainability, Good Governance, and Better Natural Resource Management.....	147
Introduction.....	147
Fiscal Sustainability.....	148
Short to Medium-term Fiscal Challenges: Managing the Tradeoff between Public Investment and Social Entitlements	148
Long-term Fiscal Challenges: Population Aging and Intergenerational Equity	155
Good Governance.....	156
Cross-Cutting Governance Challenges: Corruption, Accountability, and Oversight.....	158
Governance Challenges Affecting the Likelihood of Achieving Pathway One: Economic Structure, Regulation, and Services for Private Sector Development and Corporate Governance	160
Governance Challenges Affecting the Likelihood of Achieving Pathway Two: Service Delivery to Citizens.....	168
Better Natural Resource Management	172
Cross-Cutting Environmental Challenges: Natural Resource Degradation and Climate Change	173
Environmental Challenges Affecting the Likelihood of Achieving Pathway One: Natural Capital and Environmental Sustainability	180
Environmental Challenges Affecting the Likelihood of Achieving Pathway Two: Pollution and Past Environmental Liabilities	183
Conclusion	185
Chapter 5. Policy Priorities and Actions.....	187
Introduction.....	187
The Prioritization Process.....	187
Constraints on Progress toward Inclusive Growth and Poverty Reduction	189

Policy Priorities and Links to the Twin Goals.....	191
Create a Better Investment Climate and Reallocate Labor into Higher-Productivity Formal Jobs	192
Improve Infrastructure and Connectivity	194
Strengthen Innovation and Skills.....	195
Reduce Premature Mortality and Bad Health	195
Ensure the Quality of and Access to Education.....	195
Improve the Effectiveness and Efficiency of the Social Protection System	195
Enhance Good Governance; Improve Accountability and Enforcement	196
Maintain Fiscal Sustainability	196
Improve Management of the Environment and Natural Resources	196
Summary of Policy Actions	197
Conclusion	197
References	198
Annexes.....	206
Annex 1.1. Growth Decomposition Analysis	206
Annex 1.2. Poverty Measures for the Russian Federation	210
Annex 1.3. Description of Cluster Analysis for the Bottom 40 Percent	213
Annex 2.1. Russia’s Diversification Potential	219
Annex 3.1: Estimates of the Size of Informal Sector Employment in Russia.....	221
Annex 3.2. Health Care Utilization Indicators	223
Annex 3.3. Education Indicators.....	225
Annex 5.1. The Consultation Process	226

List of Figures

Figure O.1. GDP Growth and Poverty Dynamics, 1991–2014.....	10
Figure O.2. Trajectory of Shared Prosperity, 2007–12	10
Figure O.3. Growth and Productivity Trends, 1995–2015	12
Figure O.4. Public Spending on Infrastructure, Percent of GDP, 2008–14	14
Figure O.5. Private Participation in Infrastructure Investment, 2010–14	14
Figure O.6. Restrictiveness of Product Market Regulation.....	15
Figure O.7. The Widening Skills Gap	16
Figure O.8. Labor Force Participation by Age, Men and Women, Latest Year, Percent	18
Figure O.9. Male Life Expectancy at Birth, 1950–55 to 2010–15.....	19
Figure O.10. Spending on Education, 2012, Percent of GDP	20
Figure O.11. Spending on Noncontributory Social Assistance, Percent of GDP, Benchmark Countries	22
Figure O.12. Russia’s Worldwide Governance Indicators, Percentile Ranking, 2008–14.....	24
Figure O.13. Confidence in Government Institutions and Provision of Services, Percent, 2008–15.....	25
Figure O.14. Russia’s Energy Intensity	26
Figure O.15. Russia’s Energy Efficiency Potential	26
Figure 1.1. GDP Growth and Poverty Dynamics, 1991–2015	31
Figure 1.2. Crude Oil Price Index and Real Effective Exchange Rate Index, 2000–15.....	33
Figure 1.3. Oil and Gas Share in Total Exports, 1999–2015, Percent	33
Figure 1.4. Consumer Price Inflation by Components, Year-on-Year, 2000–16	34
Figure 1.5. Credit Growth, 2001–16, Percent	34
Figure 1.6. GDP Growth Demand Composition, 02–2015, Year-on-Year, Percent.....	35

Figure 1.7. Public Spending Composition, 2000–15, Percent of GDP	35
Figure 1.8. GDP Growth Sector Composition, 2003–15, Percent	35
Figure 1.9. Unemployment Rate, 2000–15, One-Year Moving Average, Percent	35
Figure 1.10. Real Wage Growth by Sector, 2001–15, Percent.....	36
Figure 1.11. Real Income Growth by Component, 2001–14, Percent	36
Figure 1.12. General Government Balance, 2000–15.....	38
Figure 1.13. Public Debt, 2000–15, Percent of GDP	38
Figure 1.14. Predicted Growth Effects in Russia, 1996–2010, Percent	40
Figure 1.15. Financial Stability Indicators, 1999–2015, Percent.....	46
Figure 1.16. Savings, 2000–2015, Percent	46
Figure 1.17. Current Account, 2000–2015,.....	48
Figure 1.18. Central Bank Reserve Accumulation, 2000–2015, Percent	48
Figure 1.19. Real GDP Growth Projection, Year-on-Year, 2012–18, Percent	49
Figure 1.20. Net Job Creation and Destruction Rates by Sector, 2008–14 Average, Percent	49
Figure 1.21. Median TFP Growth, Emerging Markets, Percent	49
Figure 1.22. Productivity and Wages, 2002–15, Index, 2000=100	49
Figure 1.23. Shared Prosperity in Russia and Across the World (ca. 2007–12).....	52
Figure 1.24. Bottom 40 Income Growth in Russia and Selected High-Income and Upper-Middle-Income Commodity Exporters (ca. 2007–12)	52
Figure 1.25. Share of Economically-Secure Population (Income or Consumption per Capita Above US\$10/Day in 2005 PPP), Percent, 1996–2012.....	53
Figure 1.26. Share of the Economically-Secure Population in Russia (Consumption per Capita Above US\$10/Day in 2005 PPP), Percent,.....	53
Figure 1.27. Contribution to Observed Inflow into the Economically-Secure Population Group in Russia (Consumption per Capita Above US\$10/Day in 2005 PPP), Percent	54
Figure 1.28. Change in Number of People in Real Income Categories by Quintile (Base Year 2000), 2000– 2012	54
Figure 1.29. Income by Decile, 2014, Thousand Rubles per Month per Person.....	56
Figure 1.30. Poverty Rates by Region, Using the National Poverty Line, 2014.....	57
Figure 1.31. Income Inequality, 2000–13, Gini Index, Russia and Selected Comparators	58
Figure 1.32. Wealth Share of Top Percentile, 2014 Top 10 Countries and Selected Comparators	58
Figure 1.33. Five Clusters within the Poor Population, Ordered By Size and Level of Disposable Income, 2014	59
Figure 1.34. Structure of Income, Bottom 40 and Top 60, Percent.....	62
Figure 2.1. Productivity Growth, 1995–2015, Percent	67
Figure 2.2. Median Labor Share	70
Figure 2.3. Median TFP	70
Figure 2.4. Dispersion of Labor Productivity, 75/25 Percentile	70
Figure 2.5. Dispersion of TFP, 75/25 Percentile.....	70
Figure 2.6. Firm-level TFP, Index 2005=100.....	72
Figure 2.7. TFP Evolution in Services, Index 2005=100.....	72
Figure 2.8. TFP by Sector and Ownership	73
Figure 2.9. Infrastructure Pillar of the Global Competitiveness Index	74
Figure 2.10. International Dimensions of the Logistic Performance Indicator.....	74
Figure 2.11. Public Spending on Infrastructure, Percent of GDP, 2008–15.....	76
Figure 2.12. Private Participation in Infrastructure Investment, 2010–14.....	76
Figure 2.13. Russia’s Quality of Road and Port Infrastructure.....	78
Figure 2.14. Average Traffic Speed in Peak Hours, km/h.....	79

Figure 2.15. Transport Connectivity Indicator for Russian Regions, 2014.....	80
Figure 2.16. Digital Adoption Index	81
Figure 2.17. Trade Openness, 2006–14	88
Figure 2.18. Tariff Rates, 2013	88
Figure 2.19. Trading Across Borders and Logistics Performance in Trade Ranking, 1=Best	89
Figure 2.20. Time to Clear Customs	90
Figure 2.21. FDI Inflows.....	91
Figure 2.22. Sources of Russian Net Incoming FDI, 2014.....	91
Figure 2.23. Russia’s Doing Business Performance.....	93
Figure 2.24. Restrictiveness of Product Market Regulation	96
Figure 2.25. Financial Market Development Ranking.....	98
Figure 2.26. Bank Private Credit-to-GDP Ratio, Percent.....	98
Figure 2.27. Innovation Rank	101
Figure 2.28. Capacity for Innovation Rank.....	101
Figure 2.29. The Widening Skills Gap.....	106
Figure 3.1. Hourly Wage Inequality, 2000–14	113
Figure 3.2. Average Hourly Wages, Bottom and Top 40 Percent, 2011 Constant Rubles per Month, 2000–14	113
Figure 3.3. Change in Employment by Sector, 2004–13, Percent.....	114
Figure 3.4. Labor Force Participation by Age, Men and Women, Latest Year	117
Figure 3.5. Male Life Expectancy at Birth, 1950–1955 to 2010–2015	120
Figure 3.6. Life Expectancy at Birth across Russian Regions, 2013.....	121
Figure 3.7. Mortality, 55–69 Age Group, by Educational Attainment and Gender, Russian Federation, 2011	121
Figure 3.8. Health Expenditure as a Share of GDP, ECA Region, 2014	122
Figure 3.9. Share of Households Making Catastrophic Health Payments, Percent of Total Consumption.....	123
Figure 3.10. Share of Households Making Catastrophic Health Payments, Percent of Nonfood Consumption.....	123
Figure 3.11. Russian Educational Attainment by Income Quintile, 2014, Percent	125
Figure 3.12. Basic Cognitive Skills, Russia, by Age Group	127
Figure 3.13. Index of Learning at Work, by Age, 2012, Russia and Comparator Countries.....	127
Figure 3.14. Spending, Primary through Tertiary Education, 2012, Percent of GDP	127
Figure 3.15. Children Attending Preschool, by Age Group, Type of Settlement, and Income Quintile, 2014	128
Figure 3.16. Participation in PISA by Income Quintile and Preprimary Education, 2009 and 2012, Percent.....	129
Figure 3.17. Index of Social Segregation of Schools (PISA)	130
Figure 3.18. Gini Coefficient Before and After Taxes and Transfers, Selected Countries.....	132
Figure 3.19. Distributional Impact of the Tax and Benefit System, Pre-Fiscal Deciles, 2014, Percent of Disposable Income	133
Figure 3.20. Coverage of Social Protection Programs, 2014, Percent	135
Figure 3.21. Concentration Curves for the Main Types of Social Assistance.....	138
Figure 3.22. Spending on Noncontributory Social Assistance Programs, Benchmark Countries, Percent of GDP	139
Figure 3.23. Social Assistance Transfers in Russian Regions and their Poverty Alleviation Effects, Percent.....	140
Figure 3.24. Pension Spending in GDP, 2014 or Recent Year	142

Figure 3.25. Retirement Age in the Russian Federation, the OECD, and the EU	143
Figure 4.1. General Government Expenditure, Percent of GDP	149
Figure 4.2. Indebtedness of Russia’s Regions, 2015	154
Figure 4.3. Primary Expenditure Decomposition, Baseline	155
Figure 4.4. Fiscal Sustainability Indicator: Primary Balance.....	155
Figure 4.5. Russia’s Worldwide Governance Indicators, 2003-2014, Percentile Ranking	157
Figure 4.6. Doing Business Rankings and Distance-to-Frontier Scores, 2016.....	163
Figure 4.7. Corporate Ethics Indicators (1=Best, 188=Worst)	167
Figure 4.8. Confidence in Government Institutions and Provision of Services, Percent, 2008–15	169
Figure 4.9. Water Stress Map	176
Figure 4.10. Top 10 Emitters and Top 10 Per Capita Emitters.....	177
Figure 4.11. Russia’s Energy Intensity.....	178
Figure 4.12. Russia’s Energy Efficiency Potential.....	178
Figure 4.13. Russia: Extreme Weather Events per Year, 1999 to 2014	180
Figure 4.14. Adjusted Net Savings for Russia.....	181
Figure 4.15. Adjusted Net Savings Calculation and Benchmarking of Russia	182
Figure 4.16. Number of Deaths by Type of Disease.....	184
Figure 4.17. Poverty Rates and Share of Urban Population Experiencing High Air Pollution, 2014–16... 185	185

List of Tables

Table O-1. Key priority reform areas	28
Table 1-1. General Government Fiscal Indicators, 2000–15, Percentage of GDP	37
Table 1-2. Labor Market Outcomes for Poor and Nonpoor, Percent	61
Table 1-3. Russia: Demographic Profile, of Poor/Nonpoor and B40/T60, 2014.....	63
Table 3-1. Indicators of Labor Market Vulnerability, Bottom 40 and Top 60, Percent	115
Table 3-2. Russia: Fiscal Policy and Inequality, 2014	132
Table 3-3. Russian Federation Consolidated Budget: Social Protection Spending, 2006–15, Percent of GDP	134
Table 3-4. Impact of Poverty and Inequality, Social Protection and its Components, 2014	136
Table 4-1. Potential Elements of a Fiscal Consolidation Strategy.....	150
Table 4-2. Russia’s 15 Largest Companies, Sales and Employment, 2014.....	162
Table 4-3. Average Price-Earnings Ratios for Stock Market Indices of Emerging Market Economies.....	166
Table 5-1. Policy Priorities and the Impact on the Twin Goals	191
Table 5-2. Policy Priorities and Actions.....	193

List of Boxes

Box 1.1. Russia’s 2014 Currency Crisis Response.....	42
Box 1.2. Russia’s Fiscal Rule	45
Box 1.3. Priority Reforms to Reduce Financial Sector Vulnerability	47
Box 1.4. Who Are the Bottom 40 Percent of Russians?.....	51
Box 1.5. Drivers of Income Growth for Different Income Groups, 2008–14	60
Box 2.1. ICT in Russia: Ready to Contribute to Productivity Growth?	103
Box 3.1. Low Unemployment, Variable Wages: Russia’s Model of Labor Market Adjustment.....	115
Box 3.3. An Example of Government Policy to Support the Best-Performing Schools in Moscow	130
Box 4.1. Subnational Finances: Lessons from Two Crises.....	151
Box 4.2. Public Investment Management Challenges: Example of the Road Sector	152

Box 4.3. Political and Administrative Snapshot	159
Box 4.4. Russia’s Waves of Privatization.....	161
Box 4.5. Tax and Customs Administration Reform Achievements	165
Box 4.6. ICT Integration into Service Delivery.....	170
Box 4.7. Land Use and Productivity in Agriculture.....	174
Box 5.1. Data and Knowledge Gaps	189

Setting the Stage

1. Russia is a country of global importance and great internal diversity, making it challenging to undertake a coherent country growth diagnostic. The world's largest transcontinental country spans eleven time zones in northern Eurasia. Russia is the main trading partner for many of its more than a dozen neighbors. It also is the host of 11 million migrants who generate significant remittances for their home countries. As a growing upper middle-income economy, it plays an increasing role as a donor to low-income economies worldwide. Russia is the ninth most populous country in the world with an admirable track-record in reducing poverty and boosting shared prosperity. It is richly endowed with natural resources, including timber, oil, natural gas, coal, ores and other mineral resources, which underscores its importance as a global commodity exporter. Russia has some of the longest rivers and its lakes capture approximately one-quarter of the world's liquid fresh water; it is second only to Brazil in terms of total volume of renewable water resources. Russia's importance to the global climate change agenda is reflected in the fact that it has the world's largest forest reserves, second only to the Amazon Rainforest in terms of the amount of carbon dioxide it absorbs. Because of its diverse climate conditions and terrain, Russia is unevenly populated and economic activity is dispersed, preventing the scale advantages of agglomeration. Altogether, these characteristics render undertaking this Systematic Country Diagnostic about Russia's future development course challenging. The analysis identifies general causal chains related to Russia's interlinked development challenges and opportunities, but is often based on data only available at the national level. It leads to a set of broad priorities which would need to be further adapted to the realities of its diverse internal canvas.

2. From the 1998–99 crisis until 2011, Russia experienced nearly uninterrupted strong growth and unprecedented gains in shared prosperity.¹ A favorable external environment and strong macroeconomic fundamentals facilitated inclusive growth throughout the 2000s (Figure O.1). Structural policies were key drivers of growth during the 2000s, reflecting the impact of reforms and structural changes launched during the transition period. Prudent macroeconomic management and booming oil revenues facilitated fiscal surpluses, a reduction in external debt, and a rise in reserves. This helped Russia to respond with strong countercyclical policies to the recession during the 2008–09 global economic crisis, limiting its impact on the country. Its progress in shared prosperity compared favorably with other countries (Figure O.2): The share of the population living in poverty fell by two-thirds, from about 30 percent in 2000 to just under 11 percent in 2012, based on the national poverty line.² The consumption of the population in the bottom 40 percent of the income distribution rose more rapidly than that of the total population, and the middle class expanded dramatically. Over the span of a decade, Russia became not just a middle-income economy but also a middle-class society.

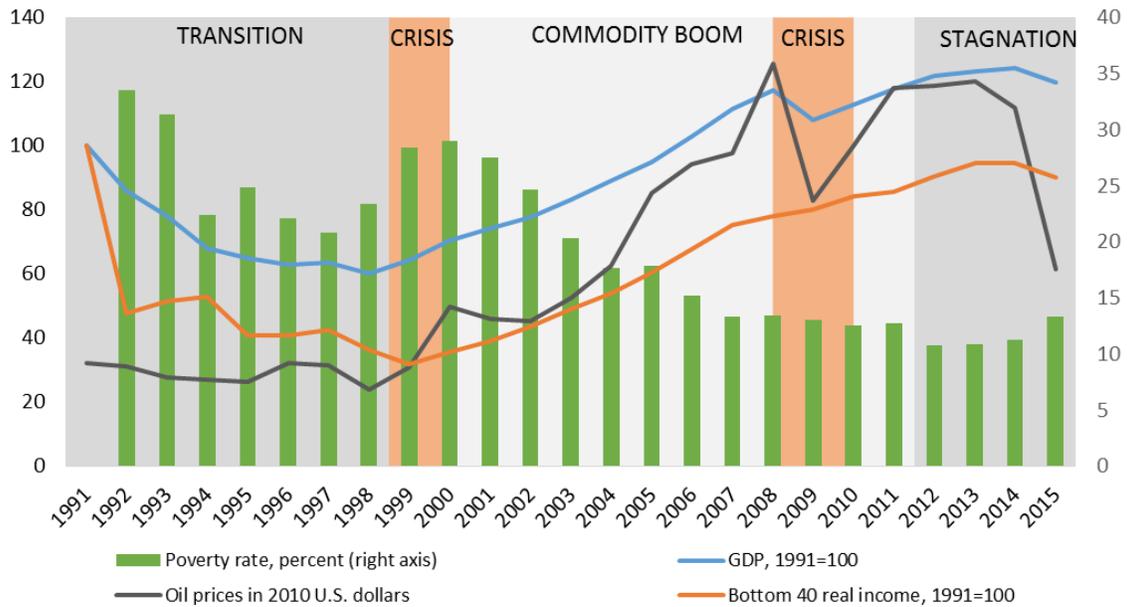
3. However, growth dynamics have weakened since 2012, and the end of the commodity super-cycle in 2014 ushered in a period of difficult economic adjustment. From 2012–13, growth and shared prosperity trends started to weaken as second-generation structural reforms—strengthening the climate

¹ Shared prosperity requires that economic growth results in a sustainable increase in the living standards of the less well-off. The World Bank Group monitors progress in shared prosperity using the income growth of the population in the bottom 40 percent of the income distribution.

² Poverty is measured in this report using the national poverty line, according to which in 2015 Russians with monthly per capita incomes below 9,701 rubles (US\$160) were considered poor. For purposes of international comparison, the US\$5 a day poverty line (2005 PPP) and an alternative measure related to moving out of vulnerability, US\$10 a day (2005 PPP prices), are used.

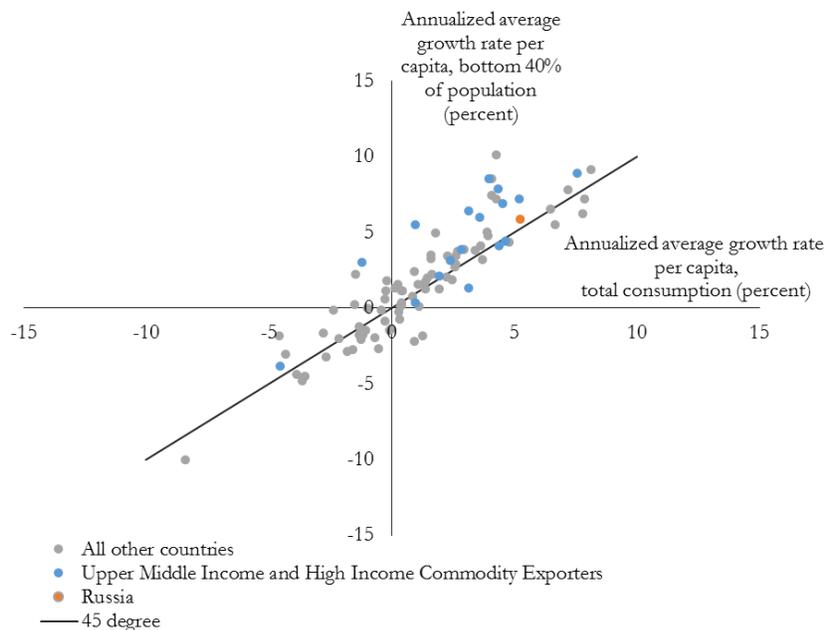
investment, diversifying the economic structure, and closing the infrastructure gap—advanced more slowly. After the sharp drop in commodity prices, which affected Russia’s main export, oil, and with the impact of the sanctions regime in 2014, the economy slipped into recession. Russia entered this new crisis with smaller fiscal reserves than in 2008, which limited the ability of counter-cyclical policies to support demand. Progress on increasing shared prosperity and poverty reduction has halted, challenging further advances in inclusive growth that characterized the commodity boom period of 2000–08.

Figure O.1. GDP Growth and Poverty Dynamics, 1991–2015



Source: Rosstat, HSE, World Bank.

Figure O.2. Trajectory of Shared Prosperity, 2007–12



Source: World Bank, Global Database of Shared Prosperity.

4. With fiscal pressures rising, the cost of the underlying social contract—in which the state is entrusted with providing jobs, services, and a system of significant transfers and subsidies—is becoming more difficult to sustain. The social contract that has characterized Russia since the turn of the millennium gives the state a powerful role as a provider of universal services: citizens trust the state to exercise strong leadership and management and in return they benefit from entitlements that have broad coverage, among them a public sector that employs about a third of all formal workers, many in state-owned enterprises (SOEs); free health and education for all; and such comprehensive benefits as a growing pension system, heavily subsidized utilities, and other services. As a result, the public sector has helped keep unemployment relatively low. But the cost of maintaining the social contract has been rising steadily as a result of high pension liabilities, considerable spending on non-means-tested social benefits, large subsidies to households and firms, and a climbing public wage bill. When the economy was flourishing and commodity prices high, the fiscal impact of the social contract was masked by rising oil revenues; today the trade-off between providing these services and ensuring fiscal sustainability is becoming a greater challenge for the state.

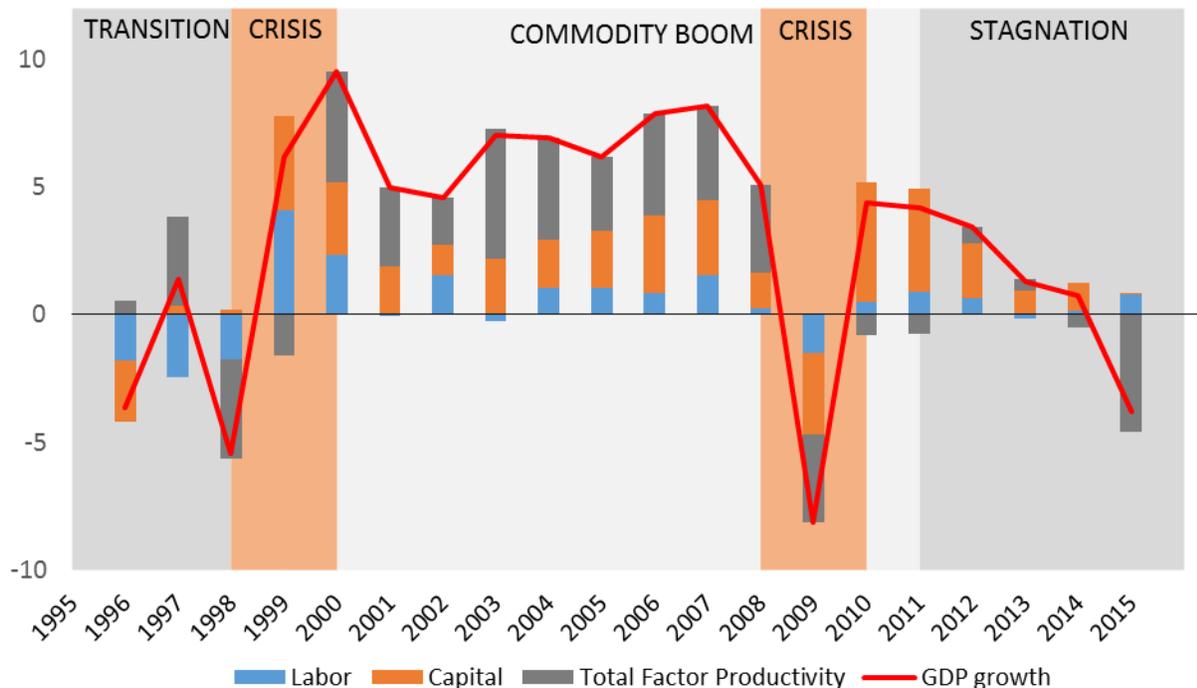
5. The recent crisis exposed the vulnerability of Russia's economy and raised questions about the sustainability of past achievements in boosting shared prosperity. Limited economic diversification and heavy reliance on oil and a few other strategic sectors have made Russia far more vulnerable to terms-of-trade shocks. Declining savings and falling credit growth have contributed to bleak domestic demand, with slowing investment also impacted by high net capital outflows. The resulting low rates of investment limit Russia's potential for medium-term growth and amplify the need for new growth drivers. Russia's pallid economic outlook and deteriorating fiscal position are jeopardizing shared prosperity gains. Fiscal pressures arising from a combination of structural issues and past trends in social spending present a particularly high economic hurdle on the path to continued macroeconomic stability and sustained progress in income mobility. For instance, stimulating domestic demand through expansionary fiscal policy is not likely to work, given the tight labor market and little investment in boosting productivity.

6. Firm-level productivity as a driver of economic growth in Russia has weakened, which suggests that Russia's competitiveness has declined. In recent years, the contribution of total factor productivity has fallen (Figure O.3). In the first half of the 2000s productivity surged from a low base, with high total factor productivity growth of 4–5 percent a year, as enterprises restructured and firms tapped into underused stocks of capital and labor after the 1998 crisis. However, as utilization rose closer to capacity, achieving additional productivity gains became more difficult. As wage growth began to outpace productivity gains and the real effective exchange rate appreciated, Russian firms operating in nonenergy sectors had to cope with rising pressures from foreign competition. There was some productivity growth from the reallocation of resources across sectors, but there is still considerable potential for more rapid productivity growth at both sectoral and firm levels. Such productivity gains could be attained either by reallocating factors of production (e.g., labor, capital, land) to more productive firms or by the accumulation of internal firm capabilities, such as improving innovation capacity, ability to adopt technology, managerial skills, and workforce skills.

7. Opportunities have arisen to increase the competitiveness of the Russian economy, especially in the nonresource sector. Falling oil prices and the depreciation of the ruble could enable broad-based improvement in Russia's international competitiveness. In the past, high commodity prices skewed the country's economic and export structure in favor of oil, gas, and mining because the high rate of return on primary commodities discouraged value addition and stifled the development of new products. Leveraging emerging opportunities to develop a broader and more sophisticated product and export mix will require a substantial increase in private investment, especially foreign direct investment, which is

associated with the strongest technological spillovers. To attract investors, particularly in the context of economic sanctions, investment conditions must improve.

Figure O.3. Growth and Productivity Trends, 1995–2015



Source: Rosstat and Russian Economic Barometer data.

8. Productivity and job growth will remain elusive and ultimately jeopardize the social gains of the past decade without a conducive investment environment, skilled labor, and adequate infrastructure.

Russia's GDP is projected to grow in the medium term by only 1–2 percent a year. More importantly, without a sustained rebound in private investment it is unlikely that new productive and high-paying jobs will be created, which is important for generating income. Since 2008, Russia has experienced net job destruction and decline in the positive impact of labor market developments on shared prosperity, while pensions and transfers have become a more important driver of income growth for those in the bottom 40 percent of the income distribution. Productivity-enhancing labor reallocation has also slowed. Adverse shocks in Russia typically reduce real wages rather than increasing unemployment, which protects workers since unemployment benefits are low. However, it also has meant little transfer of workers to higher-productivity firms or jobs. The shift to informal activities may have contributed to the fall in productivity growth; employers in the informal sector are less likely to invest in training workers.

9. This diagnostic identifies two pathways where progress is critical for sustainable growth and an expansion of shared prosperity.

The first pathway identified areas where new policies are necessary to achieve a recovery in productivity, focusing on infrastructure and connectivity, the regulatory regime for businesses, constraints on innovation by firms, and skills development for individuals. The second pathway identified the main areas for policy reforms to further reduce vulnerability by deepening human capital gains and improving access to public services. The analysis identifies channels through which the labor market can again become a source of raising the incomes of the bottom 40 percent by improving

health and education services and strengthening the poverty impact and sustainability of Russia's social protection system. To achieve these goals, progress is essential in three requisites: fiscal sustainability, governance, and management of natural resources. The policy priorities are outlined in the final section.

Pathway One: Increasing Productivity to Diversify Growth

10. Russia has substantial potential to revive productivity growth by removing economy-wide, firm-level, and individual-level constraints on it. Productivity growth will help create more formal and high-paying jobs, which in turn will open up crucial income opportunities for the poor and those at the bottom 40 percent of the income distribution. Future productivity growth will depend on improvements in infrastructure and connectivity, creation of a better investment climate, and building up innovation and skills.

Economy-wide productivity constraints:

Eroding physical capital, connectivity deficiencies, and market and trade distortions

11. The growth of Russia's capital stock has slowed in recent years, and inadequate infrastructure poses major challenges to economic growth. Underinvestment in physical infrastructure limits connectivity, which not only impairs the profits of firms, for example through higher transport costs, but also reduces income opportunities and well-being by limiting labor mobility or access of the population to services. Though Russia's transport network is vast, it is unevenly distributed geographically and suffers from poor quality. Traffic congestion on the core road network increases transportation costs and hinders urban growth by extending commuting times. The most affected regions are those that are not connected to the main railway and road transport systems or are far from the main trade and service centers in the Western part of the country.

12. The infrastructure investment needs are staggering. Russia's public expenditure on infrastructure amounted to less than 1.0 percent of GDP a year in 2012–14 (Figure O.4), while the investment needs are estimated to be about US\$1 trillion—75 percent of Russia's 2015 GDP. Depreciation of capital stock, particularly in transport, energy, public utilities, and social infrastructure, is the main driver of the need for major infrastructure investment. Provision of public infrastructure depends not only on more diverse sources of financing but also on improvements in the institutions that manage public investment.

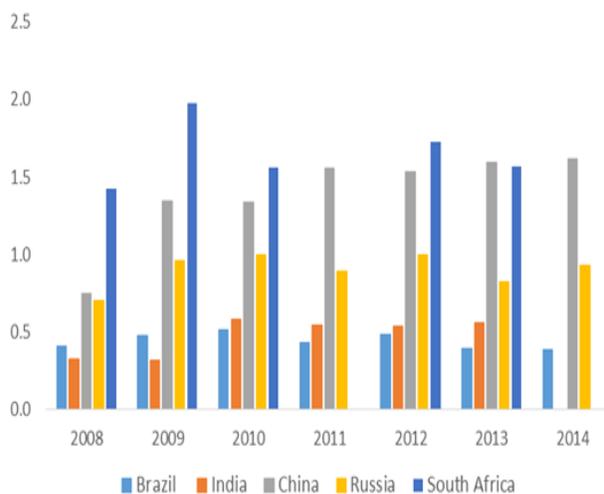
13. As fiscal constraints increase, attracting private capital through public-private partnerships (PPPs) and opening up infrastructure subsectors to direct private investment is critical. However, private participation in infrastructure in Russia is well below that in comparator countries (Figure O.5) and is severely limited by minimal competition, a shallow domestic capital market, the fragmentation and complexity of the legal system, and the lack of capacity to prepare and deliver projects, in particular under the PPP framework. Among infrastructure subsectors with considerable potential for greater private participation are energy generation and transmission, ports and airports, transport logistics (e.g., railcars, warehouses, and storage), solid waste management, facilities for industrial zones and clusters, telecommunications, and broadband.

14. While information and communications technologies (ICT) connectivity is high, Russian firms have still not fully realized the benefits of adopting ICT. Although the Russian government performs well in digital adoption, Russian businesses struggle to absorb new ICT technologies and use them effectively to increase productivity and develop new business models, products, and services. Limited innovation

capacity and uneven access to ICT infrastructure and e-government services are key factors constraining businesses from adopting ICT.

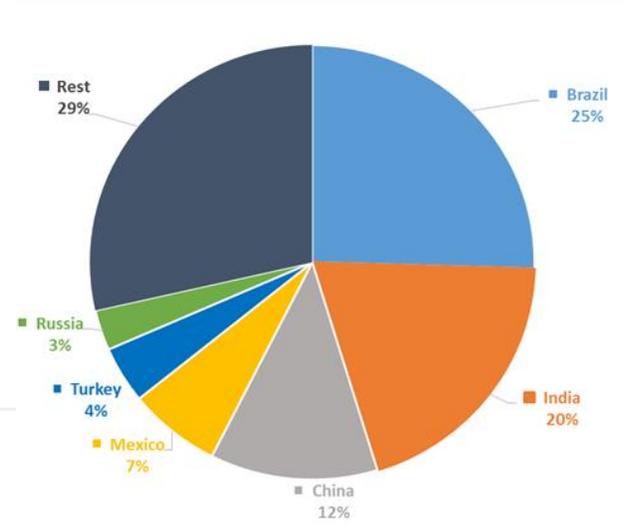
15. Despite progress in trade liberalization, greater exposure to international competition could improve efficiency. Nontariff barriers and lack of transparency in trade legislation continue to be significant obstacles to deeper trade integration, limiting competition and thus inhibiting productivity growth and investments in innovation. Russian technical regulations that govern the standards for goods (based on the GOST system) differ from the standards prevailing in most of Russia’s trading partners and come at the cost of stifled innovation and higher compliance costs for Russian producers and exporters. Russian firms also face burdensome procedures associated with trade, while trade logistics are improving only slowly. Overcoming the fragmentation of trade promotion is also a challenge. Finally, if the export competitiveness of Russian firms is to improve, a longer-term challenge will be to establish the conditions for attracting efficiency-seeking rather than market-seeking foreign direct investment—a difficult challenge in the current external context that calls for exceptional improvement in the investment climate.

Figure O.4. Public Spending on Infrastructure, Percent of GDP, 2008–14



Source: Ministry of Transport of Russian Federation, BRICS joint statistical publication, 2015.

Figure O.5. Private Participation in Infrastructure Investment, 2010–14



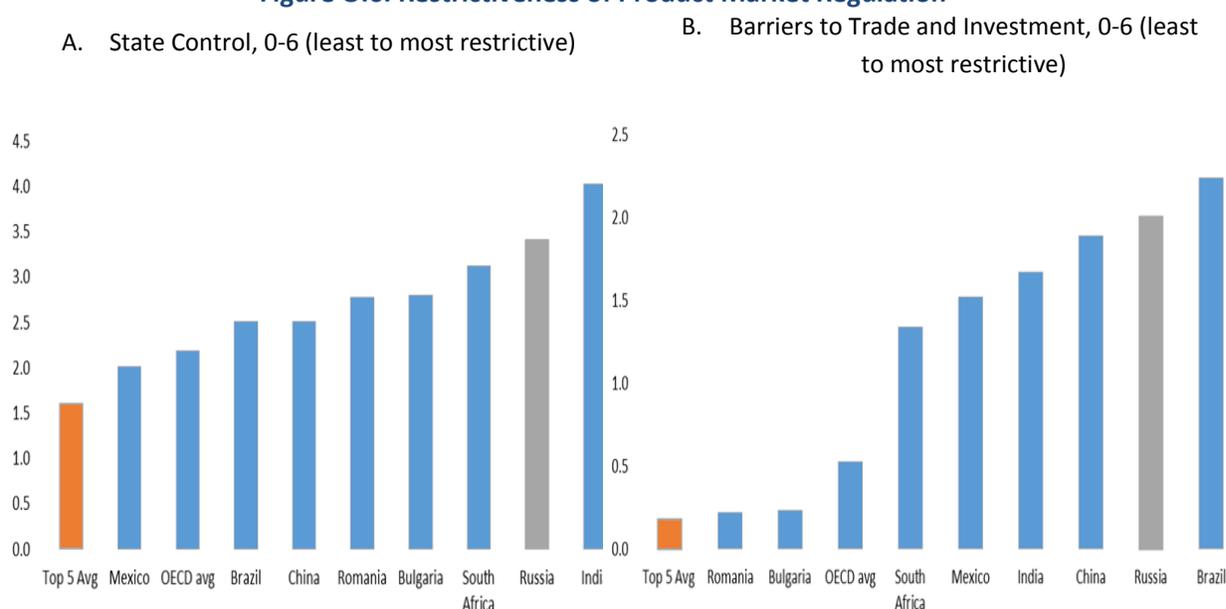
Source: Private Participation in Infrastructure (PPI) data base, World Bank.

16. De jure regulatory simplification has been impressive, but several domestic regulatory challenges remain, and declining investment trends point to additional constraints on investment beyond the regulatory dimensions. While firm entry conditions have improved markedly, business operations must deal with burdensome business operating and licensing standards, including multiple inspections related to obligatory safety and sanitary standards. Because these requirements are also sources of corruption and harassment, they generate high regulatory uncertainty, which negatively affects firm investment decisions. The private sector perceives not only corruption but also access to finance and workforce skills to be severe problems. Russia’s financial sector is shallow, which affects how well it can support an accumulation of physical and human capital or increases in total factor productivity. Russian enterprises rely much less on bank financing and more on internal and state resources to fund investment.

Small and medium enterprises (SMEs) could become a more important source of growth and jobs in Russia if their access to finance were improved.

17. Most importantly, competition conditions in Russia have not significantly contributed to productivity growth. The analysis of geographic and product market structure within Russia reveals a high degree of concentration, which negatively impacts the entry and exit behavior of healthy firms. The large presence of the state in economic activities may also create an uneven playing field. The restrictiveness of product market regulation associated with the state presence in the economy and with barriers to trade and investment is high (Figure O.6).

Figure O.6. Restrictiveness of Product Market Regulation



Source: OECD Product Market Regulation Database 2013.

Firm-level productivity constraints: Limited innovation activity

18. Russia’s innovation environment is constrained, and Russian companies are relatively poor at innovation. According to Russia’s own measure of innovation activity, industry shows low levels of innovation, whether catch-up or frontier. The ability of companies to improve efficiency and devise innovative products and services using new technologies is at the core of productivity growth. Russia’s growing software exports are a clear success story: almost half of the software products developed by Russian companies are exported, and the software industry is the biggest employer in the IT sector and its employees enjoy the highest compensation. Yet the performance of Russian companies in general on the main innovation indicators, creation of new ICT-enabled business models and organizational models, is relatively low. Only 10 percent of enterprises report technological innovation activity, compared to about 30–40 percent in OECD countries. Even within this 10 percent, only a small minority is undertaking more sophisticated forms of R&D. With so few Russian businesses engaged in the innovation process, specialization is difficult to achieve.

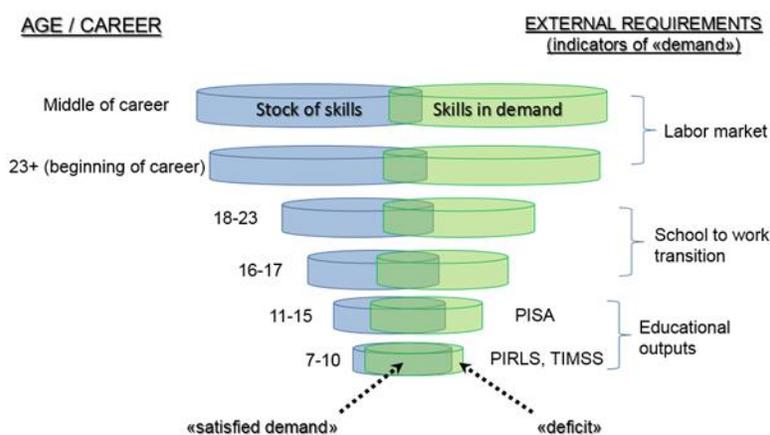
19. Russia’s science, technology, and innovation base could be strengthened. Businesses need capable management to initiate and lead the innovation process as well as plan for adopting technology. Investments in developing entrepreneurship skills and commercial innovation knowledge within the research sector would be important, as would improvements to intellectual property (IP) protection and public procurement. Yet regardless of performance and the impact of supply-side interventions, demand within the economy and industry structure itself will limit the contribution of Russia’s innovation system to economic development and productivity growth.

20. Business innovation is not an end in itself; it occurs because companies have problems to solve, markets to defend, or opportunities to grasp. Russia’s large domestic markets should be a strength in allowing Russian industry to build scale and capacity. However, because feeble domestic competitive conditions limit the ability to capture the returns from innovation, they suppress innovation itself. In Russia, there are a number of industry and market obstructions that either diminish or obstruct the drive to innovate. Most importantly, SOEs dominate various sectors, blocking competition or buying young innovative businesses, and are often neither innovative themselves nor purchasers of innovation.

*Constraints on individual productivity:
Low supply of complementary skills*

21. Private businesses in Russia consider the lack of skills to be one of the most severe constraints on their expansion and growth. Innovative companies increasingly require that employees have both a high level of high-order cognitive skills (such as the ability to solve problems) and social and behavioral skills (e.g., the ability to work with people). Russian employers reported especially severe shortages of these skills—more severe than shortages of technical skills. This change in labor demand in turn requires both qualitative changes in the types of skills taught in the education system and opportunities to renew skills at any time.

Figure O.7. The Widening Skills Gap



Source: World Bank 2013.

22. Despite the very high level of formal education attained by Russian workers, the current quality and content of education does not develop the skills demanded by the labor market. While over half of all 25–64-year-olds have some tertiary education, compared to an average of 35 percent in OECD countries, there is a growing skills gap as students progress through the Russian education system, which widens further as they enter the labor market (Figure O.7). The Russian education system is facing

challenges in teaching students both high-order cognitive skills and the noncognitive social skills that innovative firms in particular need. While the skills development system is no longer guided exclusively by the state, mechanisms for interaction between employers and educational institutions are not yet fully formed. There are still relatively few private providers. Incentives are needed for educational institutions to ensure quality and relevance in the provision of skills, and for enterprises to invest in training. Finally, Russia lacks an information system for analyzing and reporting labor market information for use in policy making. It will be important to overcome the considerable information asymmetry in the demand and supply for skills and jobs.

Pathway Two: Deepening Human Capital Gains and Improving Access to Services

23. Sustaining Russia's income gains will require that labor income replace fiscal transfers as the major driver of income for the bottom 40 percent. Removing impediments to firm growth and survival and to the exit of low-productivity firms will facilitate the movement of workers from lower- to higher-productivity jobs. Measures to improve the quality of and access to health and education services are needed to boost human capital and promote longer and more productive working lives. Reinforcing the efficiency and targeting of social protection will allow more people to be protected from poverty and the impact of adverse shocks. Providing more efficient and quality services, while creating the conditions for a greater role of labor incomes in supporting household welfare, are key to ensuring that the existing social contract is maintained in times of fiscal tightening.

The labor market challenge: Expanding high productivity employment in the formal sector

24. Jobs have shifted to more vulnerable informal-sector activities. Just over a fifth of total employment is estimated to be informal in 2015.³ In every year since 2009 the number of formal jobs that have disappeared has exceeded the number created. There is no strong evidence that earnings in the informal sector are lower than in formal employment. However, while the increase in informality opened up job opportunities for workers at the bottom of the income distribution, it also made them more vulnerable. Moreover, the expansion of informality partially reduced the positive contribution to productivity growth of labor reallocation across sectors and firms between 2002 and 2012. The growth of the informal sector may also have eroded trust in public institutions because of incomplete or selective enforcement of formal regulations. The erosion of the tax base also impaired the provision of social services and the sustainability of the social insurance system.

25. Raising labor force participation in Russia would help to mitigate, though not eliminate, the looming problem of a shrinking and aging labor force. The working-age population is projected to drop from 100 million in 2015 to 89 million in 2030 and the dependency ratio to rise from 19.1 percent in 2010 to 29.5 percent in 2030. While labor force participation rates are high for the population as a whole, there is substantial scope to lengthen the working life of Russians by eliminating constraints (for example, poor health, low skills, and limited mobility) on labor force participation and considering a rise in the statutory retirement age for both men and women. Labor force participation among the old is lower in the bottom 40 percent of the distribution—who have worse health and less education. In addition, female labor force

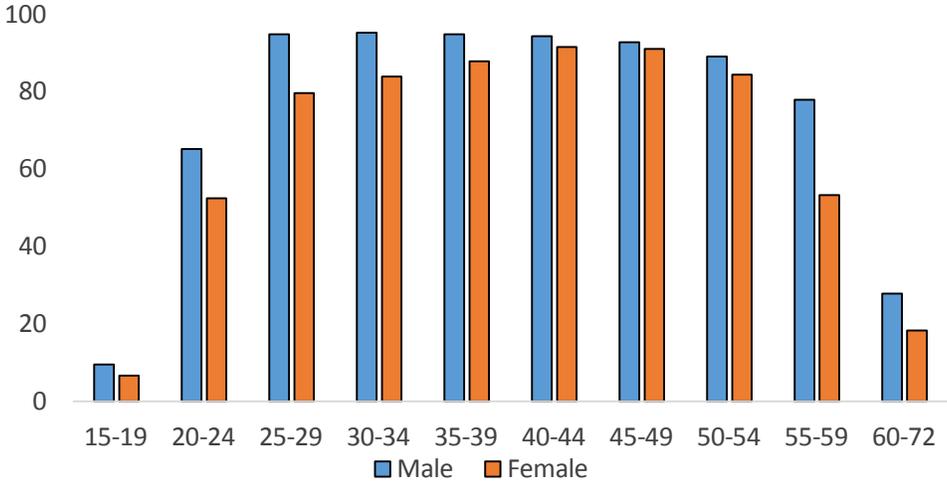
³ Those working in firms or for households or individual entrepreneurs not registered as a legal entity are defined as informal, according to the Rosstat Labor Force Survey (LFS).

participation during childbearing years and after the female statutory retirement age of 55 years is significantly below that of males (Figure O.8).

26. Russia’s aging labor force could impair productivity. There is a significant erosion of health and skills among older workers, which could limit productivity gains as the share of older workers in the labor market rises. There are strong indications, including the decline in training associated with growing informality and the risky health behavior of younger males, that this deterioration could also remain a characteristic of the younger generation as it ages (i.e., it is not just something that affects the current 50-plus cohort).

27. Investment in human capital and complementary labor market reforms could increase equality of opportunity. Inequality of opportunity refers to what is attributable to circumstances that the individual is born into and has no control over compared with other characteristics, such as education or age. From early on, such circumstances as gender, parental income or education, ethnicity, and geography can curb a child’s potential. In later life it can lead to systematic exclusion of some groups from markets and economic opportunities. In Russia, the evidence is that the circumstances into which a child is born matter for opportunities later in life. For example, parental education is the most important circumstance that determines the chances of having a job for 20 hours or more a week in Russia.

Figure O.8. Labor Force Participation by Age, Men and Women, Latest Year, Percent



Source: Rosstat.

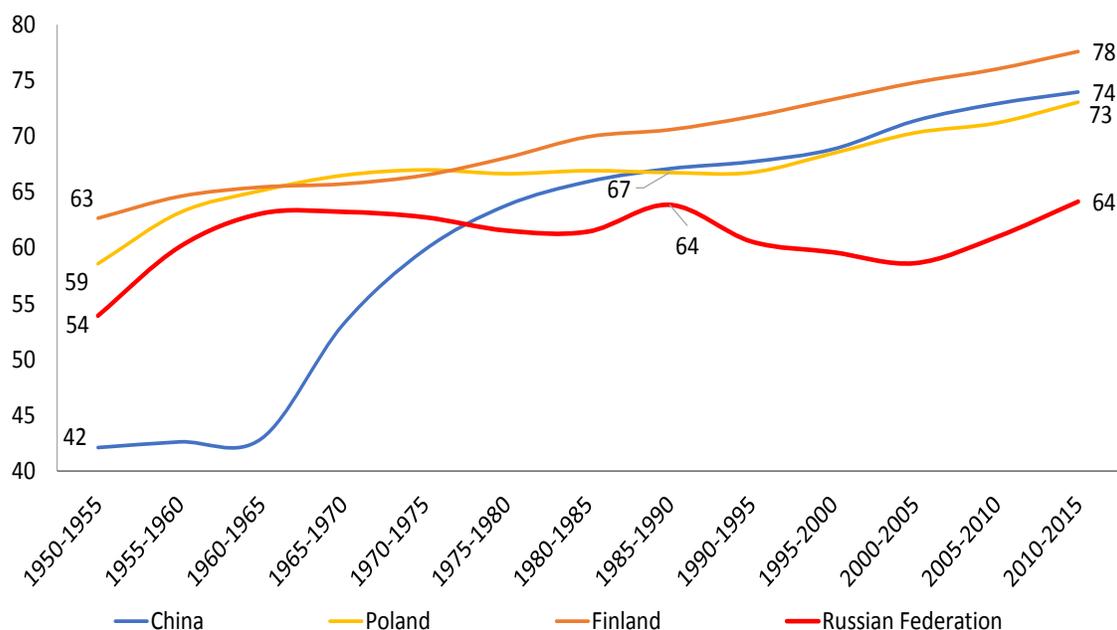
*Education and health:
Improving quality and access to services*

28. While some health-related indicators have improved in Russia in recent years, life expectancy is low and national averages cloak large differences in health outcomes between regions and socioeconomic groups. Life expectancy at birth was 70.9 years in 2014—far below that of Brazil (74) and China (76), countries with much lower per capita incomes (Figure O.9). This is not only undesirable for economic welfare, it also entails substantial economic costs: one estimate is that if deaths were delayed to a later age, Russia could have reversed two-thirds of the decline in the working-age population in recent years. Noncommunicable diseases (NCDs), particularly cardiovascular diseases and cancer, and external causes are the main contributors to premature mortality and disability. There are large gaps in life expectancy between better-off and less advantaged Russians; the less well-off, particularly men, have a

much higher burden of cardiovascular disease. Regional differences in health outcomes also are significant.

29. Relatively low public health spending in Russia reduces access to important health services. In 2013, public health spending in the Russian Federation was 3.2 percent of GDP, significantly lower than the OECD average of 6.5 percent. The share of out-of-pocket (OOP) spending in total health expenditures, often a crude indicator of financial barriers to accessing services, is not only high but has been increasing. Much of the increase, however, has occurred in richer areas of the country; in 2005–12 most OOP spending was concentrated in Moscow and St. Petersburg. By contrast, for the poor and for all groups except those living in Moscow and St. Petersburg, per capita inpatient OOP spending declined, reflecting the increase in free inpatient care services and drugs. Use of inpatient care services has become much more pro-poor, especially for those over age 65. But these improvements have been offset by substantial increases in OOP spending on outpatient drugs and services, particularly for the poor. Given the higher mortality due to NCDs among less advantaged Russians, this is of concern. Improvement of access to primary and outpatient care for the prevention, detection, and management of NDCs is a priority.

Figure O.9. Male Life Expectancy at Birth, 1950–55 to 2010–15



Source: United Nations Population Division 2015.

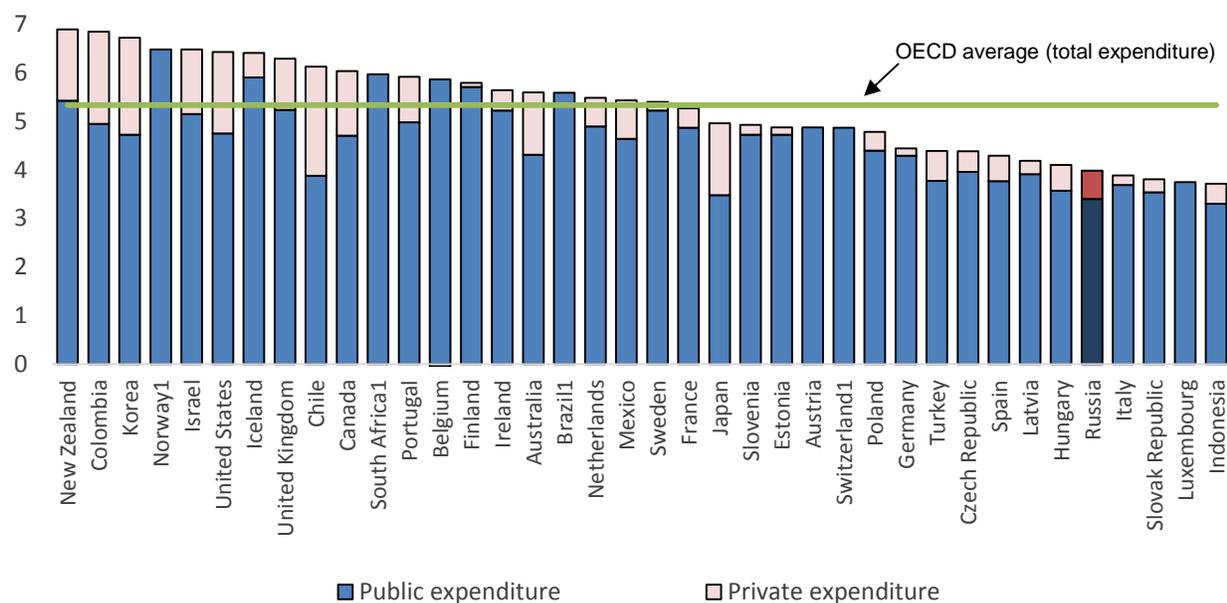
30. The emphasis on high-cost hospital and specialist care limits the capacity of the system to adapt to emerging patient needs and reduces both its efficiency and its effectiveness. In spite of a gradual reduction in hospital capacity over the last decade, the number of hospital beds per 1,000 population in Russia is 1.6 times higher and the average length of stay is 1.5 times higher than the EU average. Health care is not geared to promoting health and preventing disease. Outpatient services are underdeveloped, especially effective primary health care management of chronic diseases, outpatient surgery, day care and home care, and nursing care.

31. Russia invests less in education, 4 percent of GDP, than the OECD average of 5.3 percent (Figure O.10). Despite a substantial increase in real spending over 2005–12, Russia spends less per student on education (in U.S. dollars at purchasing power parity) than would be expected given its level of income. The availability of early childhood development and preprimary education is particularly limited,

especially for low-income households, and services are of poor quality. Regional inequalities in funding for primary and secondary education pose a threat to access because decentralization has led to rising inequality in the availability of funds for local education authorities. Rural regions are especially likely to suffer because they are often poorer and have little access to high-quality education. The government policy of supporting the best-performing schools, which have the most socially-advantaged students, has contributed to inequality; social stratification in Russian schools has increased significantly in the last decade and is among the highest for European countries.

32. Education policy has aimed to increase teacher remuneration and improve education standards, but raising quality involves further challenges, especially given fiscal constraints. There is room to increase the quality of education given that Russian students begin to lose their edge against their OECD peers when they reach secondary and post-secondary education, most notably in the area of knowledge adaptation and problem-solving skills. Efforts to develop further the officially-stipulated requirements for minimum education standards and the curriculum, and to set out the skills that students must attain at every grade and tools for their assessment, should continue. The work done so far on developing national standards is a big step toward improving educational quality, teacher autonomy, and school accountability. Teacher salaries have increased, but there is considerable room to link teacher performance and pay. Large investments are planned in the next decade to eliminate double shifts in schools, whereby one group of students is taught earlier in the day and a second group of students receives instruction in the second half of the day. To ensure that limited government resources are used most effectively in this new school building program, it will be important for interagency collaboration, the necessary research, and the use of efficient construction and technology standards (including energy efficiency).

Figure O.10. Spending on Education, 2012, Percent of GDP



Source: Education at a Glance 2015: OECD Indicators, OECD.

Note: The figure shows total spending on education from primary through tertiary level.

33. Russia runs a complex system of social protection programs with numerous benefits and numerous groups entitled to benefits. The system is dominated by pensions, followed by social assistance benefits. Spending on social protection accounted for 13.2 percent of GDP in 2013 and 13.3 percent in

2014. The number of federally-mandated social assistance programs exceeds 150, and the number of regional programs most likely exceed 500. The programs range from merit-based benefits awarded to deserving individuals, such as war veterans and heroes of labor, to assistance for people with disabilities, to services at home provided to the frail elderly, to housing subsidies. The rationale for treating certain benefits—such as allowances to individuals with particular merits or reproductive policy measures—as social assistance is not clear. Resources are spread over many programs, often contributing little to the income of the beneficiaries.

The challenge for the social protection system: Improving efficiency and sustainability

34. Pensions have more impact on poverty than social assistance: Pensions are larger and the elasticity of poverty with respect to pensions is higher than for social assistance. However, social assistance spending is still relatively high; it just has less impact on poverty than would be expected. Russia spends 2.7 percent of GDP on noncontributory social safety nets (social assistance), up from 2.0 percent of GDP in 2006. Only 15 percent (0.4 percent of GDP) of all spending on social assistance is allocated to programs that involve income or means testing for households. Targeting one-third of social assistance spending to the lowest 20–30 percent of the population and increasing targeting accuracy to 50–60 percent could decrease poverty by 20–30 percent, which would significantly alleviate the impact of the economic crisis.

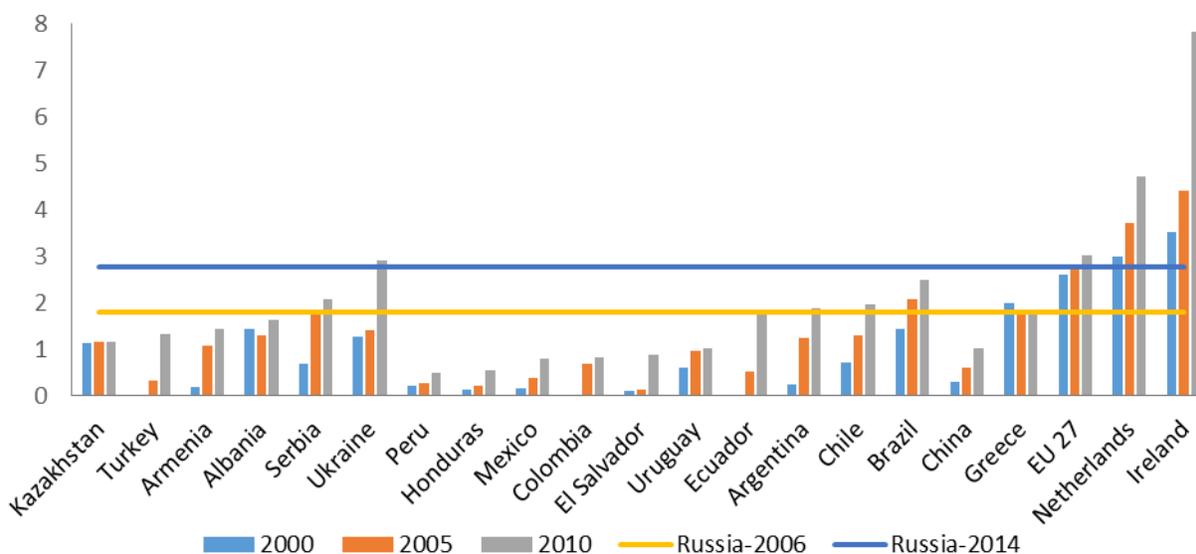
35. However, the adequacy of pensions is low. The level of pension payments as a share of earnings when working (the pension replacement rate) fell from 35.7 percent in 2010 to 32.9 percent in 2013. Despite low actual replacement rates, pension spending in Russia is close to the OECD average. Ad hoc adjustments of basic and merit pensions and indexation of insurance pensions above the inflation rate have boosted pension expenditures since 2008; meanwhile, contribution subsidies, reduced rates for farmers and the self-employed, and widespread avoidance of contribution payments have reduced revenues. As a result, in 2015 the Pension Fund deficit reached almost 3 percent of GDP.

36. The fiscal position of the pension system is aggravated by a relatively low statutory retirement age (55 for women and 60 for men). Moreover, workers in a broad list of occupations can retire earlier if they have the required length of service. In combination with generous early retirement provisions, this results in a low actual retirement age and a total number of pensioners that significantly exceeds the number of people of retirement age. Due to the rise in informality, coverage of the insurance pension system is likely to fall from the high rates achieved during the Soviet Union. As a consequence, an increasing number of workers may not be able to meet the requirements for a full old-age pension and would have to rely on the social pension.

37. The Russian social assistance system is vast and complicated. Russia spends 2.7 percent of GDP on social assistance, comparable to the EU and significantly higher than in many emerging markets (Figure O.11). About two-thirds of social assistance spending is linked to a complex system of “privileges” and categorical payments. Except for cash-for-work programs, most social assistance programs are not flexible enough to quickly respond to crisis situations: the majority of programs are not indexed regularly, and adjustments are ad hoc and depend on the resources available. Changes in program design or benefit levels are highly decentralized, with large disparities by region. They are often done piecemeal in stop-and-go fashion. The result is that the poverty impact of social assistance spending differs widely by region. Social assistance transfers vary from 1 percent of household income to as much as 16 percent. The poverty alleviation effect ranges from well below 10 percent to just below 50 percent—which is on a par with the best-performing systems. The difference in the poverty alleviation effects of regional social assistance are not just due to how much is spent—the efficiency of spending also varies greatly: regions providing 6

percent of household income as a noncontributory transfer can reduce poverty by as little as 10 percent to as much as 33 percent.

Figure O.11. Spending on Noncontributory Social Assistance, Percent of GDP, Benchmark Countries



Source: World Bank Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE).

Requisites for Sustained, Inclusive Growth: Fiscal Sustainability, Good Governance, and Improved Management of Natural Resources

Fiscal Sustainability

38. Fiscal adjustment will be critical for inclusive growth in Russia. Without fiscal sustainability, it will be difficult to support productivity growth in a diversifying economy, and it will be challenging to reduce the vulnerabilities of Russia’s citizens through better service delivery. The recent significant tightening of the budget constraint has exacerbated the tradeoffs that Russia faces between supporting household incomes and increasing investment in human and physical capital. Since the mid-2000s, large increases in pensions and public wages have made government spending the major driver of the incomes of the bottom 40 percent of the population. This was dictated by the underlying social contract, which generates strong expectations that the state would provide jobs and services. However, these expenditures came at the expense of investment in public infrastructure and human capital. Also, while government spending was crucial in enabling social mobility and income growth, significant inefficiencies in targeting persisted. Fiscal savings can in part be generated by a reform of spending policies to increase efficiency, direct expenditures to the highest-priority areas, and strengthen public investment management. But it also will require reforms to tax policy and administration in order to collect more revenue from nonoil and gas sources, particularly in light of moderating commodity prices.

39. Population aging and low oil prices threaten the sustainability of fiscal policy. Managing the increase in fiscal pressures caused by an aging population will require significant structural reforms, especially of the pension system, with adjustments to the retirement age, changes in contribution rates, or a shift from publicly funded to contribution-funded benefits. Labor market policies designed to boost

labor force participation could have a significant impact on systemic liabilities. The costs of pension reform could be financed through an increase in debt and a change in the fiscal rule to boost public savings.

40. Fiscal risks due to contingent liabilities are significant, especially for subnational governments. The contingent liabilities arising from large state ownership of banks and enterprises represent an important fiscal risk. At the subnational level fiscal pressures can increasingly arise from the buildup of debt by publicly owned enterprises that provide public services, such as transport and utilities. Recent surveys of international rating agencies suggest that in some jurisdictions contingent liabilities are high.

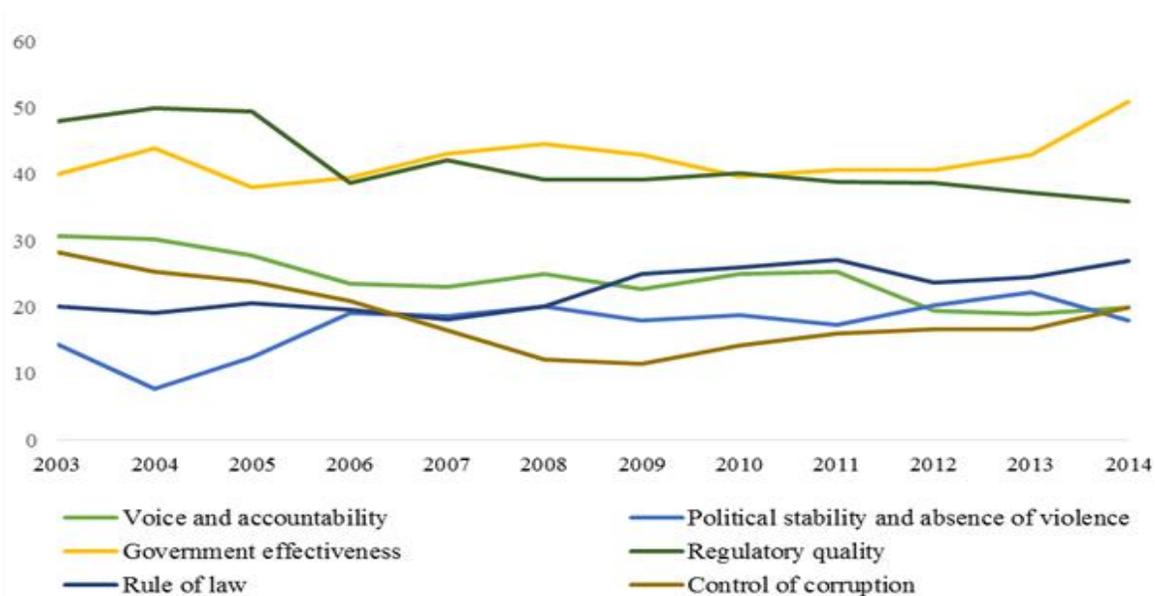
41. Low growth and a series of unfunded federal mandates have increased regional deficits. While aggregate debt levels are currently low, the stock is growing. In the short term, the rise in debt can be contained by rules that cap debt levels in the regions. But over the long term, growing deficits will create pressures for another round of federal relief or steep cuts in expenditures. To prevent this, changes in the division of revenue and expenditure responsibilities may be required. Another important lesson from previous crises is that regional governments need more flexibility, not necessarily a permanent revenue increase. Measures are also needed to change the reason for subnational government borrowing. At present, subnational governments borrow to respond to short-term fiscal crises and to postpone painful adjustments rather than funding investment in long-lived and high-rate-of-return assets.

Good Governance

42. The quality of governance can facilitate or constrain Russia's progress along pathway one on productivity and diversified growth and pathway two on inclusive growth. In order for policies to create better conditions for productivity growth and a more diversified economy, and to be effective in improving service delivery and social protection in a prosperous middle-class society, public institutions must be responsive to the needs of business and citizens and must advance the rule of law. A more transparent and flexible regulatory system would help ensure a level playing field, with ample incentives for competition and innovation. Despite the substantial changes in the role of the state in recent decades, the ownership of productive assets has become even more concentrated, reducing competition and impairing corporate governance. Overcoming inequities in service delivery and responding to the demands of a growing middle class will require greater accountability and consistent policies.

43. The government has achieved improvements in the quality of public governance and in government effectiveness. Progress has often been incremental, but over time the results have been significant, especially for political stability, absence of violence, and the rule of law. Recently, the country's performance on the government effectiveness dimension appears to have improved significantly (Figure O.12). However, Russia's ranking is still below the 50th percentile for most Worldwide Governance Indicators. Regulatory policies have been simplified and the business environment has improved, but there are still challenges to private sector entry, entrepreneurship, investment, and innovation. Making public procurement more transparent and efficient could make it easier for private firms to compete for government contracts. Leveraging e-government more effectively could simplify administrative procedures for businesses and improve delivery of services to citizens. Flaws in voice and accountability persist, despite some reduction in arbitrary decisions by officials (e.g., in tax administration). Formal institutions of accountability, such as the courts, are often perceived to be susceptible to executive influence, and social accountability mechanisms are not well developed. The effectiveness of anti-corruption policy has been mixed, and implementation of the National Anti-corruption Plan has been lagging.

Figure O.12. Russia's Worldwide Governance Indicators, Percentile Ranking, 2008–14

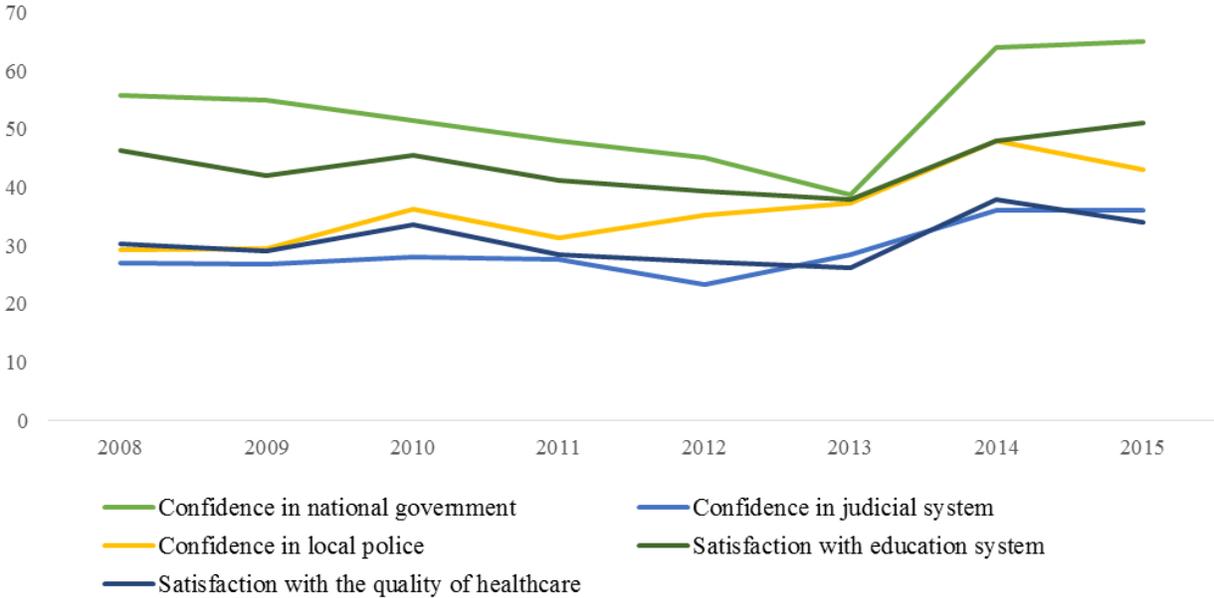


Source: World Bank.

44. Despite major initiatives over the past decade to strengthen corporate governance, the practices of Russian firms remain poor. Good corporate governance is essential to establish an investment climate that is conducive to the emergence of competitive companies and efficient capital markets. Countries with sound corporate governance practices attract more capital. Adopting the new Corporate Governance Code, which introduced many best-practice recommendations in 2014, became a lower priority for many companies as the economy deteriorated. Independent directors are not sufficiently represented on boards of directors. Disclosure of financial statements and information on ownership structures and related-party transactions is minimal. Given the small number of independent directors and inadequate disclosure practices, high concentration of ownership in both public and private enterprises makes minority shareholders vulnerable to unfavorable board decisions.

45. Although Russia has undertaken a series of administrative reforms to improve the quality and effectiveness of public services, the impact has been limited. An important part of the government strategy to improve the access of citizens to public services, realize efficiency gains, and reduce petty corruption in service delivery was the introduction of e-services. Although administrative regulations and standards for delivery have been codified, their application has been incomplete due to difficulties in integrating the reforms within multi-layered government structures and the lack of federal budget funding for the reforms. Strong income growth over the last decade has created a large middle class, which has increased demand for access to quality public services. Citizen perception surveys show a significant rise in confidence in government institutions, from 39 percent in 2013 to 64 percent in 2014, but confidence in the judicial system and local police is low, and there is dissatisfaction with the provision of health and education services (Figure O.13).

Figure O.13. Confidence in Government Institutions and Provision of Services, Percent, 2008–15



Source: Gallup World Survey Data.

Better Natural Resources Management

46. Better environmental and natural resource management would help sustain economic growth and increase resilience. Russia’s large endowment of natural capital overshadows the inefficiencies and the costs of poor environmental management. Inefficient use of natural resources pushes up production costs, impairs competitiveness, and reduces savings for future generations. High energy intensity (Figure O.14), stemming from the combination of subsidized energy tariffs, obsolete capital stock, an inadequate production structure, low population density, and a cold climate, is a huge drag on Russia’s competitiveness. Improvements in efficiency could reduce energy consumption by 45 percent (Figure O.15). Growth has been achieved at the expense of natural capital: while Russia has a high level of wealth per capita (the sum of physical, human, and natural capital), its adjusted net savings, the difference between production and consumption adjusted for the use of natural resources and investment in human capital, is less than for peers, which threatens long-term sustainability. It appears that income growth is being achieved at the expense of depleting the natural resource base, especially mineral and energy resources.

Figure O.14. Russia's Energy Intensity

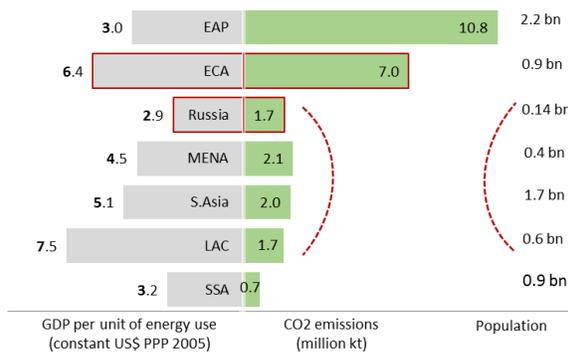
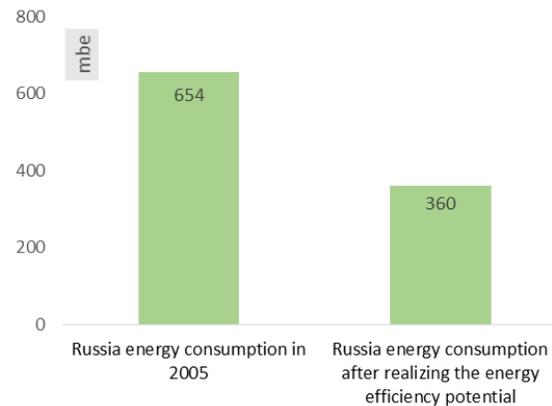


Figure O.15. Russia's Energy Efficiency Potential



Source: World Bank's World Development Indicators.

Note: EAP= East Asia and the Pacific Region; ECA= Europe and Central Asia; MENA= Middle East and North Africa; LAC=Latin America and the Caribbean Region; SSA=Sub-Saharan Africa.

Total incremental investments:	\$320 billion
End users cost savings:	\$80 billion/year
Benefits to economy:	\$120-150 billion/year

Source: World Bank 2011.

47. However, while Russia is depleting some of its natural resources at an alarming rate, other natural resources, such as forests, have potential for economic growth that is largely untapped. World demand for timber is growing very rapidly, increasing the potential for exporting forest products and boosting employment. Improved environmental management also offers economic opportunities. Improvements in waste management could make a significant contribution to growth and job creation. Similarly, urban land development associated with large development of infrastructure and the transport system offers an opportunity to repair past environmental damages while increasing the value of assets.

48. Pollution and natural resource degradation have had an adverse impact on welfare, especially for the most vulnerable. Together, these problems disproportionately affect the poor, who tend to live in the most marginalized and exposed areas. In addition to heightening morbidity and mortality risks, living or working in an unhealthy environment reduces productivity and wages and increases health treatment costs. Air pollution is associated with 3–6 percent of total deaths in Russian cities, and also affects children. If not properly managed, increased solid waste poses an additional threat to health. Up to 30 percent of landfills in Russia do not meet sanitary standards, which particularly affects the poorer and marginalized groups that live near landfills and dump sites. Only 5 percent of the municipal solid waste currently generated is recycled, compared to 60 percent in EU countries. Contaminated soil, air, water, and radioactive waste, a legacy from past economic and military activities, also create significant health hazards.

49. Climate change will increase the vulnerability of Russia's economy to weather-related hazards and pose new challenges to policies in support of growth and shared prosperity. Floods, storms, and droughts are likely to become more frequent and more costly to address. The frequency of extreme weather events is already affecting agricultural production; for example, in 2010 a record drought destroyed one-third of Russia's harvest. Climate change also will have a profound environmental impact

on the pristine but fragile environment in the Arctic zone. Climate change and weather-related disasters have a particularly severe impact on the poor, who often lack insurance or coping capacity. Better management of land, forests, and water would help manage climate change and disaster risks and would especially benefit poor and natural-resource-dependent populations that have more limited coping mechanisms. As one of the most energy-intensive economies, Russia is responsible for a large share of global carbon emissions. Russian forests store one-third of the forest carbon balance worldwide, but fires, pest infestations, and human activities severely impair their effectiveness as a carbon sink and may result in additional carbon emissions. Higher energy efficiency, development of renewable energy sources, and better management of forests would help Russia to mitigate and adapt to the impacts of climate change and would elevate its role in the global climate change agenda.

Policy Priorities Emerging from the Diagnostic

50. Policy priorities are recommended to advance Russia in achieving the twin goals.⁴ In light of the diagnostic findings, it will be crucial to raise productivity in order to create formal, high-paying jobs. It will be of equal importance to further raise social inclusion by reducing the vulnerability of the poor and other people in the bottom 40 percent. The crucial areas for policy action that can boost productivity and formal employment relate to the *creation of a better investment climate, improved connectivity and infrastructure, and enhanced innovation and skills*. Complementary to these policy priorities are creation of a stronger human capital base that is both better able to participate productively in labor markets and less vulnerable to fall into poverty as a result of shocks. Here three policy priorities were identified as key: *reducing premature mortality and improving health outcomes, improving quality and access to education, and strengthening the effectiveness and efficiency of social protection systems*. Sustainable advances across all these dimensions are conditional on progress in measures of *good governance, maintaining fiscal viability, and finally managing environmental and natural resources wisely*.

51. The Systematic Country Diagnostic moved from the findings of the analysis to articulation of policy priorities—and subsequently concrete policy actions—in three steps:

1. The country team confirmed a long list of constraints on progress toward inclusive growth and poverty reduction.
2. The core team identified the top three policy priorities for each pathway by applying three filters to the list of constraints: (a) impact on the twin goals and sustainability; (b) timing and sequencing; and (c) complementarities and preconditions, whereby addressing one set of constraints would also trigger (or be a condition for) progress in other areas. Based on this analysis, validation through benchmarking, and the inputs of experts, the core team then identified actions for each policy priority.
3. The entire country team participated in an open discussion to validate and refine the policy priorities and proposed policy actions (see
4. Table O.1).

52. While there is a considerable body of data and analysis available for Russia, the report identified some substantial knowledge gaps in terms of both World Bank sector expertise and more generally topics not well covered in the academic or policy research literature. Regional knowledge could be broadened on a wide variety of topics to uncover the diverse challenges faced by different areas. Topics

⁴ In 2013, the World Bank Group adopted two goals to guide its work: ending extreme poverty and boosting shared prosperity. More specifically, the goals are to reduce extreme poverty in the world to less than 3 percent by 2030, and to foster income growth of the bottom 40 percent of the income distribution in each country.

identified in the diagnostic, while not exhaustive, range from deeper measurement of shared prosperity trends to factors driving regional productivity and labor mobility to explanations for divergences in access to and the quality of social protection programs, education, and health services. A comprehensive review of both federal and regional public spending and the revenues of and fiscal liabilities created by state-owned enterprises, banks, and other financial institutions, is warranted and would inform efforts to restore fiscal space. Since regions differ greatly in their fiscal circumstances and the obstacles they face in delivering public services, further regional analysis is a priority. A better understanding of the factors constraining the financing and implementation of investment is also needed, as are more evidence-based practical models for executing infrastructure projects that are cost-effective and attract private sector participation. Further empirical knowledge is needed of how the environment impacts on different dimensions of welfare in the poorer segments of the population and how better environmental management could provide economic opportunities. The World Bank will seek to collaborate with the authorities and with research institutions, think tanks, and civil society organizations to address data and knowledge gaps.

Table O.1. Key priority reform areas

Pathways/ Requisites	Policy Priorities	Policy Actions
Increasing productivity for diversified growth	Create a better investment climate and reallocate labor to higher-productivity formal jobs.	<ul style="list-style-type: none"> • Create a level playing field for all firms by enhancing competition conditions and streamlining regulatory requirements, such as the inspection regime, for business operations, in order to encourage entrepreneurship and SME growth. • Diversify and deepen the financial sector to help improve access to finance for SMEs, introduce long-term finance instruments, and reduce the cost of credit. • Remove nontariff barriers, improve trade facilitation through greater reliance on risk-management techniques, streamline international transit procedures, increase the transparency of trade legislation, and address the fragmentation of trade promotion. • Support labor mobility by developing housing markets and transportation networks, reducing regulations that act as barriers to the movement of labor, and assisting individuals with high job search and moving costs.
	Improve infrastructure and connectivity.	<ul style="list-style-type: none"> • Remove the infrastructure bottlenecks on the main trade corridors and improve logistic services. • Improve connectivity and transport infrastructure and services in lagging regions and urban areas. • Improve public investment management: increase the economic impact of public infrastructure investment by enhancing institutional capacity to plan and manage large-scale initiatives in transport and logistics, and expand use of PPPs.
	Strengthen innovation and skills.	<ul style="list-style-type: none"> • Support catch-up innovation and growth of internal business capability through supply-side interventions to help firms upgrade their capabilities and demand-side reforms to create more competitive markets, reduce regulation, and strengthen IP protection. • Improve Russia’s Science Technology and Innovation (STI) base and its contribution to the broader economy through better coordination and design of interventions. • Align skills demand and supply by introducing effective incentives to change the content, forms, and methods of skills training, strengthening the

Pathways/ Requisites	Policy Priorities	Policy Actions
		capacity of the skills development system, and introducing a modern information system to communicate demand for and supply of skills and jobs.
Reducing vulnerability by deepening human capital and improving access to services	Reduce premature mortality and bad health.	<ul style="list-style-type: none"> • Strengthen health promotion, disease prevention, and early detection and management of noncommunicable diseases (NCDs). • Reorient health care delivery toward greater reliance on primary health care to manage the growing epidemic of NCDs, avoid unmanageable escalation of health care spending in the medium term and target premature mortality among men and less advantaged socioeconomic groups. • Increase financial resources for spending on outpatient services and preventive care, as fiscal constraints allow, including improving the access of poorer households.
	Ensure the quality of and access to education.	<ul style="list-style-type: none"> • Improve access to and the quality and efficiency of education across regions and incomes at all levels of the education system, from early childhood education to the higher education system. • Increase education financing while improving the efficiency of public infrastructure financing and reduce the bias toward well-performing schools and richer regions.
	Improve the effectiveness and efficiency of the social protection system.	<ul style="list-style-type: none"> • Improve the efficiency and effectiveness of social assistance by increasing the consistency of its objectives and instruments, consolidating overlapping programs, and better targeting. • Reduce the rigidity of labor market institutions and curtail social security contribution exemptions to decrease informality and increase social security revenues.
Cross-cutting requisites for sustainability: Good governance, fiscal reform, and better environment and natural resource management	Enhance good governance; improve accountability and enforcement.	<ul style="list-style-type: none"> • Advance implementation of the Anti-Corruption Plan and guarantee the impartial, transparent, and predictable application of laws by strengthening institutional checks and balances and social accountability mechanisms. • Improve public procurement to enable firms to compete for government contracts at federal and subnational levels. • Leverage e-government more effectively to simplify administrative procedures, increase business efficiency, and strengthen access to services in urban and rural areas (such as health and education), especially for the vulnerable. • Encourage the implementation of the new Corporate Governance Code—particularly by SOEs, financial intermediaries, and companies listed on domestic stock exchange—to tackle outstanding corporate governance deficiencies, including the independency and accountability problems of corporate boards, inadequate corporate transparency, and poor protection of the rights of minority shareholders. • Improve service delivery by better linking financing arrangements with sector strategies and outcomes from planning through completion.

Pathways/ Requisites	Policy Priorities	Policy Actions
	Maintain fiscal sustainability.	<ul style="list-style-type: none"> • Increase nonoil revenues and improve the efficiency and effectiveness of spending, especially of capital infrastructure investments and social expenditures, to reduce the expected fiscal consolidation burden and preserve fiscal space for building infrastructure and protecting the poor. • Address deficit-generating mechanisms of demographic aging: advance pension reforms, especially adjustments to the retirement age, changes in contribution rates, or a shift from publicly funded to contribution-funded benefits; and revise labor market policies to boost labor force participation. • Improve the management and mitigation of contingent fiscal liability risks at all administrative levels.
	Improve environment and natural resources management.	<ul style="list-style-type: none"> • Improve the application of environmental policies to ensure that growth is sustainable: increase coordination of policies and regulation of the use of its natural resources across the government agencies responsible; increase the availability of environmental information for decision making; and better enforce environmental laws. • Adapt to and mitigate climate and disaster risks by safeguarding against the degradation of land and vulnerability to weather-related shocks, including through promotion of good agricultural practices. Improve forest and water management. Reduce carbon emissions by increasing energy efficiency and developing renewable energy sources. • Offset natural wealth depletion with sustainable investments in human and built capital, maintain irreplaceable water and forest ecological services, and diversify economic growth away from activities that pollute heavily. Improve waste management and address past environmental legacies.

53. Russia’s advances toward sustainable inclusive growth and reduced poverty require concerted policy actions on many fronts. The evidence presented in the Systematic Country Diagnostic and the prioritization discussions clearly highlight that reviving productivity-led growth—where labor markets can once again drive shared prosperity and income mobility—requires immediate action to address both obstacles in markets and weaknesses in the human capital base.

54. These policies have varying implications for different Russian age groups and regions. This entails an implicit trade-off; for example, there are unmet investment needs in human capital development, such as early childhood education, and underinvestment in physical infrastructure. Pensioners have been the largest beneficiaries of additional fiscal resources in recent years, but while efforts to improve pension adequacy are important, the policies outlined in

55. Table O.1 entail a rebalancing of priorities to benefit all population groups. Demographic aging in Russia necessitates not just a focus on pension sustainability but also policies across the lifecycle for improving and maintaining productivity, starting in early childhood. Spatial differences should also be taken into account when making progress across these policy areas. Supporting regional convergence through improving connectivity will further spread the gains from growth across the country. Other actions in the area of service delivery and fiscal management will benefit from customizing to the local context to ensure that gaps between and within regions are narrowed.

56. Although the fruits of many policy actions will only be visible in the medium and longer term, now is the time to start. Reform is urgent before inequalities and vulnerabilities increase under the pressing fiscal challenges caused by lower commodity prices, before demographic changes grow to represent too much of a strain on labor market demands and fiscal resources, and before the opportunity to embed the results of a decade of successful growth fades away.

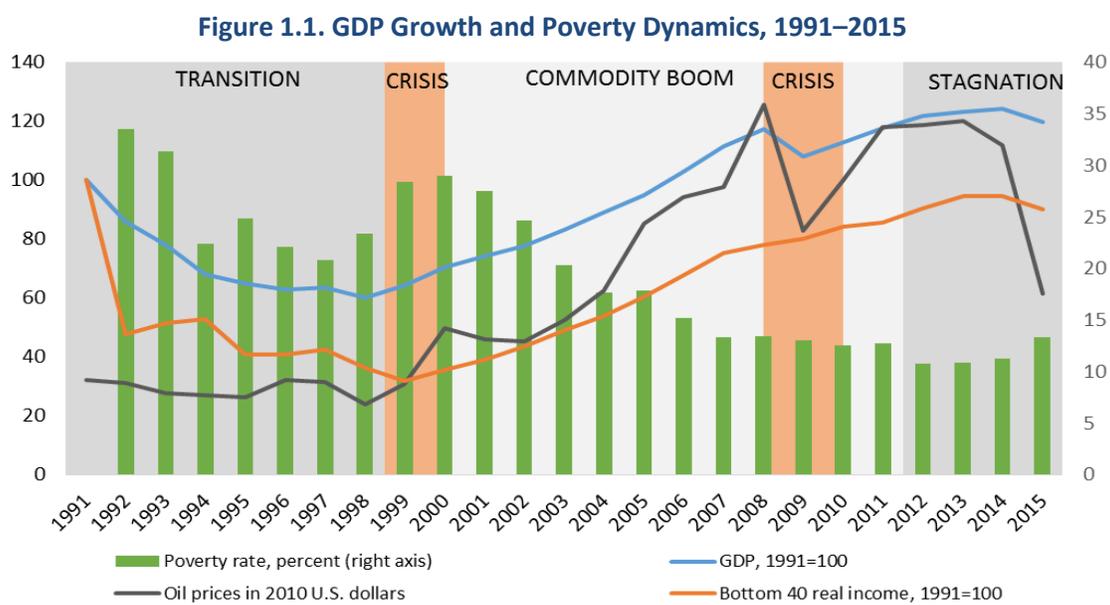
Chapter 1. Macroeconomic and Shared Prosperity Trends

Introduction

57. Strong macroeconomic performance, growth, and shared prosperity have gone hand in hand in Russia for the last few decades. When the economy contracted in the difficult period of transition that began in 1991, Russia’s shared prosperity and poverty reduction performance was weak. In contrast, during the period of strong GDP growth that began in 2000 the incomes of individuals at the bottom of the income distribution rose rapidly (Figure 1.1). Macroeconomic stability, structural transformation, and increasing commodity prices after the 1998–99 economic crisis provided the necessary conditions for steady growth, welfare advances for the poor and vulnerable, and improved incomes for a growing middle class.

58. As underlying growth conditions weakened, Russia has now entered a period of stagnation. Russia responded to the global crisis in 2008–09 with a sizable fiscal stimulus, including support for the banking sector, which enabled the economy to recover quickly. However, a diminished focus on addressing longstanding structural problems in the economy increased economic imbalances and ultimately led to a decline in investor and consumer confidence. Growth slowed significantly in 2012–13, and in 2014 the economy stagnated. The end of the commodity super-cycle hit the Russian economy hard. In 2015 the decline in oil prices, together with the economic impact of sanctions, pushed the economy into recession.

59. Russia’s weak economic outlook and its deteriorating fiscal position put at risk its shared prosperity achievements. Some initial stabilization measures, mainly directed to the financial sector, were undertaken. However, the fiscal space has declined rapidly, which impeded a counter-cyclical fiscal response and will require further fiscal restructuring in coming years. It appears that progress in boosting shared prosperity and reducing poverty has slowed—if not halted—challenging further advances in inclusive growth like that which characterized the commodity boom period.



60. One weakness inherent in the current economic system is its vulnerability, because the economy is concentrated in just a few sectors, and a significant degree of state involvement slows innovation and structural transformation. Market dominance and concentration in a few sectors by large and relatively old firms close to the state provide fewer incentives for productivity increases in and perpetuate economic volatility (see chapter 2). Weak corporate governance in an economy with very high ownership concentration makes it harder to attract transformative investments (see chapter 4). In the medium term, the greatest risk to Russia's economic sustainability lies in the dearth of investment and the low productivity growth. This hints at deeper structural problems and governance challenges in the economy, which will be discussed in the remainder of the report.

61. Many of Russia's structural economic challenges relate to its economic geography. Another central weakness of the current economic model lies in the geographic dispersion of Russia's population and economic activity. Spatial misallocation in the economy is more challenging in a vast country like Russia because markets cannot compensate easily for geographic distortions over long distances, making it difficult to capture the agglomeration economies that spur structural change and diversification. Given Russia's large size and its legacy of spatial inefficiency, labor and production are found in places where they are not used effectively⁵. Higher mobility could compensate for that, but mobility in the last decade was much lower in Russia than in other countries. If Russia were to move to capitalize on the largely untapped potential of agglomeration of economic activities around key urban centers, which could significantly increase productivity and hence sustain growth, the challenges arising from institutional obstacles to mobility within and across regions will become more acute.

62. The ability of the government, both federal and local, to deliver and meet popular expectations has been weakened. This is partly because of the less favorable macroeconomic and fiscal environment but also partly because Russia risks becoming a victim of its own success, having raised the expectations of its people with years of successive spending rises, particularly on pensions and public wages. While the current model, with a strong role for the state in economic and social policies, benefits from relatively high political support, in the present context it may weaken over time. The cost of the social contract has gone up, with the increased roles of pensions, subsidies, public investments, and a large public sector wage bill having pushed up government spending. These challenges were previously masked by revenues fueled by rising oil prices; the risk is that a rebalancing of oil prices, particularly at the much lower level seen since late 2014, makes it difficult to continue to fund welfare improvements for the population from the constrained public purse. Additionally, while the public system has continued to finance health and education services, their quality and equity have begun to fall short.

63. Overall, focusing exclusively on aggregate national trends underestimates the challenge Russia's size and diversity entail. The largest country in the world, stretching from St. Petersburg on the Baltic Sea to Vladivostok on the Pacific coast, Russia consists of eight federal districts and over 80 constituent entities (federal subjects), with highly varied populations, economic activities, and progress on poverty reduction and shared prosperity. The country's size and diversity resulted not only in spatial challenges, but also large divergences in economic and social outcomes with implications also for regional and sub-regional disparities local service delivery, and thus welfare outcomes at the household level. Whenever possible this chapter will refer to such regional and sub-regional trends, but for some important dimensions data and knowledge gaps remain (see chapter 5).

⁵ The legacy of past economic planning, which promoted large-scale development projects based on natural resources and territorial-industrial complexes, led to production complexes that were hard to access geographically. Policies to spread out the population were contrary to the natural tendency of industry and services to concentrate.

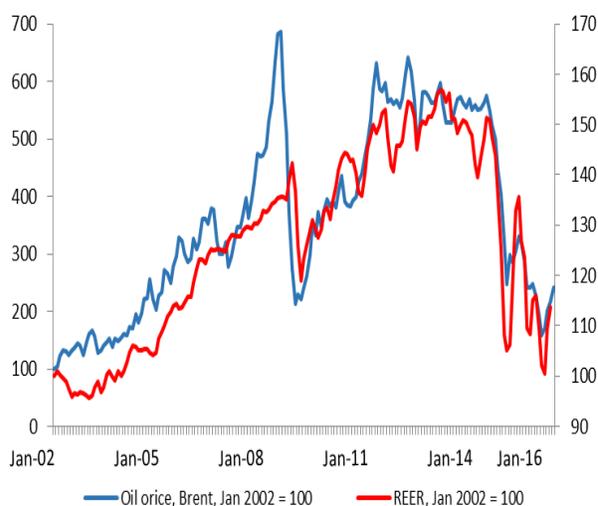
Macroeconomic Stability during the Commodity Boom

The Foundations of Stability and Growth

64. The economy grew briskly in the 2000s, supported by a favorable external environment, solid macroeconomic fundamentals, and sound fiscal management. Between 2000 and 2013, gross domestic product (GDP) rose by 5.2 percent a year, above the 4.5 percent average for Europe and Central Asia (ECA). The growth spurt was interrupted only by the 2008–09 crisis, when GDP declined by 7.8 percent, but soon thereafter growth resumed. Per capita GDP in real terms nearly doubled between 2000 and 2012 (from US\$8,613 to US\$15,177 in purchasing power parity, 2005 prices). The Russian Federation became one of the 10 largest economies in the world, with healthy current account and federal budget surpluses. International reserves peaked in mid-2008 at US\$584 billion, the third highest level in the world and nearly equal to total external debt.

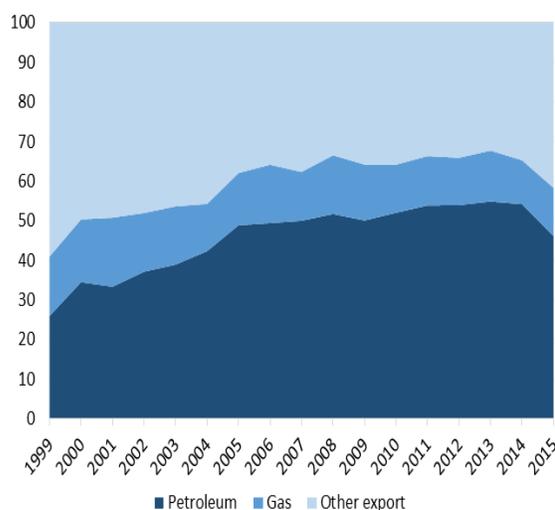
65. Favorable external conditions made a particularly important contribution to growth. Oil prices increased from an average of US\$28 per barrel in 2000 to US\$105 in 2013 (Figure 1.2). Oil and gas exports from about 40 percent of total exports in 1999 to nearly 70 percent in 2013 (Figure 1.3). Buoyant export revenues and strengthening terms of trade drove a significant real exchange rate appreciation.

Figure 1.2. Crude Oil Price Index and Real Effective Exchange Rate Index, 2000–15



Source: World Bank.

Figure 1.3. Oil and Gas Share in Total Exports, 1999–2015, Percent

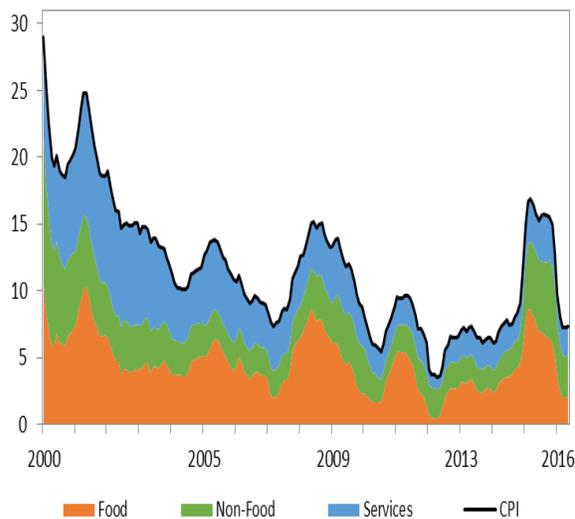


Source: UN Comtrade.

66. Domestically, macroeconomic policies restrained inflation in the 2000s. After the 1998 crisis, the Russian government introduced bold reforms that laid the foundation for rapid recovery and a decade of high growth. Macroeconomic stability was strengthened in four ways: Large increases in revenues accommodated pressures for more spending and lower tax rates while maintaining a healthy fiscal surplus. An oil reserve fund—the stabilization fund—helped limit the Dutch disease that plagues many oil-rich countries. Repayment of a significant portion of Russia’s external debt mitigated Russia’s external vulnerability related to commodities. And by the end of 2007 monetary policy had helped reduce inflation to about 12 percent (Figure 1.4).

67. Credit growth supported the modernization of the economy and rapid consumption growth. Capital inflows and declining inflation allowed interest rates to fall and domestic credit to expand, without endangering financial sector stability (figure 1.5). Improvements in financial intermediation also facilitated credit growth. Nominal growth in credit to firms averaged nearly 40 percent until the 2008–09 crisis and was 14 percent in 2013. Buoyant credit growth also meant that investment demand could be met without the need for more domestic savings. The sharp acceleration in consumer credit growth fueled consumption.

Figure 1.4. Consumer Price Inflation by Components, Year-on-Year, 2000–16



Source: Rosstat.

Figure 1.5. Credit Growth, 2001–16, Percent

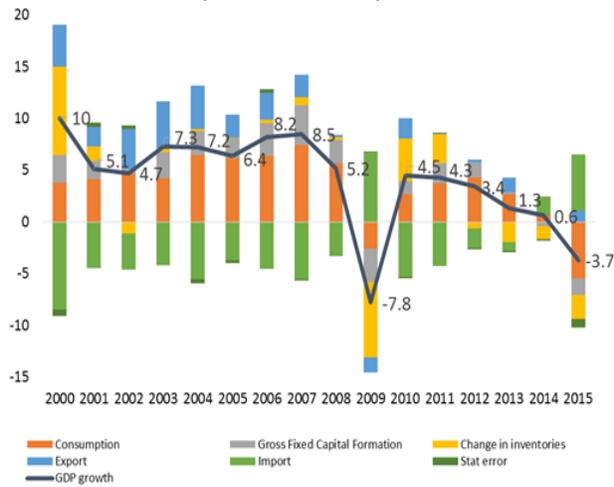


Source: Central Bank of Russia.

Gains from the Commodity Boom and Sound Macroeconomic Management

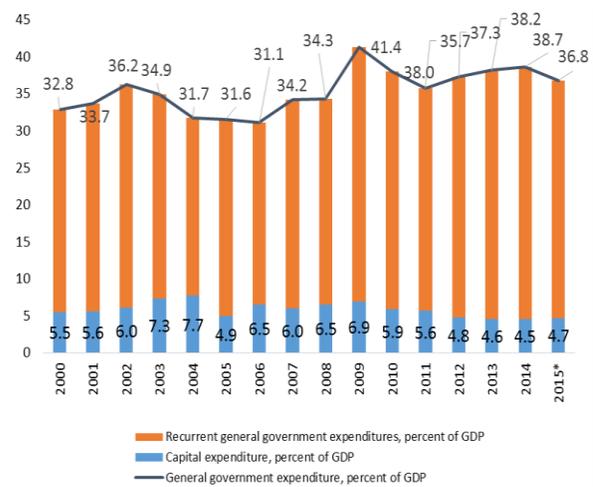
68. The combination of macroeconomic stability and the oil windfall resulted in fiscal expansion, which promoted consumption-driven growth (Figure 1.6). Buoyant oil revenues, accounting for about 25 percent of total revenue, boosted public spending and allowed for a steady increase in public employment, and in wages, pensions, and transfers. Total general government spending increased tenfold in nominal terms between 2000 and 2013 and rose as a share of GDP from 32.8 to 38.2 percent, solely because recurrent spending was going up (Figure 1.7).

Figure 1.6. GDP Growth Demand Composition, 02–2015, Year-on-Year, Percent



Source: Rosstat.

Figure 1.7. Public Spending Composition, 2000–15, Percent of GDP



Source: IMF and Roskazna.

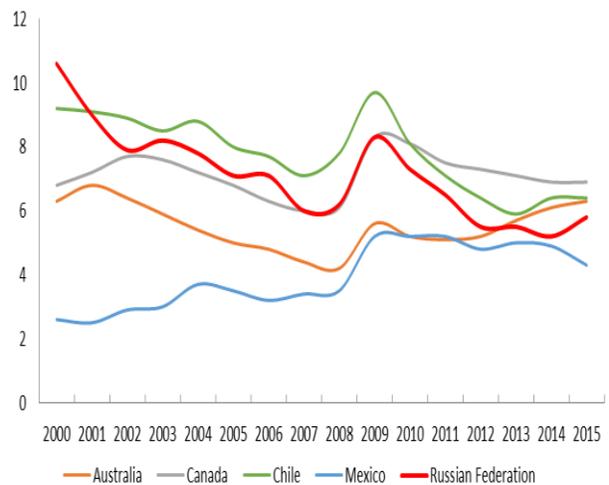
69. In Russia an expanding public sector and a growing nontradable sector resulted in growth-with-jobs. The economy was successful in creating new jobs. As the economic structure changed to a more modern one, the nontradable sector became the main growth engine and contributed to significant job creation (Figure 1.8). When its labor market performance is compared to other resource-rich countries, Russia’s experience was respectable. The unemployment rate dropped continuously, from double digits at the start of the decade to about 5–6 percent in recent years, notwithstanding the impact of the global financial crisis in 2008–09 (Figure 1.9). Employment gains in the public sector and a rapidly growing nontradable sector contributed to growth in real wages (Figure 1.10) and incomes (Figure 1.11).

Figure 1.8. GDP Growth Sector Composition, 2003–15, Percent



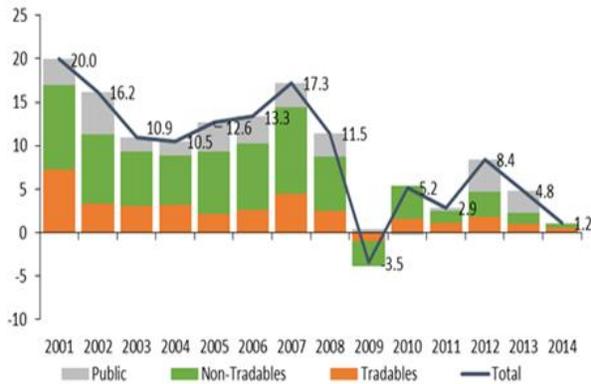
Source: Rosstat.

Figure 1.9. Unemployment Rate, 2000–15, One-Year Moving Average, Percent



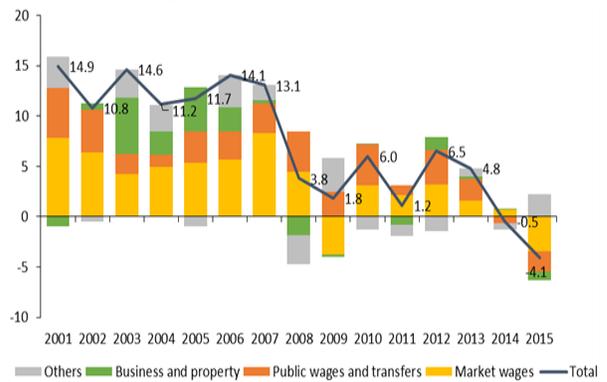
Source: ILO.

Figure 1.10. Real Wage Growth by Sector, 2001–15, Percent



Source: Rosstat.

Figure 1.11. Real Income Growth by Component, 2001–14, Percent



Source: Rosstat.

70. The fiscal windfalls that financed increased public spending underpinned Russia’s economic and human development gains. Russia’s growth and shared prosperity story over the past decade is inseparable from fiscal trends. Since the 2000s began, windfalls in the form of significant and growing oil revenues allowed Russia to expand spending on social programs while at the same time building fiscal reserves and reducing debt as a share of GDP (Table 1-1). Before the global financial crisis hit, non-oil revenues declined as a share of GDP while oil revenues rose dramatically—from 2.3 percent of GDP in 2000 to over 10 percent by 2008. The government used the increase in revenues to expand social programs. Between 2000 and 2008 total spending on education, health, and pensions increased by 4.1 percent of GDP. In turn, improved access to health and education and rising social transfers, together with rapid income growth, substantially reduced poverty and lessened inequality. Public investment, though comparatively low, also went up from 5.5 percent of GDP in 2000 to 6.5 percent in 2008.

Table 1-1. General Government Fiscal Indicators, 2000–15, Percentage of GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
Revenue	36.2	36.9	37.0	36.4	36.6	39.7	39.5	40.2	39.2	35.0	34.6	37.3	37.7	36.9	37.5	33.3
Taxes	26.9	27.8	26.9	26.0	26.8	31.8	31.4	31.2	31.2	25.7	26.5	28.7	28.5	27.7	28.2	23.5
Contributions	7.5	6.9	7.6	7.8	7.4	5.5	5.4	6.0	5.5	5.9	5.3	6.3	6.6	7.1	7.1	6.6
Other	1.9	2.2	2.5	2.5	2.5	2.5	2.7	3.1	2.5	3.4	2.8	2.3	2.5	2.2	2.2	3.2
Oil and gas revenues	2.3	3.3	3.1	3.7	6.1	10.0	10.9	8.7	10.6	7.7	8.3	10.1	10.4	9.9	10.4	7.2
Non-oil and gas revenues	33.9	33.6	33.8	32.6	30.6	29.7	28.6	31.5	28.6	27.4	26.4	27.2	27.3	27.1	27.1	26.2
Expenditure	32.8	33.7	36.2	34.9	31.7	31.6	31.1	34.2	34.3	41.4	38.0	35.7	37.3	38.2	38.7	36.8
Current expenditure	27.4	28.1	30.2	27.6	24.0	26.6	24.6	28.2	27.8	34.4	32.2	30.1	32.5	33.7	34.2	31.6
Payroll	5.2	5.6	7.1	7.1	6.6	7.0	7.3	7.4	7.6	9.9	8.2	7.3	4.9	5.2	5.1	4.4
Interest payments	4.3	2.7	2.1	1.7	1.2	1.0	0.7	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8
Goods and services (except transfers)	2.7	5.0	4.5	4.0	3.6	3.8	3.8	5.0	5.3	5.8	4.8	4.9	4.1	4.1	3.9	3.4
Capital expenditure	5.5	5.6	6.0	7.3	7.7	4.9	6.5	6.0	6.5	6.9	5.9	5.6	4.8	4.6	4.5	4.7
Non-oil and gas balance	1.1	-0.1	-2.4	-2.3	-1.2	-1.8	-2.5	-2.7	-5.7	-14.0	-11.7	-8.5	-9.9	-11.1	-11.6	-10.6
Primary balance	7.7	5.9	2.8	3.1	6.1	9.1	9.1	6.6	5.3	-5.7	-2.9	2.1	1.0	-0.6	-0.4	-2.7
Balance	3.3	3.2	0.7	1.4	4.9	8.1	8.4	6.0	4.9	-6.3	-3.4	1.5	0.4	-1.3	-1.2	-3.5
Expenditures by function																
Public administration	0.7	1.7	2.0	2.1	2.1	2.5	2.3	2.9	2.7	2.8	2.5	2.4	2.3	2.3	2.3	2.3
National defense	2.6	2.8	2.7	2.8	2.6	2.7	2.5	2.5	2.5	3.1	2.8	2.7	2.9	3.2	3.5	3.9
National security	1.8	2.1	2.2	2.3	2.2	2.7	2.7	2.6	2.6	3.2	2.9	2.7	3.1	3.3	3.1	2.6
National economy	2.5	4.7	4.2	3.7	3.4	3.5	3.5	4.7	5.5	7.2	5.0	5.0	5.3	5.0	6.4	4.7
Housing and communal services	2.7	2.2	2.0	1.9	1.7	2.2	2.3	3.3	2.8	2.6	2.3	2.1	1.7	1.6	1.4	1.2
Environment	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Education	2.9	3.1	3.8	3.6	3.5	3.7	3.9	4.0	4.0	4.6	4.1	4.0	4.1	4.4	4.3	3.8
Culture and mass media	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6
Health and sport	2.1	2.0	2.3	2.3	2.2	3.7	3.6	4.2	3.7	4.3	3.7	3.7	4.0	3.8	3.9	3.9
Social policy	7.8	9.1	10.4	7.3	6.7	8.7	8.8	8.6	9.1	12.2	13.3	11.6	12.4	13.2	12.3	12.4
o/w pensions	n/a	n/a	n/a	n/a	n/a	6.6	6.2	5.9	6.2	8.3	9.6	7.3	7.5	8.3	7.9	8.7
Memo items:																
GDP, bln rubles	7,305.6	8,943.6	10,830.5	13,208.2	17,027.2	21,609.8	26,917.2	33,247.5	41,276.8	38,807.2	46,308.5	55,967.2	62,176.5	66,190.1	71,406.4	80,804.3
Public debt, percent of GDP	47.8	37.5	38.2	28.6	21.3	13.0	8.0	6.5	5.6	7.7	10.2	10.5	12.2	13.1	15.3	14.6
Oil price, annual average, Brent, US\$/bbl	28.3	24.4	25.0	28.9	38.3	54.4	65.4	72.7	97.6	61.9	79.6	110.9	112.0	108.9	98.9	52.4

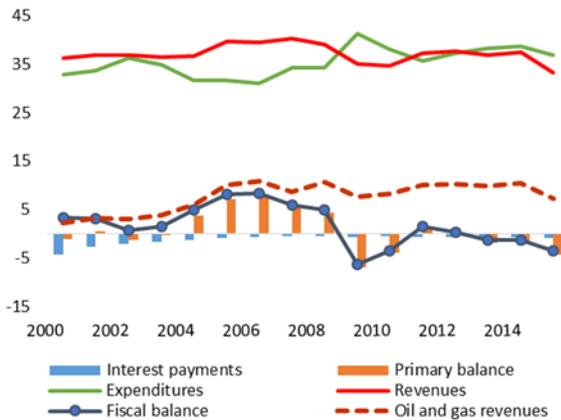
Source: IMF, Roskazna, Rosstat.

* Due to methodological changes in nominal GDP calculation, data for 2000 - 2014 and 2015 are not comparable.

71. However, by the mid-2000s Russia's economic expansion had accelerated above the long-term trend and there were signs of overheating. Within the nontradable sector, growth shifted to retail trade and construction. Productive capacity was under strain, infrastructure constraints tightened, and real wage increases outpaced productivity gains. The composition of capital inflows to the private sector moved steadily toward private debt flows, often with short maturities. After declining for eight years, consumer price inflation rose in 2007. The overheating and large capital inflows complicated the conduct of monetary policy, pushing considerable liquidity into the system. The local credit boom further fueled demand for consumer goods and durables and real estate. All these factors boosted asset prices, reflected in stock and real estate prices. In sum, Russian economic growth became dependent on booming domestic demand and vulnerable to changing investor sentiment just as the global financial crisis was about to hit.

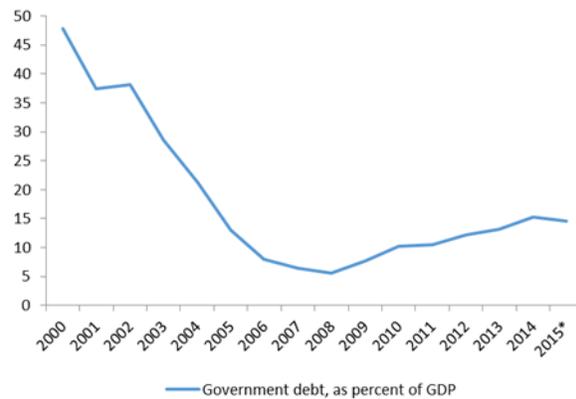
72. Until 2008 prudent macroeconomic management resulted in reduction of public debt and accumulation of large fiscal reserves, which helped Russia to weather the global financial crisis. Despite the 11.6 percent annual real increase in spending for 1999–2008, rising revenues resulted in a primary surplus that averaged 6.1 percent a year between 2001 and 2008 and exceeded 9 percent in 2005 and 2006 (Figure 1.12). Russia reduced its gross debt-to-GDP ratio from about 48 percent of GDP in 2000 to just about 6 percent by 2008 (Figure 1.13). Strong pre-crisis macroeconomic fundamentals, coupled with the large fiscal and international reserves accumulated during the decade up to 2008, allowed Russia to weather the storm when the global financial crisis hit.

Figure 1.12. General Government Balance, 2000–15



Source: Ministry of Finance and Rosstat.

Figure 1.13. Public Debt, 2000–15, Percent of GDP



Source: Ministry of Finance and Central Bank.

73. The total cost of the anti-crisis measures Russia implemented in 2008-09 amounted to more than US\$90 billion, or about 7 percent of GDP. The initial fiscal policy response was focused on supporting the financial sector and (large) enterprises. The swift and massive policy response of the government and the central bank managed to stave off a systemic banking crisis and liquidity crunch and prevented a currency crisis.⁶ No major banks failed, and most banks managed to repay their short-term external obligations.⁷ Confidence in the banking system was quickly restored, reflected in a reflow of deposits. But with deepening unemployment and poverty, resources were gradually directed to support households, active labor market programs, and small and medium enterprises (SMEs). The federal government provided strong fiscal support to regions and subnational delivery of services.

74. Countercyclical measures in 2008-09 helped the economy to recover quickly. Though of greater magnitude than in many other G-20 countries, Russia’s fiscal policy response was appropriate, given its much larger growth deceleration, its weaker automatic stabilizers, and its large fiscal reserves, which made it possible to finance the entire deficit of 2009 from internal sources. Initially, the policy response worked well: although GDP declined by almost 8 percent in 2009, robust growth returned in 2010–12. Nevertheless, more emphasis on infrastructure and social spending likely would have had larger multiplier effects, thus providing greater support for aggregate demand.

75. A decade of structural reforms, which had significantly strengthened Russia’s budget and the financial system, contributed to the rapid recovery after 2008-09. Fiscal reforms improved budget planning and execution: Federal and regional executive agencies prepared medium-term budgets with performance targets. Municipalities were given more budgetary autonomy, and public participation in decision making increased. The banking sector was strengthened by better prudential regulations, risk-

⁶ The authorities responded by reversing the earlier monetary tightening and committing substantial fiscal resources to shoring up the banking system and ensuring liquidity in financial markets. The Central Bank was willing to spend considerable internal reserves to ensure a gradual transition to a new equilibrium in the exchange rate that reflected the changed fundamentals, in the process making exchange rate policy more flexible. This difficult period was managed without a currency crisis—a major concern of the authorities at the time.

⁷ Although many small- and mid-sized banks have been resolved in the past few years, substantially depleting the reserves of the Deposit Insurance Authority, the banking system as a whole weathered the crisis relatively well. Improved liquidity enabled banks to use excess funds to repay uncollateralized central bank refinancing ahead of schedule, and that refinancing was terminated by end-2010.

based supervision, and greater transparency of bank ownership. In early 2008, before the global crisis, Russia's banks had fairly sound financial indicators, with strong solvency, high profitability, low nonperforming loans, and adequate liquidity.

Russia's Growth Drivers and Vulnerabilities

76. Growth decomposition confirms that structural policies had strong effects on growth during the 2000s, reflecting the impact of reforms and structural changes launched during the transition period (see: Annex 1.1. Growth Decomposition Analysis⁸) Facing demographic challenges and a likely *new normal* environment ahead, when the commodity super-cycle would come to an end and external financing conditions turn less favorable, it is critical for future policy design to understand the factors underlying Russia's growth during the previous decade. Breaking the 2000s decade into early and late periods provides a detailed picture of the evolution of the effects of different factors on growth (Figure 1.14). Structural policies were the key driver of growth in the early 2000s (2000 to 2005), but persistent effects of growth from the previous period had a negative effect on current growth.^{9,10} External conditions and stabilization policies had only a small, though positive, impact on growth during this period as policies to stabilize the currency were adopted after the exchange rate crisis.

77. Russia experienced large productivity gains in the first half of the 2000s, driven in good part by a productivity surge from a low base. Total factor productivity (TFP) increased by 4–5 percent a year. Productivity within firms contributed the bulk of these gains as enterprises restructured, and firms tapped into underutilized stocks of capital and labor after the 1998 crisis. However, as utilization rose closer to capacity, additional productivity gains became more difficult. On the demand side, Russia's growth was supported by sizable investment and rising consumption, in part reflecting a catch-up from the previous decade's depressed domestic demand.

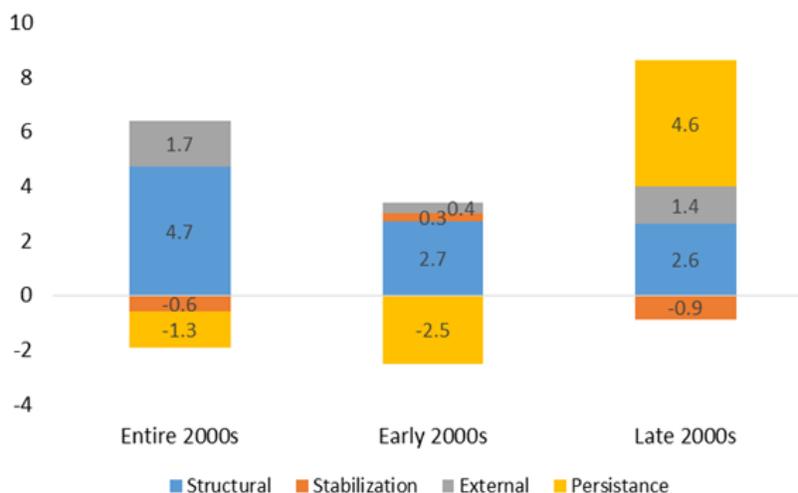
78. The contribution of structural policies continued to be important in the late 2000s, but growth became driven by the positive impact of growth persistence. Unlike the early 2000s, growth persistence had a large and positive impact on GDP growth between 2006 and 2010, reflecting favorable external conditions. Resource-rich, Russia during this period registered average real GDP per capita growth of 4 percent, driven by higher terms of trade. Indeed, terms of trade gains were a key driver of growth: due to higher oil prices terms of trade gains grew on average by 53 percentage points. With better terms of trade, the contribution of the external environment to growth also improved significantly relative to the early 2000s. The recent deterioration in the terms of trade and declines in GDP underline the importance of structural policies in driving growth.

⁸ World Bank 2016: The analysis decomposed Russia's income per capita growth for the period from 2000 to 2010, separating the effects from external conditions, stabilization policies, structural reforms, and growth persistence (the legacy effect of past income levels). This analysis compared Russia to similar countries that are also exporters of metals and/or oil. GDP per capita (in PPP terms) was used to measure the standard of living and facilitated comparisons across countries.

⁹ The economic motivation for persistence is the following: Saving is determined by income. Higher income leads to higher saving; higher saving leads to higher investment; higher investment leads to an increase in capital stock; an increase in capital stock leads to increased income, and these effects continue to loop. The degree of persistence is affected by the capital-output elasticity; the consensus view in the macroeconomic literature is that this elasticity is positive and below unity.

¹⁰ Growth persistence reduced GDP by 2.5 percent during this period due to weaker terms of trade, neutralizing almost all the positive effects of structural policies.

Figure 1.14. Predicted Growth Effects in Russia, 1996–2010, Percent



Source: World Bank.

Note: ‘Entire 2000s’ compares the average for 2000–10 with 1996–2000; ‘Early 2000s’ compares the average for 2001–05 with 1996–2000; and ‘Late 2000s’ compares the average for 2006–10 with 2001–05.

79. Decelerating growth since 2010 indicates that the Russian economy lost competitiveness due to lingering structural constraints. This was due to a gradual slow-down in the late 2000s in second-generation structural reforms—strengthening the investment climate, diversifying the economic structure, and closing the infrastructure gap. Russia’s significant gaps in all major infrastructure sectors—in both coverage and quality of service—remained largely unaddressed. Inadequate maintenance of existing assets and investment in new ones during the 1990s was not made up during the period of prosperity in the commodity boom period of 2000–07. Investment growth, which was largely driven by public infrastructure projects, fell after the 2008–09 crisis and had virtually disappeared by the second half of 2013. As wage growth began to outpace productivity gains and the real effective exchange rate rose, Russian firms operating in non-energy sectors had to cope with rising pressures from foreign competition.

80. The structural vulnerabilities of the economy are captured in its narrow industrial structure. Russia’s economic structure continued to be dominated by large corporations highly concentrated in traditional heavy industries, oil and gas, with a limited small and medium enterprise sector. Two-thirds of stock market capitalization was similarly concentrated in oil and gas or related stocks, which amplified the transmission of external oil shocks to the domestic economy. The government has retained a dominant position in many sectors, which undermines competition. In the financial sector, the three largest state-owned banks account for over half of total banking sector assets, stifling competition and preventing the deepening of financial services.¹¹

¹¹ With the top 20 banks controlling about 75 percent of total sector assets, the market can be described as an oligopoly. Based on the top 50 banks, the Herfindhal index value of 1,500 showed a moderately high degree of market concentration. However, if the state-owned banks within the top 50 are treated as a single bank holding company, the index jumps to 5,000, which is characteristic of an oligopoly. At the same time, there is segmentation between the very large banks and the large number of rather small regional banks.

81. Russia's macroeconomic and fiscal stability in recent decades masked the vulnerability and shortcomings of its growth model that are now coming to the fore. Although natural resources—the single largest asset in Russia's wealth portfolio—supported both economic growth and macroeconomic and fiscal stability, limited economic diversification and heavy reliance on oil and a few other strategic sectors heightened Russia's vulnerability to terms-of-trade and related shocks. While low investment rates by themselves would limit Russia's medium-term potential growth, the country must now also deal with persistently low oil prices and economic sanctions, which underscore the vulnerabilities and sustainability risks to Russia's growth model.

Macroeconomic Challenges after the Commodity Boom

Responding to a New Crisis

82. After the 2008-09 crisis, oil prices quickly rose again and, together with fiscal adjustment enabled a temporary rebuilding of fiscal balances and fiscal space. By the end of 2010, oil prices had recovered to almost US\$100 a barrel. The government's federal budget law for 2011–13 aimed to gradually broaden the non-oil revenue base and reduce expenditures. It provided for creation of additional fiscal space totaling 5.1 percentage points of GDP over the three-year period and a gradual reduction of the fiscal deficit. Deficit financing was to come mainly from domestic sources, particularly borrowing, supplemented by modest external borrowing. The budget was in surplus in 2011–12, due to significant reductions in expenditures as a share of GDP and rising oil revenues. However, this was a short-lived achievement: already in 2013, the general government budget had fallen back into deficit as oil and non-oil revenues declined and spending rose, driven by fiscal expansion in subnational governments. Growth declined steadily, from 4.3 percent in 2011 to 3.4 percent in 2012 and 1.3 percent in 2013.

83. When crisis conditions returned in late 2014, Russia's macroeconomic situation was reasonably strong, but not as strong as in 2008-09. Russia entered this period with smaller fiscal reserves and was facing the prospect of a structural downturn. In 2013, the Reserve Fund and the National Welfare Fund stood at about 4 percent of GDP, well below the pre-crisis levels of 9.8 percent for the Reserve Fund and 6.3 percent for the National Welfare Fund. Anemic growth in 2014 reflected the stalled structural reforms.

84. The financial stability that the Russian banking sector had experienced in the previous few years came under renewed pressure with the imposition of economic sanctions and the plunge in oil prices. Before the steep depreciation of the ruble in 2014, bank capital and income positions had already begun to deteriorate owing to the economic slowdown. The ruble depreciation put additional pressure on bank earnings and risk-weighted capital because about 30 percent of corporate loans had been extended in U.S. dollars. The situation worsened late in 2014 as outflows of retail deposits created liquidity pressures, asset prices declined, and the central bank raised policy interest rates, worsening bank net interest margins.

85. Despite the economic turmoil, in 2014-15, macroeconomic and financial stability was maintained (Box 1.1). Government support to Russia's financial sector in 2014–15, including the Central Bank of Russia (CBR) funding, amounted to about US\$180 billion, 11 percent of GDP. This is comparable to the level of government support in 2008–09. The program, designed to maintain financial stability through, among other measures, temporary regulatory forbearance and capital support to selected banks, expired at the end of 2015. The overall Russian financial sector remains small at 100 percent of GDP, and the banking sector remains heavily concentrated, but due to central bank efforts since 2014 it is slowly consolidating from the bottom up. The reserves of the Deposit Insurance Authority (DIA) have been

substantially depleted in the past two years as nearly 200 banks were closed, obliging the CBR to provide funding to keep the DIA functioning.¹²

86. In response to the combined impact of the oil price shock and sanctions, Russia in early 2015 adopted an anti-crisis plan amounting to US\$40 billion, 3 percent of GDP. The program included massive recapitalization of banks¹³ and measures to mitigate some of the effects of the expenditure rationalization adopted in response to plummeting oil revenues and weaker economic activity. While the 2015 budget reduced real expenditures (e.g., by limiting wage indexation), the anti-crisis plan reallocated spending to priority sectors (including full indexation of pensions, support to specific sectors, budget credits to regions, federal credit guarantees, and use of the National Wealth Fund to support systemically important enterprises and banks). As a result, in 2015 the fiscal deficit increased to 3.5 percent of GDP in 2015. To finance the deficit, the authorities drew on the Reserve Fund, which declined from US\$88 billion at the end of 2014 to US\$46 billion at the end of 2015.

Box 1.1. Russia's 2014 Currency Crisis Response

The currency crisis at the end of 2014 prompted coordinated measures by the central bank and the government to ensure financial stability.^a The government and the Central Bank of Russia (CBR) moved swiftly: the planned switch to a free float of the ruble was advanced to November and other measures to support financial stability were introduced promptly, including the recapitalization of banks in December 2014.

Until October 2014, pressure on the ruble and exchange rate volatility were still moderate and the CBR had to intervene only marginally. However, from early in October to November 10, 2014, pressure on the ruble intensified as oil prices plunged and foreign exchange liquidity limitations surfaced. Massive capital outflows, hoarding of foreign exchange proceeds by exporters because access to external finance was restricted for sanctioned banks and corporations, and dollarization of the savings of Russians added to pressure on the ruble. During that period the CBR introduced several emergency measures to guarantee foreign exchange liquidity^b; in October 2014 alone it spent US\$30 billion to support the currency. However, volatility continued as oil prices continued to plummet and on November 10 the CBR switched to a free float to try to end the drain on reserves.^c In response to the unprecedented currency volatility (figure B1.1), on December 16 the CBR hiked its policy rate by 650 basis points. Yet the very next day the exchange rate plummeted by 11 percent, prompting the CBR and the government to work urgently to keep the financial system stable.^d These measures, together with the massive rate hike, helped to anchor the exchange rate.

Notes:

Figure B1.1. Oil Prices and the Ruble Exchange Rate During the 2014 Crisis (right hand axis reversed)



Source: Haver database; Central Bank of Russia.

¹² The size of the DIA's deposit insurance fund had shrunk from RUB168 billion at the end of 2013 to RUB36 billion in October 2015, severely compromising its capacity to serve as a financial backstop.

¹³ At the end of December 2014, the government began the RUB1.0 trillion recapitalization program by issuing treasury bonds to be invested in the capital of systemically important banks. At the same time, the State Duma approved the law allowing up to 10 percent of the National Wealth Fund to be invested in Russian bank subordinated deposits and bonds. On May 13, 2015, the government approved recapitalization of four banks—Rossia, Severnii Morskoi Put, Sodeistvie Obshestvennim Initsiativam, and Rossiiski Natsionalni Kommercheski Bank—by providing subordinated loans totaling RUB20.1 billion. On August 10, the government also approved a RUB 8.5 billion recapitalization plan for 10 regional banks.

^a After November 27, 2014 when OPEC decided not to cut oil production, the ruble went into free fall, which required the CBR to resume its interventions; it spent another US\$10.3 billion in the first half of December 2014.

^b To increase foreign exchange (forex) liquidity, the CBR on October 29 introduced 7- and 28-day repo facilities in foreign currency. The day before, it had raised policy rates by another 150 basis points, to 9.5 percent, in response to rising pressures for depreciation and accelerating inflation.

^c The CBR spent US\$86.5 billion of foreign currency reserves in 2014, leaving it with a balance of US\$390 billion (10.7 months of imports) at yearend.

^d In addition to new foreign exchange repo facilities introduced in November, the following measures were introduced: (1) the Ministry of Finance sold foreign exchange in the amount of US\$1.5 billion; (2) the CBR introduced 28- and 365-day foreign currency loans to the 11 banks with capital of over RUB100 billion; (3) five major state-owned exporters were given a deadline of March 1, 2015, to cut their net foreign assets back to the level of October 1, 2014; and (4) regulatory forbearance policies were introduced in December 2014 and later extended through 2015.

Emerging Risks to Macroeconomic Stability and Growth

87. Russia's economic vulnerability, exposed during the 2014 oil-price shock and the ensuing economic crisis in 2015, raised issues related to the country's growth model:

1. The drop in oil prices, together with sluggish growth due to the slowdown in structural reforms, reduced government revenues and thus the government's ability to sustain inclusive growth. Fiscal pressures, reflecting a combination of structural issues and past social expenditure trends, now present a serious economic challenge for Russia. Tradeoffs arise for the government between delivering in its role of provider of social services, education, and health, and maintaining a sustainable fiscal stance. Addressing fiscal stresses will be essential to maintain macroeconomic stability and continue the progress made on income mobility in the past decade.
2. A key challenge is related to the continued need to support financial sector stability and deepening. The state continues to have a dominant role in the financial sector, crowding out other market participants and effectively discouraging new foreign entrants, new capital flows, and financial innovation more generally. Weak competition was exacerbated by the recent crisis, when anti-crisis support went primarily to the large systemically important public banks. To facilitate growth in investment, especially in infrastructure and human capital investments, new sources of private capital to better support long-term financing options would need to be identified and developed.
3. It was partly the appreciating real exchange rate and rising real wages that fueled Russia's consumption-driven growth and in turn greater shared prosperity. However, over time it also eroded the economy's competitiveness. Future inclusive growth will be much more difficult without sustained productivity increases. However, given recent depreciation dynamics, new opportunities to improve Russia's competitiveness have emerged.

The Need to Address Fiscal Pressures

88. Uncertainty about fiscal policy represents a significant risk to Russia's medium-term growth prospects, just as the volatility of oil revenues has complicated medium-term fiscal planning. Russia has a disproportionately large public sector: a significant share of the workforce is employed by the public administration or by state-owned enterprises (SOEs), banks, and other financial institutions', and many households are directly dependent on wages from public employment. Because Russia has a relatively generous social welfare system, transfers and pensions also constitute a substantial share of household income, and the state is also entrusted to provide basic services, notably health and education. Given the state's prominent role in the economy, many private firms rely on public contracts. Thus, fiscal planning strongly affects public views on the economy and has major implications for employment, household

incomes, service delivery, and economic growth. The prospects for a tighter fiscal policy, uncertainty about fiscal priorities, and long fiscal planning horizons (although the budget horizon was reduced to one year in 2015 and 2016) significantly heighten economic uncertainty for households and firms. A clear, well-sequenced plan for eliminating the deficit over the next few years would allow them to make better consumption and investment decisions.

89. Medium-term fiscal policy should provide for continued spending on strategic public investments while shielding poor and vulnerable households from the brunt of the fiscal adjustment.

Ensuring that the burden of the adjustment is equitably distributed and that the fiscal consolidation is consistent with long-term productivity growth will likely require a comprehensive review of spending priorities focusing on key areas, such as national defense, economic subsidies, and social programs and pensions. Investment decisions should follow a transparent vetting process based on assessment of financial viability to ensure that scarce capital resources generate adequate long-term returns. Strengthening management of public investments would help to ensure that projects generate value for money. While improvements in expenditure efficiency would help the government maximize the value of its resources, the gains may not be sufficient to compensate for increasing structural imbalances. A review of tax policies would be required to develop a strategy to increase non-oil revenues and sustainably lower the non-oil deficit.

90. Restoring long-term fiscal sustainability may not be possible without making adjustments to the current fiscal rule or adopting a different one (Box 1.2).

Given weak medium-term growth prospects and low public debt, a targeted procyclical fiscal policy or a somewhat delayed consolidation is a short-term option. In 2015 the National Welfare Fund was increasingly committed to boosting investment demand.¹⁴ Having been used to finance the 2015 fiscal deficit and budget outlays for 2016, the Reserve Fund is likely to be exhausted by the end of 2017. In the next few years, the impact of lower oil prices will be captured by the fiscal rule, which will limit expenditures. Nevertheless, in the medium term, without changes to the fiscal rule the budget would continue to run a deficit higher than the levels estimated to be consistent with intergenerational equity objectives. Chapter 4 discusses the short-term and long-term risks to Russia's fiscal sustainability.

¹⁴ The government has changed the National Welfare Fund investment rules, raising the limit on resources that may be used to finance domestic infrastructure projects to 60 percent (from the 40 percent that previously could be invested in debt securities and stocks of Russian companies to finance infrastructure projects approved by the government). The government also approved financing for a long list of projects amounting to about RUB900 billion, including a new Central Ring Road in Moscow, upgrades to the Trans-Siberian and Baikal-Amursk railways, and projects to improve energy efficiency and Internet connectivity. In 2015, the government also used the National Welfare Fund as an off-budget mechanism to support large banks and stimulate investment.

Box 1.2. Russia's Fiscal Rule

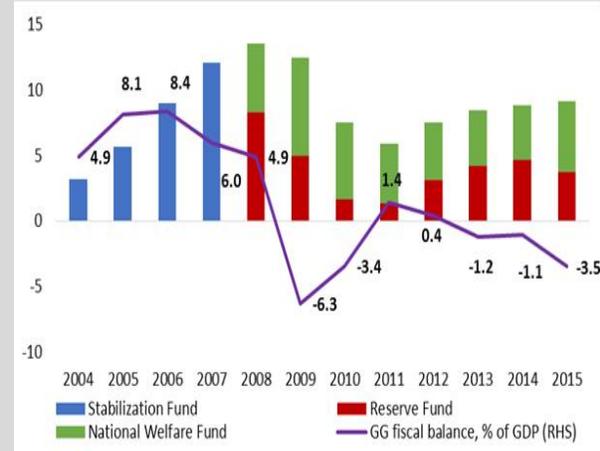
To protect budgetary spending targets and help manage the adverse effects of volatile oil revenues on the real exchange rate, the government decided in 2004 to convert Russia's financial reserves into a formal Stabilization Fund. The Fund was designed to accumulate resources during years of high world oil prices and to support spending when oil prices were low. Oil customs duties received by the budget in excess of a cut-off price were channeled to the Stabilization Fund. The cut-off price was originally set at US\$20 a barrel and in 2006 increased to US\$27 a barrel. In 2005–2007, the government tapped into the Fund to repay a portion of the country's external debt and cover the Pension Fund deficit. Nevertheless, the balance of the Stabilization Fund grew from US\$18.7 billion at the end of 2004 to US\$156.7 billion at the end of 2007.

In 2008, the Stabilization Fund was split into a Reserve Fund and a National Welfare Fund, and the fiscal rule was adjusted. The Reserve Fund was set up to protect the budget from fluctuations in energy prices, with an upper limit established at 10 percent of GDP and revenues surplus to that accruing to the National Welfare Fund, which was invested in a diversified portfolio. The new fiscal rule, the so-called permanent income fiscal rule, was designed to sustain Russia's non-oil and gas deficit at a level not exceeding 4.7 percent of GDP starting in 2011 (with 3.7 percent of GDP coming from transfers from the Reserve Fund and 1 percent of GDP from debt issuance).

During the global financial crisis, the fiscal rule was suspended. Savings accumulated in the Reserve Fund allowed the government to finance a deficit of 6.3 percent of GDP in 2009 without significant deterioration in the debt-to-GDP ratio. In 2009 and 2010, the government spent about 3 percent of GDP from the Reserve Fund for budget financing (figure B1.2).

In 2013, a new fiscal rule was introduced. It set a ceiling on federal spending equal to the sum of (1) oil revenues at the base oil price, (2) non-oil and gas revenues, and (3) net borrowing of 1 percent of GDP. Any excess oil revenues would be used to replenish the Reserve Fund up to a ceiling of 7 percent of GDP, beyond which proceeds would be split between the National Welfare Fund and priority development projects. Any shortfall caused by the oil price dropping below the base price would be covered by the Reserve Fund. While the base oil price was initially set as the average price over the previous five years, the reference period was to be extended progressively by one year and was supposed to reach 10 years in 2018.

Figure B1.2. Oil and Gas Funds, US\$ Billion



Source: Ministry of Finance, Rosstat.

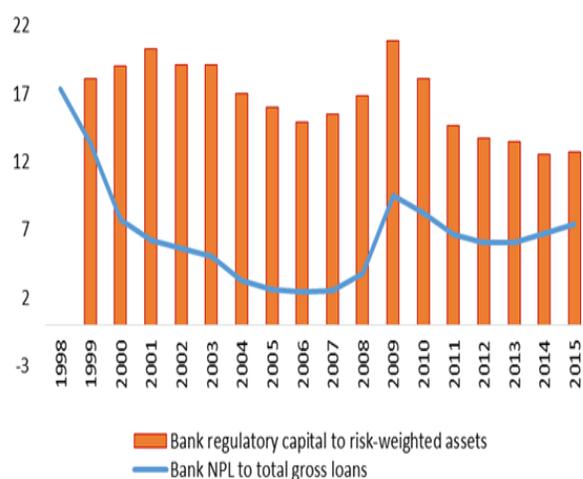
The Need for Financial Sector Restructuring

91. The need for continued bank resolution or restructuring to maintain financial stability raises the risk of increasing contingent fiscal liabilities. While no fiscal resources are believed to have been used in the recent bank resolutions, the risk of contingent liabilities is increasing.¹⁵ At the same time, vulnerabilities in the economy and the need to recapitalize banks, both private and public, are likely to have increased with the expiration of the temporary regulatory forbearance program.

¹⁵ In March 2015, the government approved RUB150 billion (US\$2.2 billion) financed by the federal budget (from the president's contingency fund) to recapitalize the state-owned development corporation Vnesheconombank (VEB). VEB's assets amount to 9 percent of GDP and it might need RUB1.2 trillion in state aid to cope with bad loans and assets and to honor its debt obligations.

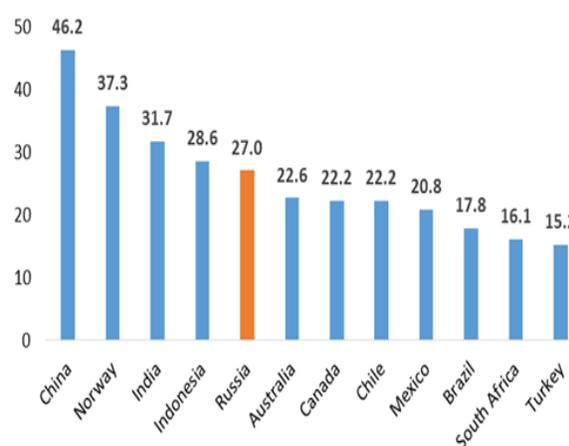
92. Financial sector risks relating to the high concentration of nonperforming loans have risen. As the CBR utilizes a rather different asset classification methodology, cross-country comparisons of nonperforming loans (NPL) are difficult, but NPLs are rising (Figure 1.15 and Figure 1.16) and are highly concentrated: about two-thirds of NPLs are held by the 20 largest institutions. Banks have thus been obliged to increase their loan-loss provisioning, which has eroded profits and capital, thus undermining their ability to attract badly needed new investments. Additional loan-loss provisioning is likely in the near term. While the banking system is still sufficiently capitalized,¹⁶ the capital adequacy ratio has declined over the past few years and many mid-sized banks, especially those heavily exposed to consumer or foreign currency-denominated corporate loans, are obliged to add to their provisioning. Signaling higher concentration risks, the ratio of large credits to bank capital rose to 236.7 percent, up from 209 percent at the end of 2012. The increased risks facing the banking system are serious challenges to the efforts of the authorities to maintain financial stability.

Figure 1.15. Financial Stability Indicators, 1999–2015, Percent



Source: Central Bank of Russia.

Figure 1.16. Savings, 2000–15, Percent



Source: IMF.

93. The 2016 concluded Financial Sector Assessment Program (FSAP) review put into perspective the scope of issues faced by the financial sector and laid out a comprehensive set of findings and recommendations¹⁷ to mitigate risks in the medium term. The recommendations include: (i) adopting measures to ensure adequate bank capitalization and stress-testing procedures; (ii) strengthening liquidity management, financial sector oversight and regulation; (iii) modernizing the macro-prudential, crisis management, and bank resolution regimes, and (iv) improving governance at public banks and taking steps to sustainably expand financial inclusion. A number of priority structural and prudential reform measures could help improve the resiliency and stability of the banking system in the near term (Box 1.3).

94. Declining savings and credit are major factors contributing to tepid domestic demand, with investment trends also impacted by continued net capital outflows. While Russia's average total savings in 2000–2005 compare well with the other BRICS countries and large commodity exporters (Figure 1.16),

¹⁶ The aggregate capital adequacy ratio in 2015 was about 12 percent, above the regulatory minimum of 8 percent.

¹⁷ Source: <http://www.imf.org/external/pubs/cat/longres.aspx?sk=44085.0>

they have declined significantly since 2011, from 27.9 to 23.5 percent in 2015. This coincided with declining credit growth, especially to households. In 2015, total credit growth was 15.9 percent (with a

Box 1.3. Priority Reforms to Reduce Financial Sector Vulnerability

Despite significant improvements in recent years, weaknesses in banking regulation and supervision remain which would need to be addressed in the near term to decrease vulnerability.

1. To combat the rising stock and flow of NPLs, legal, regulatory and prudential impediments to the ability of banks to execute on collateral should be promptly identified and resolved so that NPLs can more quickly return to being earning assets.^a
2. The return of sustainable credit growth could be encouraged by more rigorous credit underwriting and reporting requirements, to enable banks to better estimate and price credit risk.
3. With the decline of capitalization levels and the concurrent reduction in large bank capital requirements, banks have less capacity to absorb losses, limiting their maneuverability in times of stress. The quality or accessibility of bank capital remains an important consideration for the CBR and fiscal authorities generally given the large scope of public bank ownership.^b
4. The bank resolution framework should be modernized to contemporary (post-2008 global crisis) standards. A clear legal basis should be provided for the regulator to intervene early in troubled banks to minimize potential resolution costs.^c
5. Given the very limited reserves held by the DIA to support the continuing consolidation of banks and the potential for one-off resolution costs at mid-tier or larger banks, a sustainable program of industry-led funding must be developed to curtail external funding demands.

Notes:

^a Asset classification methodologies should be better aligned with international best practice, to encourage banks to recognize credit risks earlier and provision accordingly.

^b The CBR adopted the initiative to require the largest banks to establish countercyclical capital buffers by 2018, in line with Basel III.

^c The potential to undertake a 'purchase and assumption' transaction has recently been launched to minimize resolution costs but, crucially, creditors' bail-in provisions have not been adopted.

^d These would include using authority already in place to seek from banks a forward payment or top-up of the DIA reserves; the introduction of a higher risk premium (if for a limited time) and longer term, and expansion of deposit insurance coverage to legal entities.

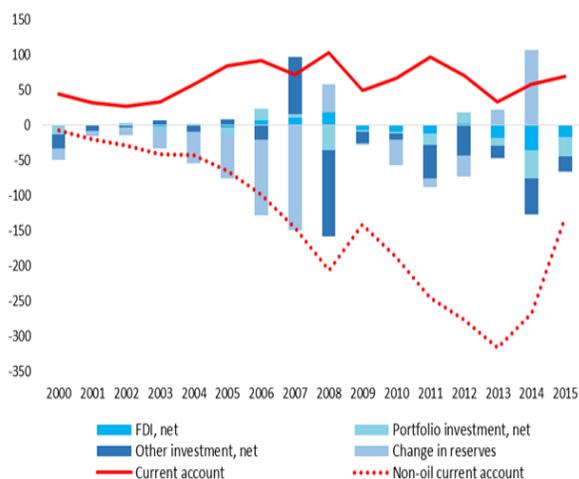
95. CPI of 15.6 percent), while credit growth to households was negative in real terms. While growth in credit correlates with growth patterns in commodity prices and fiscal trends, saving patterns do not. Instead, Russia has registered sizable net capital outflows since 2008; in 2014, they reached record highs of US\$152.9 billion (compared to US\$133.6 billion in 2008). Net foreign direct investment and net portfolio and other investments have been almost consistently negative since 2008 (Figure 1.17). These trends contributed to low and recently negative growth in domestic investment.

The Need for New Growth Drivers

96. The need for new growth drivers became evident in recent years when an increasing non-oil current account deficit and slowing accumulation of central bank reserves pointed to increasing vulnerability to external shocks (Figure 1.18). Given the tight labor market and constraints on investment that could boost productivity, stimulating domestic demand through expansionary fiscal policy would not only be ineffective but also likely lead to higher inflation, an erosion of fiscal balances, and an increase in public debt. A tight labor market is reflected in the fact that Russia's unemployment has been close to

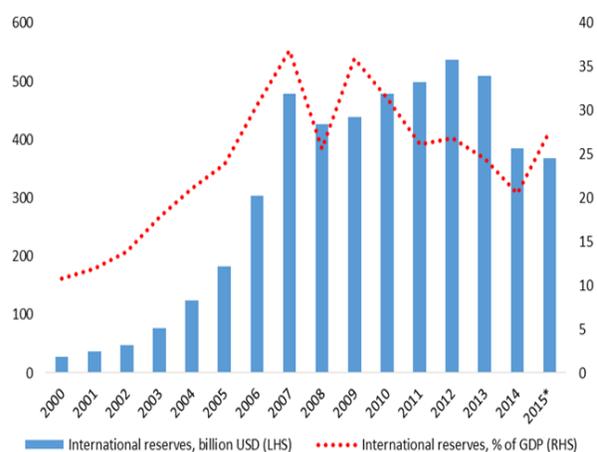
historical lows even during the 2015 recession.¹⁸ Before 2015, low unemployment coupled with expansionary policies had contributed to wage growth and put upward pressure on inflation and interest rates. Inflation is slowly retreating, but inflation expectations remain persistently above the central bank target. Fiscal space for capital investment was already limited in recent years, crowded out by fiscal social obligations. Thus to sustain robust growth and achievements in shared prosperity, Russia needs to become more attractive to private investors, foreign and domestic alike, by addressing its longstanding structural problems.

Figure 1.17. Current Account, 2000–2015, US\$ Billion



Source: Central Bank of Russia.

Figure 1.18. Central Bank Reserve Accumulation, 2000–2015, Percent



Source: Central Bank of Russia.

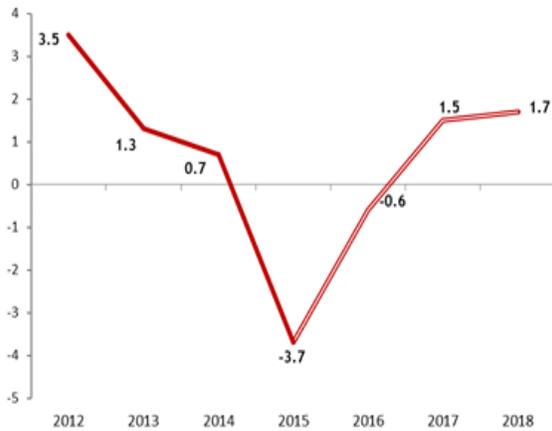
97. Without an environment conducive to investment, skilled labor, and adequate infrastructure, private investment and productivity growth will remain elusive, which will jeopardize the social gains of the past decade. A rapid recovery from the recession is not expected any time soon, given that the external environment is projected to remain volatile and consumption growth to continue weakening (a trend that had started even before the recent crisis). GDP is projected to increase by 1–2 percent a year in 2017–18 (Figure 1.19). More worrisome is that without a rebound in private investment it is unlikely that new productive jobs will be created: since 2008, job destruction has outpaced job creation (Figure 1.20). Continuation of these trends could put more pressure on labor markets, where unemployment is slowly rising as real wages are falling. The drop in real wages has driven income declines that already have had a significant negative impact on not only the poor and vulnerable but also middle-class households. Continued declines in income would risk reversing Russia’s substantial achievements in poverty reduction and social mobility.

98. Slowing productivity growth in the past has contributed to lower growth and rising labor costs, eroding Russia’s competitiveness. Even before growth declined rapidly in 2014–15, the contributions of

¹⁸ The unemployment rate reached 5.6 percent in 2015 compared to 5.3 percent in 2014. However, the rise was moderate compared to that observed during the global financial crisis, when the unemployment rate soared from 6.2 percent in 2008 to 8.2 percent in 2009. Although Russia’s aging population has been affecting its labor market since 2012, in 2015 the total labor supply remained stable as labor force participation rose slightly. Together with other data, this suggests that informality is growing but also that a rising number of workers are struggling to find and retain full-time employment. At the same time, the recent steep drop in real wages may require people to work longer hours or hold multiple part-time jobs.

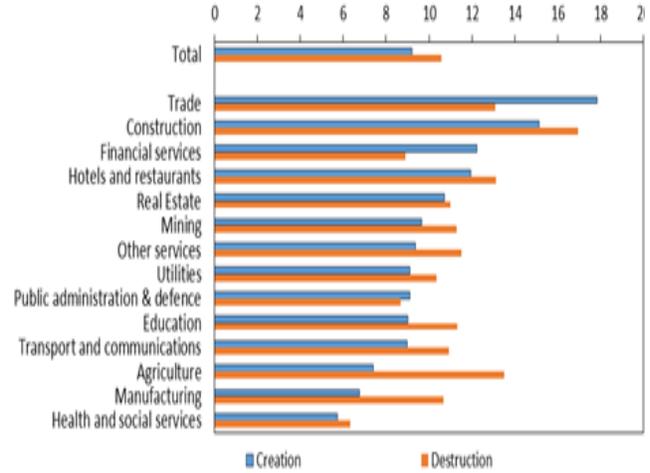
capital, labor, and productivity outpaced that of TFP. Compared to TFP growth in other emerging markets (Figure 1.21), Russia’s was smaller. (The reasons will be explored in chapter 2.) Since 2000, growth in the average wage has outpaced growth in labor productivity (Figure 1.22). Most of the divergence happened before 2002, when real wages grew much faster than productivity; however, the wage-productivity gap persists, eroding the competitiveness of Russia’s economy. Only since 2014 has this trend started to reverse, pointing to new growth opportunities.

Figure 1.19. Real GDP Growth Projection, Year-on-Year, 2012–18, Percent



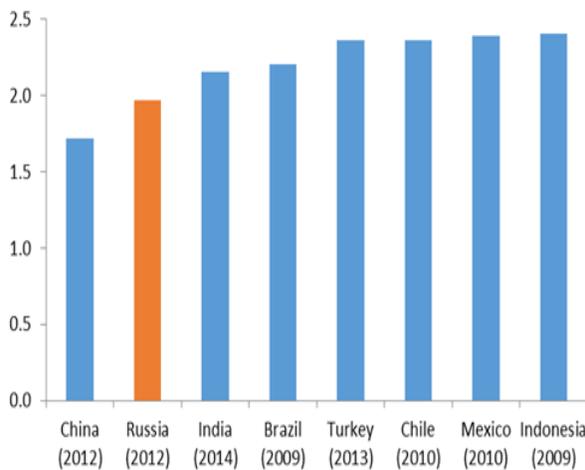
Source: Rosstat data and World Bank estimates.

Figure 1.20. Net Job Creation and Destruction Rates by Sector, 2008–14 Average, Percent



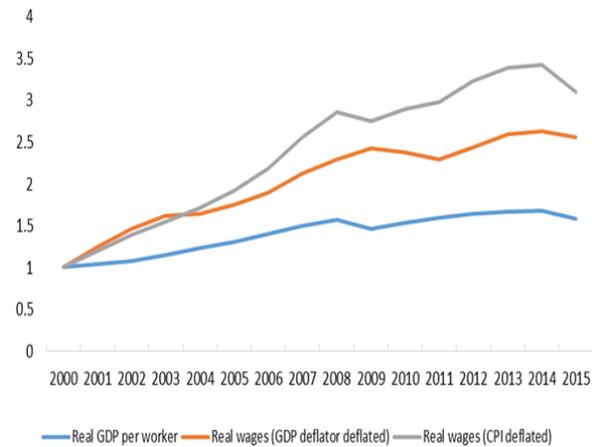
Source: Rosstat.

Figure 1.21. Median TFP Growth, Emerging Markets, Percent



Source: Enterprise Survey data.

Figure 1.22. Productivity and Wages, 2002–15, Index, 2000=100



Source: ILO, Rosstat and Haver Analytics data.¹⁹

¹⁹ Real wages deflated by CPI as reported by official statistics captures the changes in purchasing power of the earnings for consumers. However, to capture the changes in labor costs for producers it might be more logical to deflate nominal wages with the index that better captures the changes in prices for producers. The GDP deflator is the natural option to do this.

99. Opportunities have arisen to make Russia's non-resource sector more competitive and transform its export profile by diversifying away from primary commodities. Falling oil prices have exposed serious weaknesses in Russia's current growth model, but the depreciation of the ruble could enable a broad-based improvement in Russia's international competitiveness. In the past, the growing dominance of the natural resource sector undermined economy-wide competitiveness as high commodity prices skewed the country's economic and export structure in favor of oil, gas, and mining. The high rate of return offered by primary commodities discouraged value addition and stifled the development of new products and exports. Leveraging emerging opportunities to develop a broader and more sophisticated product and export mix will require a substantial increase in private investment, especially FDI, which is associated with the strongest technological spillovers. The price advantage generated by the depreciation might not be sufficient to attract investors, particularly in the context of the economic sanctions, unless it is accompanied by sustained improvements in the investment climate and deep structural reforms.

100. The government is undertaking a challenging reform program to take advantage of these opportunities and to avoid a reversal of achievements in shared prosperity. The 2016 anti-crisis plan does not focus exclusively on stabilization but includes a number of medium-term economic development initiatives, among them reforms designed to improve the investment climate, reduce the frequency of business audits, diminish regulatory uncertainty, and strengthen judicial processes and law-enforcement systems. Recently, the president revived his Economic Expert Council and tasked it with drafting a new strategy for Russia's long-term development. A swift progression from strategies and plans to tangible improvements in Russia's investment climate would send the right signals to private investors. Without rapid and sustained investment in new industries, Russia may miss the opportunity afforded by its current price advantage, which would make promoting sufficient productivity growth to accelerate the country's long-term economic trajectory far more challenging. Russia's productivity constraints are examined in greater detail in chapter 2.

Shared Prosperity during the Commodity Boom

101. The favorable macroeconomic environment and high rates of growth during the boom benefitted people at the bottom of the income distribution. During the commodity boom, Russia's growth was highly inclusive, resulting in a remarkable performance in shared prosperity. The consumption of the bottom 40 percent (B40; see [Box 1.4](#)) rose by close to 10 percent annually during the period of strongest growth (2004–09), slowing to a still high 5.9 percent in 2007–12. Both figures are well above the average increase in consumption for the total population in either period, which was about 8 percent in the first and 5.3 percent in the second period. Russia's performance over 2007–2012 is even more impressive when compared to that of other countries—including many commodity exporters (figures 1.23 and 1.24).

Box 1.4. Who Are the Bottom 40 Percent of Russians?

Latent class analysis (LCA) was used to classify individuals in the bottom 40 percent of the income distribution into groups whose members share similar characteristics and whose characteristics are dissimilar to other groups (Kaufman and Rousseeuw 1990). The following six groups were identified. (See Annex 2 for details on the methodology.)

- **“Female pensioners living alone or couples” (27.4 percent of the bottom 40 percent of the income distribution).** This group consists mostly of women aged 55 and up, married or widowed, who have a higher risk of disability, due to old age, than the population at large and who are twice as likely to have completed less than secondary education. Almost all are economically inactive. The majority live in pensioner-only households or in mixed households of pensioners and working-age adults. Pensions constitute 72 percent of their disposable income. At the same time, this is the highest-income group in the bottom 40 percent; their poverty risk is 40 percent lower than the bottom 40 percent average.
- **“Vulnerable working-age individuals with dependent children” (23.3 percent).** This group comprises individuals aged 25–44 who are married with dependent children. They are likely to have secondary vocational education and to be employed in industry, construction, transportation, or trade and consumer services. They have a high probability to be informally or self-employed. This is one of the most disadvantaged groups in terms of income poverty.
- **“Older low-skilled workers” (18 percent).** This group comprises individuals aged 40–59 in households without dependent children. They are likely to have completed secondary general or vocational education and have a higher than average probability of being employed in agriculture and housing/community services. They are also very likely to be employed in low-skilled service jobs (clerks) and jobs that require elementary qualifications. These individuals have an elevated risk of unemployment and informal employment and have one of the highest risks of falling into income poverty.
- **“Female public-sector workers” (12 percent).** This group consists of individuals aged 30–49, 80 percent of whom are women. These are people with secondary or tertiary education who are very unlikely to have any labor market vulnerabilities apart from in-work poverty. They are likely to be employed by state-owned or co-owned organizations and have jobs in education, health care, and public administration. They are likely to have professional and technician/associate professional occupations and be more prosperous than the other groups. They have a high probability of having dependent children and are more likely to live in small towns.
- **“Young unemployed” (10.4 percent).** This group comprises young people aged 20–29, more often men. These are predominantly single people living alone or in childless households. They are unlikely to be economically inactive, but their risk of unemployment is 3.7 times as high as the bottom 40 percent average and the risk of informal employment is 2.2 times as high. They are likely to have completed secondary or secondary vocational education and to be employed in trade and consumer services and construction. They are concentrated in low-skilled service and elementary occupations. The members of this group have the highest probability (2.7 times as high as the average) of residing in the North Caucasus, where the rates of youth unemployment and informality are high.
- **“Students” (9 percent).** This group consists of single individuals aged 15–19 enrolled in full-time studies; hence the majority are economically inactive. For the most part they still live with parents, although a smaller number live alone or in childless households. A high share of their disposable incomes comes from social and private transfers.

102. Poverty declined significantly and the economically-secure population expanded. The share of the population in poverty plunged from about 30 percent in 2000 to about 13 percent in 2008 based on the national poverty line; using the international US\$5/day poverty line (2005 PPP), poverty fell even more, hitting 11.0 percent in 2008 (see Annex 2 on data and methodology). Given the low levels of income poverty in Russia, understanding the dynamics of vulnerability and the progress toward economic security is a more useful approach to measuring welfare than examining the level of poverty. The internationally

estimated vulnerability threshold, above which one is less likely to fall into poverty, is conventionally set at an income or consumption of more than US\$10/day (2005 PPP). The share of the economically secure in the total population increased from about 25 percent in 2000 to over 60 percent in 2008.

103. This progress is especially striking when seen in an international context. The pattern of growth in Russia during the commodity boom resulted in a much steeper increase in the share of the economically-secure population than in comparator countries. While starting at levels below many comparators (Figure 1.25 and 1.26) after the 1998–99 crisis, by 2006 Russia had overtaken them all. Other resource-rich countries like Brazil and Chile, which had started with relatively similar shares of the economically-secure population in the mid-1990s and also experienced high growth during the commodity boom years, did not see as steep an increase in this income group as Russia did. And by 2008, the share of the economically secure in Russia’s population topped the second-best performing comparator country, Poland, by over 15 percentage points, despite Poland’s head start in the first decade after the transition

Figure 1.23. Shared Prosperity in Russia and Across the World (ca. 2007–12)

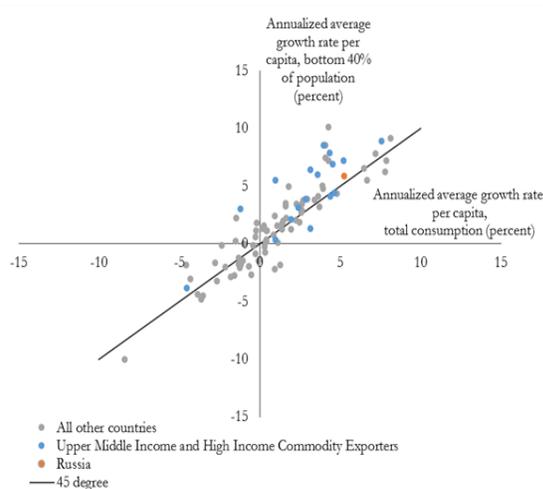
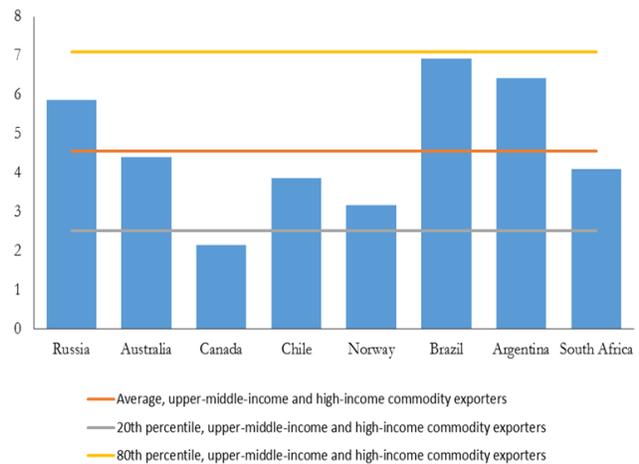
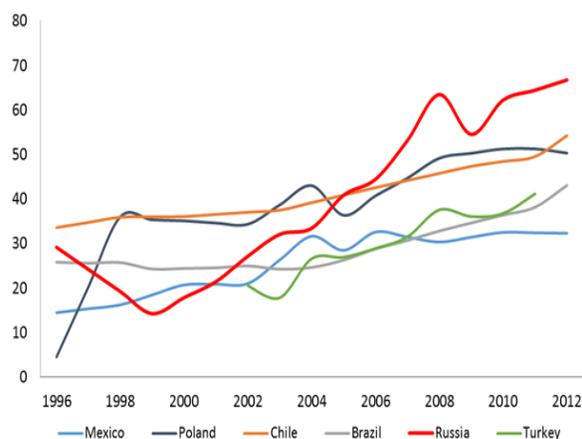


Figure 1.24. Bottom 40 Income Growth in Russia and Selected High-Income and Upper-Middle-Income Commodity Exporters (ca. 2007–12)



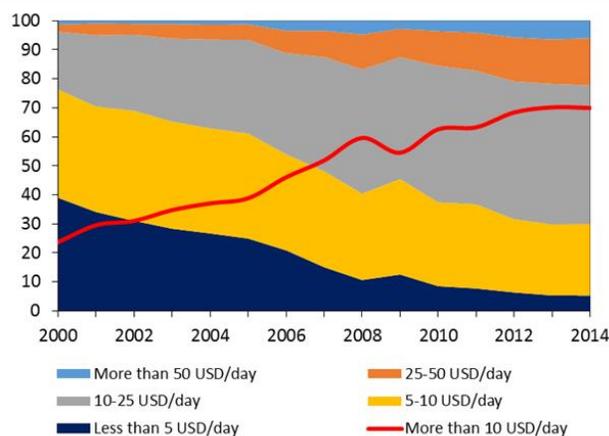
Source: World Bank Global Database of Shared Prosperity.

Figure 1.25. Share of Economically-Secure Population (Income or Consumption per Capita Above US\$10/Day in 2005 PPP), Percent, 1996–2012



Source: PovCalnet by World Bank.

Figure 1.26. Share of the Economically-Secure Population in Russia (Consumption per Capita Above US\$10/Day in 2005 PPP), Percent, 2000 – 2014

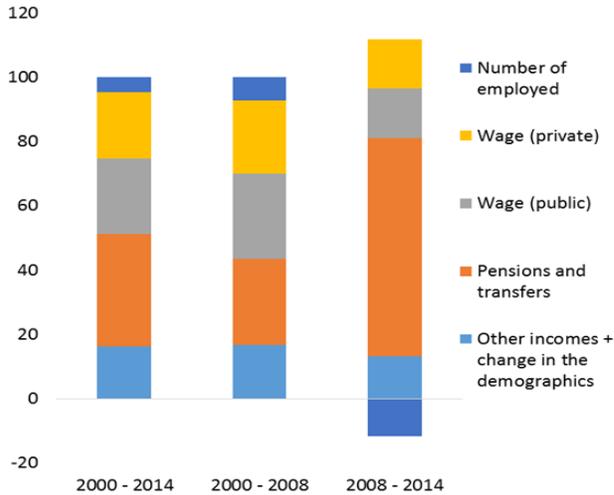


Source: RLMS-HSE data, 2000–14.

104. Income mobility at the bottom during the period of strong growth was driven mainly by rising wages and employment. The economic transformation and growth Russia experienced between 2000 and 2008 generated more and better jobs for the poor and the economically less secure. Indeed, labor incomes were the main driver of household poverty reduction and shared prosperity in that period: Close to 60 percent of the people who became economically secure did so either through increased wages (private and public) or—to a lesser extent—due to an increase in the number of employed individuals within the household (Figure 1.27). This is reflected in the movement of people away from the lowest real income bracket into higher-paying jobs (Figure 1.28): as many as 415,000 workers left the lowest real income category during the commodity boom. In contrast, pensions and transfers accounted for only about 25 percent of the people who became economically secure—a much lower share than the average contribution of pensions and transfers for the whole 2000–14 period.

105. Wage growth in the private sector during the pre-crisis period was driven by productivity-enhancing labor relocation across sectors and firms (Gimpelson 2015). Institutional changes, such as increases in the minimum wage, played a role, but the major structural shifts in the wake of the commodity boom, which moved individuals from agriculture and manufacturing into better-paying service jobs, contributed the most to income growth at the bottom of the distribution. Overall, the economic growth of the 2000s enhanced job quality and increased wages for the majority of workers—especially those at the bottom. At the beginning of the 2000s, this was driven by sectoral reallocation supported by structural reform. By the mid-2000s, expanding domestic demand due to the oil boom took a large role in driving the growth of the nontradable services sector. Rapid GDP growth based on the rise of commodity prices brought large wage gains but little additional employment. The general rise in earnings led to an increase in incomes across the distribution.

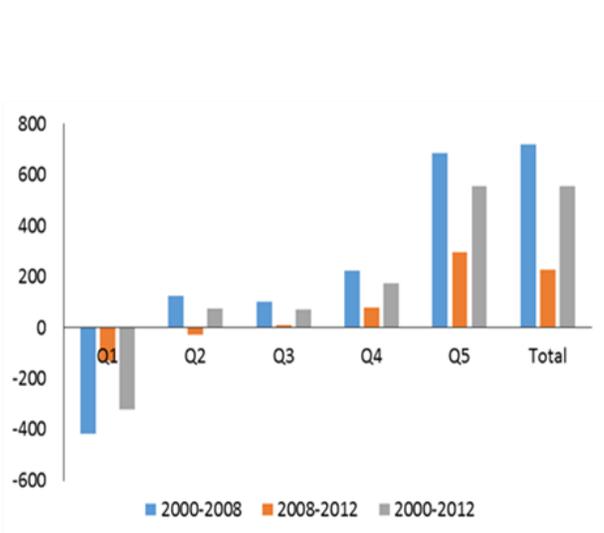
Figure 1.27. Contribution to Observed Inflow into the Economically-Secure Population Group in Russia (Consumption per Capita Above US\$10/Day in 2005 PPP), Percent



Source: RLMS-HSE data.

Note: This figure is based on a Shapley decomposition by components of income per capita.

Figure 1.28. Change in Number of People in Real Income Categories by Quintile (Base Year 2000), 2000–2012



Source: Lopez-Calva (2015).

Note: Based on real average monthly wages for 2000–12 with wage quintile bands fixed in 2000.

106. After years of inequality rising, wage inequality fell substantially in the 2000s. Wage inequality measured by the Gini index fell by 19 percent from 2002 to 2012 (World Bank 2015). Real wages for the bottom 40 percent of the wage distribution increased faster than wages for the top 40 percent, reducing the wage gap between the two groups. The minimum wage policy and relocation from rural to urban areas were the main drivers of wage changes at the bottom of the distribution, while changing labor force composition in terms of educational attainment and firm size were more important at the top (Lukiyanova and Gimpelson 2015). But the fall in the skills premium for university education was also an important factor behind the compression of the wage distribution; wages at the top—in larger firms and higher-skilled activities—have grown relatively less, contributing to the reduction of the wage gap. There are many reasons behind the decline, including a growth in the share of tertiary educated workers, a decline in the quality of tertiary education, skills mismatches, and changes in the sectoral structure of the economy.

Shared Prosperity after the Commodity Boom

107. The rise in shared prosperity was interrupted by the global financial crisis of 2008–09. The incomes of the bottom 40 percent fell with the crisis, but recovered quickly and continued to grow, though more slowly. The impact on poverty was minimal, and the poverty rate began to fall again, particularly in 2010–12 as public pension spending and public wages increased. However, improvements in shared prosperity stopped in 2012 with the weakening of the macroeconomic environment and falling oil prices. The incomes of the bottom 40 percent stagnated in 2012 and 2013 and then dropped faster than average incomes in 2014. The poverty rate, using the national definition (see Annex 2), rose from 10.7 percent in 2012 to 13.4 percent in 2015 as wages and social pensions declined in real terms.

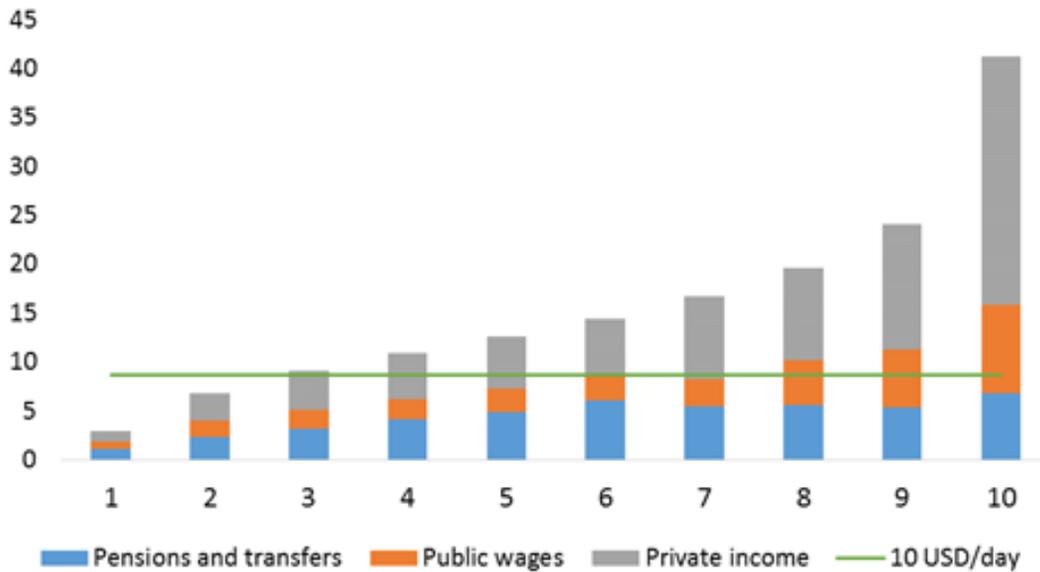
108. The contribution of the labor market to shared prosperity declined after the 2008 crisis. The macroeconomic environment, which had driven much of the advance in the household incomes of those in the bottom 40 percent of the income distribution through higher returns to labor, deteriorated, bringing to a halt progress in creating more and better-paid jobs. As Figure 1.27 indicates, higher wages explained only about 25 percent of the movement into economic security after 2008, in contrast with about half in the boom period. A decline in the number of those employed contributed to a movement of households out of economic security, leaving pensions and transfers as the main engine of improving incomes at the bottom. Similarly, after 2008 movements into higher real income categories slowed significantly, mirroring the diminished role of labor earnings in shared prosperity and poverty reduction.

109. The recent situation has exposed the structural weaknesses that remain in labor markets despite the decade of progress. The productivity-enhancing labor relocation across sectors and firms, which had previously driven progress, slowed significantly after the crisis and is unlikely to gain momentum in current economic conditions—although the depreciation of the ruble should spur some recovery in the non-oil tradable sector. Moreover, the nature of the relocation process led to a reduction in the size of the average formal firm and an increase in informality, both of which are likely to have negatively affected productivity growth after the crisis and could continue to do so in the future. As a consequence, even the smaller growth in labor income in the post-crisis period was mostly driven by wage growth in the public sector rather than productivity (and wage) increases in the private sector. The increased levels of informality and reliance on public sector wages make the poor and the economically less secure particularly vulnerable. Despite the economic downturn, however, unemployment has not increased. Labor market adjustment in Russia is typically reflected in lower wages rather than job losses: the unemployment rate rose only slightly, from 5.2 percent in 2014 to 5.6 percent in 2015, while real wages fell by 9.5 percent in 2015.

110. Fiscal policy played a very prominent role in sustaining shared prosperity and protecting the most vulnerable in the period of economic stagnation and decline (Figure 1.27). Pensions and transfers explain about 60 percent of the movement into economic security over 2008–2014, compared to about 25 percent in the boom period (2000–08). Higher public wages also have sustained progress since 2008. The state’s central role in sheltering people against economic vulnerabilities and sustaining further improvements in living standards reflects the expectations raised by the existing social contract. But in the medium and long term due to fiscal tightening these are less likely to be met.

111. The unfavorable macroeconomic environment and constrained fiscal position will make it difficult to raise the incomes of the most vulnerable. Public transfers, pensions, and public sector wages account for about three-fifths of the income of households in the poorest two deciles, and about half of the income of the next two deciles (Figure 1.29). This, combined with projected trends in inflation, which are likely to reduce the real value of transfers, threatens to reverse Russia’s substantial achievements in reducing poverty and promoting shared prosperity. Opportunities to earn more or better incomes through private sector jobs are currently limited, and pressures to reduce or restructure public spending are mounting.

Figure 1.29. Income by Decile, 2014, Thousand Rubles per Month per Person



Source: RLMS-HSE data.

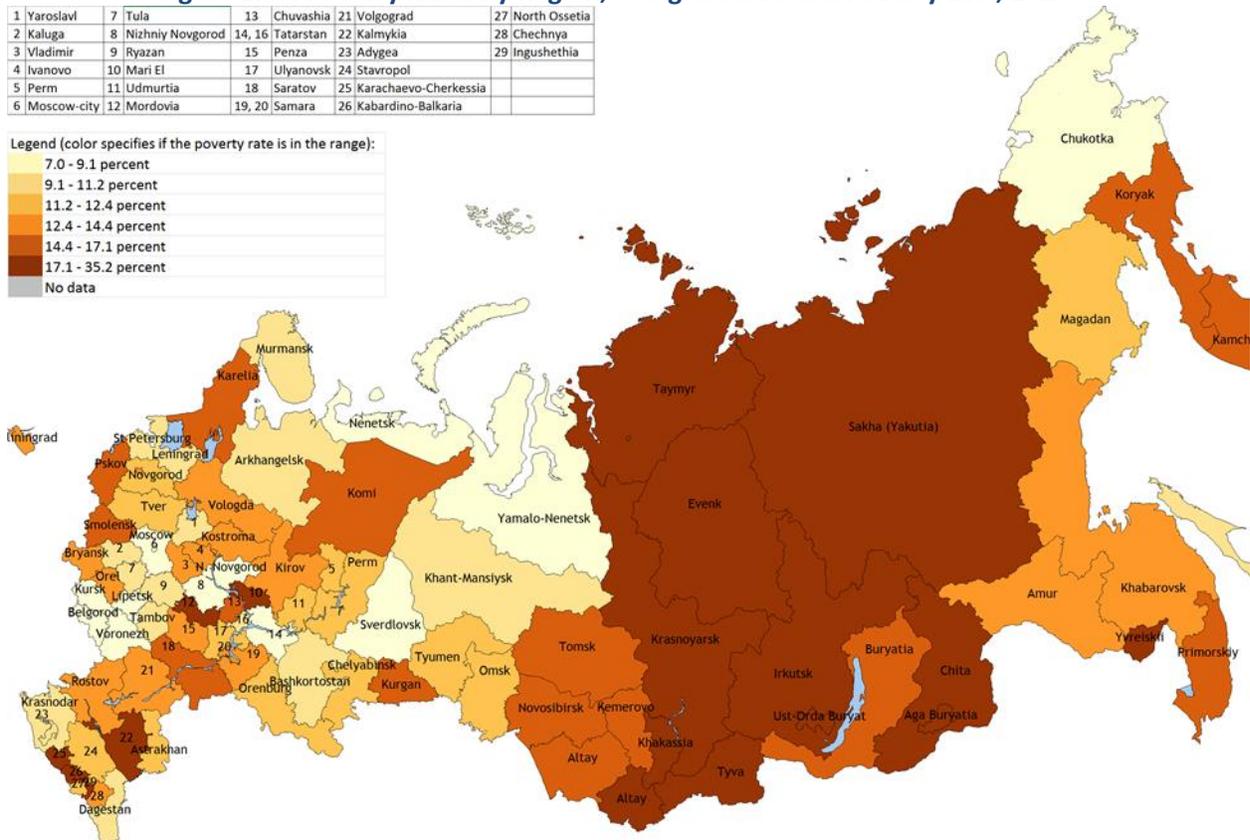
112. This challenging situation has also exacerbated the difficulties of addressing regional inequalities, which have persisted even during times of strong growth. Although poverty has declined significantly, the country average masks severe disparities between regions, as well as between rural and urban areas (Figure 1.30). The Far East and the North Caucasus are the poorest regions in the country; income in the Central Area is closest to the national average; and the Ural area, with many oil-rich territories, is the richest. In 2013 the poverty rate in urban areas was 8.6 percent but in rural areas it was 17.2 percent. Large differences in regional GDP per capita are another dimension of inequality. Apart from large differences in incomes, average levels of health and well-being also vary substantially across geographical area.

Figure 1.30. Poverty Rates by Region, Using the National Poverty Line, 2014

1 Yaroslavl	7 Tula	13 Chuvashia	21 Volgograd	27 North Ossetia
2 Kaluga	8 Nizhniy Novgorod	14, 16 Tatarstan	22 Kalmykia	28 Chechnya
3 Vladimir	9 Ryazan	15 Penza	23 Adygea	29 Ingushethia
4 Ivanovo	10 Mari El	17 Ulyanovsk	24 Stavropol	
5 Perm	11 Udmurtia	18 Saratov	25 Karachaevo-Cherkessia	
6 Moscow-city	12 Mordovia	19, 20 Samara	26 Kabardino-Balkaria	

Legend (color specifies if the poverty rate is in the range):

7.0 - 9.1 percent
9.1 - 11.2 percent
11.2 - 12.4 percent
12.4 - 14.4 percent
14.4 - 17.1 percent
17.1 - 35.2 percent
No data



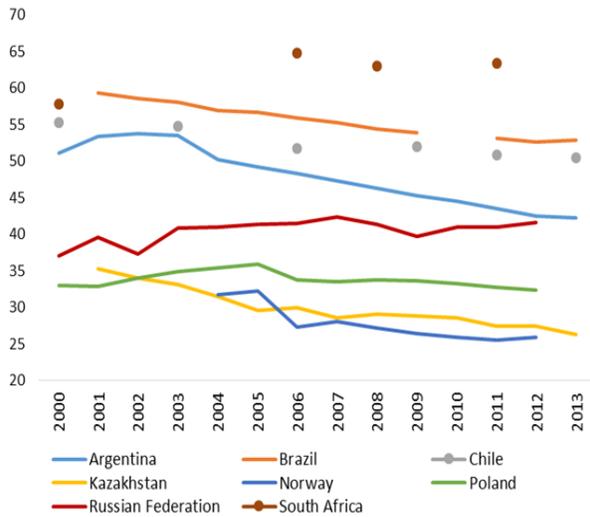
Source: Rosstat data.

Note: The map displays regional borders as of 2005.

113. The distribution of consumption (or income), wealth, and opportunity is highly unequal in Russia. Inequality in consumption or income, measured by the Gini index, shot up during the transition as the rise in private sector activity increased the dispersion of wages. Since the mid-2000s, however, inequality has not risen substantially (Figure 1.31). Wage inequality, as noted above (and in the analysis in chapter 3), showed a robust and sustained reduction starting in the early 2000s. However, measurements of inequality based on household survey data may be biased downward because top earners are underrepresented in the survey and there is evidence that there is a substantial amount of wealth in the hands of a few.

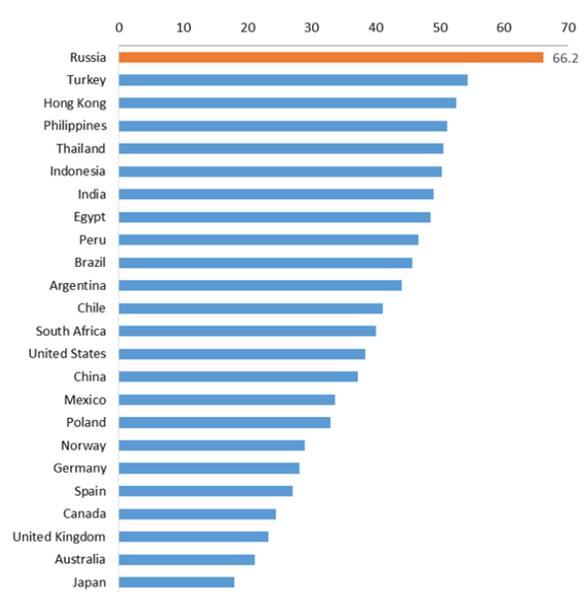
114. The share of wealth held by the top 1 percent in Russia is the highest of all countries measured. One percent of the population holds 66.2 percent of the country's wealth (Figure 1.32). Rising inequalities in wealth are often the outcome of markets and regulations favoring incumbents and are typically symptomatic of elite capture. High concentration of wealth at the top can result in a minority influencing the distribution of resources through the political process, which can distort policy making and slow growth (see Bussolo and Lopez-Calva 2014). Chapter 4 explores this concern in greater detail.

Figure 1.31. Income Inequality, 2000–13, Gini Index, Russia and Selected Comparators



Source: WDI, accessed in April 2016.

Figure 1.32. Wealth Share of Top Percentile, 2014 Top 10 Countries and Selected Comparators



Source: Credit Suisse 2014.

115. Lastly, inequality of opportunity is of concern for shared prosperity because it reinforces disadvantages that hinder mobility across generations. Factors attributable to the circumstances that an individual is born into and has no control over, such as gender, race, place of birth, and parental background, can curb a person’s potential and lead to systematic exclusion of some groups from markets and economic opportunities. For Russia, such circumstances have been found to have an impact on equity of opportunity in employment and in protection from economic distress compared to other characteristics, such as education or age. The evidence is that there is inequality in access to full-time jobs (20+ hours of work) attributable to circumstances. However, it is on the low side compared to other ECA countries, with the effect being similar in magnitude to Estonia or the Czech Republic.²⁰ Inequality related to the opportunity of “not facing economic distress” is high in Russia, which is ranked third highest in ECA for the share of inequality explained by circumstances.²¹ In Russia a father’s education and minority status are the two most important contributors to not facing economic distress. Moreover, 55 percent of Russian respondents to the 2006 EBRD Life in Transition Survey (LITS) survey said that access to networks and connections are very important or essential to get a public sector job; almost 48 percent said the same about getting a private sector job. For the ECA region these figures average 45 percent (public jobs) and 40 percent (private jobs). Improving access to quality education and health services can contribute to a higher and more equitable human capital base, reducing inequity of opportunity (see chapter 3).

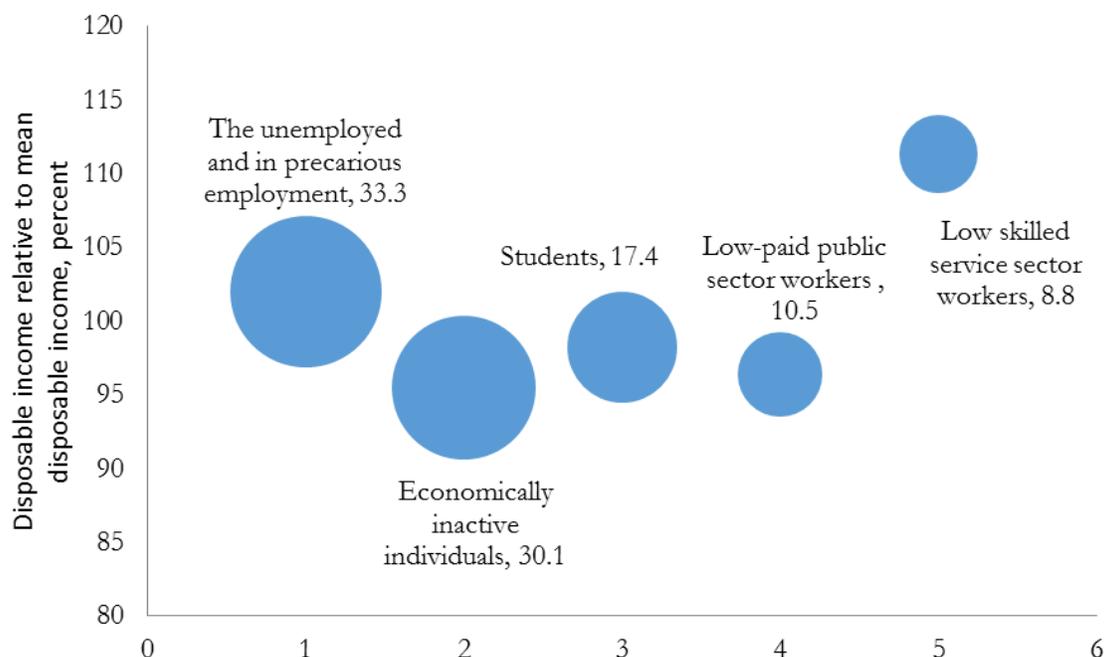
²⁰ The equity of opportunity discussion is based on the analysis of Abras et al. 2013.

²¹ Economic distress is defined as a report of having collected unemployment insurance, experienced wage cuts, or worked at a job below qualification in the year before the survey.

Profile of the Poor and the Bottom 40 percent

116. Despite a significant reduction in recent decades, more than 20 million Russians remain in poverty. The poor tend to be younger than 50: recent pension increases have decreased the risk of poverty among the older population. Those living in poverty suffer from labor market difficulties, being either economically inactive, unemployed, or working in low-paid jobs. Women and those with dependent children feature frequently among the poor. Cluster analysis was conducted to identify groups of the poor who share similar socioeconomic and demographic characteristics; five were found (see Figure 1.33). Two groups are the nonworking poor: economically-inactive older individuals, mostly women (30.1 percent of the poor); and students and young people who are not working, many of whom are single and have dependent children (17.4 percent of the poor). These two groups and a third, consisting mainly of female public sector workers with dependent children (10.5 percent of the poor), have the lowest incomes among the poor. A large share of the poor population is made up of low-skilled workers who are unemployed or in precarious employment—the fourth group—and who often live in small towns and rural areas (33.3 percent of the poor). A final, slightly better-off but still poor, group is made up of low-skilled service sector workers (8.8 percent of the poor). Besides considering the population in poverty, from the perspective of shared prosperity it is important to examine the circumstances of the broader group of less well-off individuals; the measure used by the World Bank is the population in the bottom 40 percent of the income distribution. Box 1.4.5 and Annex 3 give a description of the results of a cluster analysis done to examine the socioeconomic and demographic characteristics of the bottom 40 percent of the population.

Figure 1.33. Five Clusters within the Poor Population, Ordered By Size and Level of Disposable Income, 2014



Source: RLMS-HSE data for 2014.

Notes: Cross-sectional sample of individuals aged 15+ with per capita disposable incomes below the national poverty line/subsistence minimum level.

Box 1.5. Drivers of Income Growth for Different Income Groups, 2008–14

After the 2008–09 crisis, pensions and public wages played a significant role in increasing the incomes of households at the bottom of the distribution. In 2008–14, the bottom 40 percent (B40) experienced higher total income growth than the top 60 percent of income earners (total income growth is represented by the red line in figure B1.4. Private income growth was positive for all four deciles in 2008–14, with the third and fourth deciles having the largest absolute gains. Less than half of the real income growth of the first and second deciles was driven by private incomes (44 percent of total income growth), while the rest is mostly explained by the expansion of public wages (26 percent) and pensions (26 percent).

Figure B1.4. Contribution to Real Income Growth by Source, 2008–14, Thousand Rubles/person/ month



Source: RLMS-HSE data, 2008–2014.

Note: Income deciles are defined for each year.

Pensions and public wages increased incomes for all deciles in 2008–2014. The incidence of public transfers and wages (pensions, public wages, and other transfers) is U-shaped across the income distribution: the poorest (first and second deciles) and the top 60 percent had higher real income growth than the vulnerable nonpoor with low incomes—those in the third and fourth deciles who are not yet middle class. However, the drivers of income growth for the poorer and richer deciles differed. The negative contribution of private income (mostly wages from the private sector) and public wages for the fifth to seventh deciles almost eliminated the positive effect of pensions for the top 60 percent. During 2008–09 pension indexation reached 10 to 20 percent in real terms. In 2010 a major increase (through “pension valorization,” which extended coverage) boosted pensions by 35 percent in real terms. The top income deciles benefited from this policy, with real income growth for the top 60 percent explained by the increase in pensions and especially the valorization. Private incomes had a small effect and for the richest deciles that effect was negative. Public wage growth was negative for the middle deciles.

117. Both the poor and the less well-off are much less involved in labor markets; and when they are, they have worse jobs than richer groups. Labor force participation and employment rates are much lower for the poor than for the nonpoor (Table 1-2), although the gap narrowed significantly between 2007 and 2014.²² Moreover, the economically active who are poor or vulnerable are four times more likely to be

²²A brief analysis of labor market outcomes for individuals in the bottom 40 and top 60 of the population is provided in Table 3.1 in chapter 3.

unemployed.²³ When employed, workers who are poor are more likely to work in informal or low-paid, self-employed jobs where they are less protected against economic shocks because they lack access to sufficient social insurance.

Table 1-2. Labor Market Outcomes for Poor and Nonpoor, Percent

	Labor Force Participation Rate		Unemployment Rate		Share of Informal or Self-Employment in Total Employment	
	2007	2014	2007	2014	2007	2014
Poor	52.4	58.8	13.4	16.1	19.8	25.7
Nonpoor	66.4	66.2	4.9	4.4	15.1	19.8
Total	63.1	65.2	6.6	5.9	15.9	20.4

Source: RLMS-HSE data, 2007-2014.

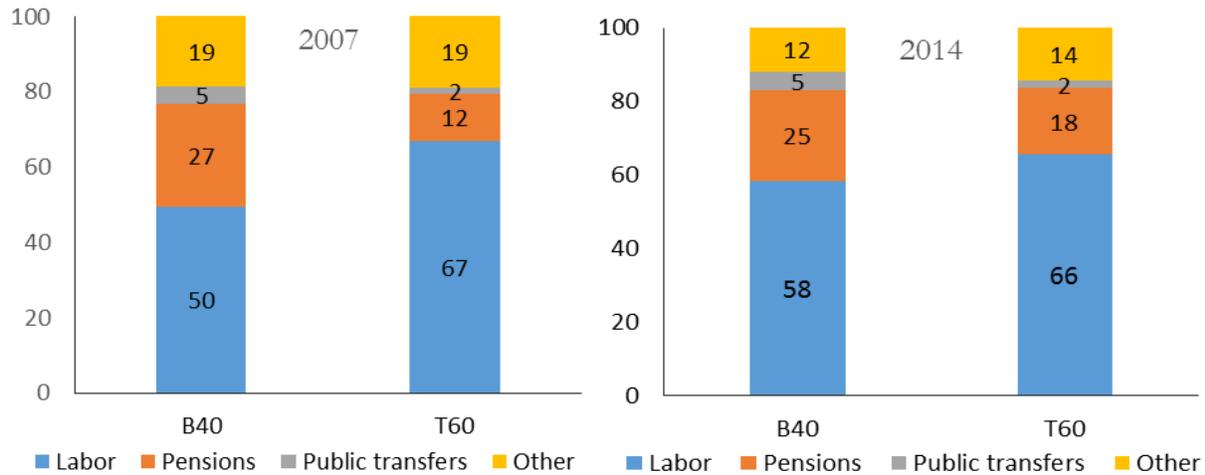
Note: The share of informally employed is slightly lower based on RLMS-HSE data than the estimates based on LFS data (for further discussion see Annex 3.1, chapter 3).

118. Worse labor market outcomes for the poor and less well-off translate into greater reliance on public transfers and pensions, resulting in greater vulnerability when the fiscal situation tightens. Labor income represents a smaller share and pensions and social transfers a larger share of total income for the poor and the bottom 40 percent of the distribution compared to the non-poor and the top 60 percent of the income distribution (T60) (Figure 1.34). The poor tend to rely more on social transfers. There are very few pensioners among the poor, although many pension recipients are in the higher income deciles of the bottom 40 percent. The structure of income sources for the bottom 40 and top 60 percent has converged since 2007, due both to pension increases (affecting mostly the top 60 percent) and public wage increases (affecting in particular the bottom 40 percent).

119. Families with more children and those in small towns or rural areas are more vulnerable to poverty. The poor population are more likely to have two or more dependent children. The share of people living in small towns, rural areas, and the republics of North Caucasus and Southern Siberia is higher for the poor and bottom 40 than for richer groups (Table 1-3). This means that they have less access to markets and jobs in bigger cities and depend more on agriculture and public support through pensions and transfers. They also have less access to utilities, partly because they are more likely to be in rural areas.

²³ The unemployment rates here are calculated using the RLMS-HSE survey, not the LFS. Unemployment rates calculated using these two surveys could differ because as the survey design and sample are not the same.

Figure 1.34. Structure of Income, Bottom 40 and Top 60, Percent



Source: RLMS-HSE data, 2007-2014.

Note: Other income includes private transfers, income from home production, in-kind consumption, and incomes from business and property (interest, dividends, etc.).

120. The poor and the less well-off bottom 40 have much lower average levels of education and worse access to health services. The share of the population with higher education in the poor and bottom 40 is little more than half that of the non-poor and top 60, while shares of all other levels of education are higher (Table 1-3). This leads to the poor and others in the bottom 40 percent working in less productive sectors (agriculture, trade, food and textile industries, and utilities), while the top 60 percent are more often employed in heavy industry, public administration and defense, IT and financial services. The poor and bottom 40 have less private health insurance coverage. At the same time, they report being less often affected by chronic diseases of all registered types—probably because they have less access to diagnostic services rather than that they have better health.

Table 1-3. Russia: Demographic Profile, of Poor/Nonpoor and B40/T60, 2014

		Poor	Nonpoor	B40	T60
Location	1st Russia: big cities (over 500,000)	21.5	35.1	22.3	40.0
Distribution by types of settlement, percent of total population in each group	2nd Russia: other cities (50,000–500,000)	27.0	29.0	29.6	28.1
	3rd Russia: small towns and rural	46.2	31.4	41.8	28.3
	4th Russia: North Caucasus	5.2	4.6	6.3	3.6
Demographics	Average age, years	30.1	40.5	35.0	41.5
	Average young-age dependency ratio	0.77	0.40	0.62	0.36
	Average old-age dependency ratio	0.20	0.34	0.28	0.34
Household composition	Couple with 1 child	22.8	25.1	23.6	25.6
Distribution by type, percent of total population in each group	Couple with 2 children	23.6	13.6	20.1	11.8
	Couple with 3 and more children	14.9	4.9	11.7	3.0
	Single parents	12.5	5.5	9.2	4.9
	Adults	15.0	18.9	13.5	21.4
	Pensioners	1.0	14.6	7.9	15.6
	Mixed	10.2	17.3	14.0	17.7
Education	Below full secondary	21.8	14.1	19.6	12.5
Distribution by level, percent of adults (22 years and older) in each group	Full secondary	19.0	15.3	18.5	14.3
	Above secondary, but not higher	42.9	42.0	44.4	40.8
	Higher and above	16.3	28.6	17.5	32.4
Sector of employment	Agriculture	8.5	3.2	5.9	2.8
Distribution by level, percent of employed in each group	Food and textile industry	6.5	5.9	6.5	5.7
	Heavy industry	8.6	13.4	10.8	13.7
	Utilities	5.9	3.3	4.2	3.3
	Construction	7.3	9.0	8.9	8.8
	Transportation	10.1	9.7	9.3	10.0
	Trade	22.0	20.8	22.9	20.0
	Health and education	19.5	19.9	19.0	20.3
	Public administration and defense	5.5	7.9	6.7	8.1
	Finance and IT	3.4	4.8	3.5	5.1
Access to health services	Have private insurance	1.7	3.6	1.4	4.5
Health status	Smoking	38.5	28.4	32.0	28.4
	Have disability status	3.8	8.5	6.2	8.8
Chronic diseases	No chronic diseases	59.4	44.2	52.5	42.6
Percent of total population reporting in each group	One chronic disease	18.0	19.4	18.1	19.9
	Two chronic diseases	9.0	12.8	11.1	12.9
	Three and more chronic diseases	13.7	23.7	18.3	24.6
Access to utilities	Central heating	52.8	70.1	55.9	75.0
Percent of total population reporting in each group	Central water	78.8	91.8	84.9	93.0
	Hot water	50.5	66.4	53.8	70.6
	Central gas	57.3	71.6	67.9	70.4
	Electric oven/cooker	20.5	20.8	16.7	23.3
	Central sewerage	57.0	72.5	60.4	76.5
	Phone (wired, not cell)	34.4	51.8	37.6	56.6
	Central heating	85.7	89.3	82.7	92.0

Source: RLMS-HSE data, 2007–14.

Conclusion

121. During the 2000s, a favorable external environment, strong macroeconomic fundamentals, and sound fiscal management facilitated inclusive growth in Russia. Favorable external conditions contributed significantly to growth, but Russia had laid the foundation for a period of high growth by macroeconomic stability through structural reforms in the early 2000s. The creation of a stabilization fund and a fiscal rule limited the worst aspects of Dutch disease and significantly reduced external debt. Prudent macroeconomic management and booming oil revenues facilitated a reduction in external debt and a rise in reserves; coupled with a robust financial system, this contributed to the economy's fast recovery after the 2008–09 crisis. Fiscal revenue windfalls from the commodity boom were in part used to expand spending on education, health, and other social programs, on pensions, and on public wages, which promoted consumption-driven growth. Increased public spending made a key contribution to Russia's economic and human development gains. Improved access to health and education and rising social transfers, together with rapid income growth, helped reduce poverty and lessen inequality.

122. Russia's vulnerabilities increased during the 2000s. Strong growth in the first half of the decade reflected rising productivity from drawing on underutilized stocks of capital and labor in the aftermath of the 1998 crisis. However, as utilization rose closer to capacity, additional productivity gains became more difficult to achieve. Instead, the economy showed signs of overheating, especially as fewer second-generation structural reforms—strengthening the investment climate, diversifying the economic structure, and closing the infrastructure gap—were initiated by the end of the 2000s. Economic growth became dependent on large capital inflows and booming domestic demand. Limited diversification of the economy and heavy reliance on oil and a few other strategic sectors made Russia very vulnerable to terms-of-trade shocks, while low investment rates began to limit Russia's medium-term growth potential. Progress in boosting shared prosperity and reducing poverty halted.

123. New macroeconomic challenges emerged when the 2014 oil-price shock exposed Russia's economic vulnerability. Persistently low oil prices, economic sanctions, and slowing structural transformation limited government revenues and threatened financial sector stability. Coordinated measures by the central bank and the government to avoid a currency crisis at the end of 2014 were successful in providing macroeconomic and financial sector stability. However, additional structural and prudential reform measures are needed to help improve the resiliency and stability of the banking system and contain fiscal liabilities related to the closing of financially nonviable banks. Fiscal pressures, reflecting both dependence on dwindling oil revenues and past trends in social spending, are confronting the authorities with severe economic challenges. Moreover, the fiscal adjustments must be made in a difficult environment, with little room for countercyclical stimulus to sustain inclusive growth. Priorities include strengthening non-oil revenue sources, improving the targeting of expenditure to priority sectors (infrastructure) and social categories (the poorest and most vulnerable), and implementing a medium-term fiscal framework with a meaningful fiscal rule. Addressing those challenges will be vital for maintaining macroeconomic stability and sustaining the progress made in income mobility of the past decade.

124. Maintaining macroeconomic stability and overcoming constraints on productivity growth are preconditions for growth and shared prosperity. Boosting productivity growth will require structural reforms to achieve more efficient allocation of labor and capital between sectors and firms and to level the playing field for private investors. Key policies include easing administrative barriers to doing business, reducing transportation and logistics costs, and providing more equal access to factors of production and markets by enhancing competition. Enhanced productivity will also ensure that growth will be inclusive, as highly-productive jobs are also well-paid jobs that create new income opportunities for citizens, notably

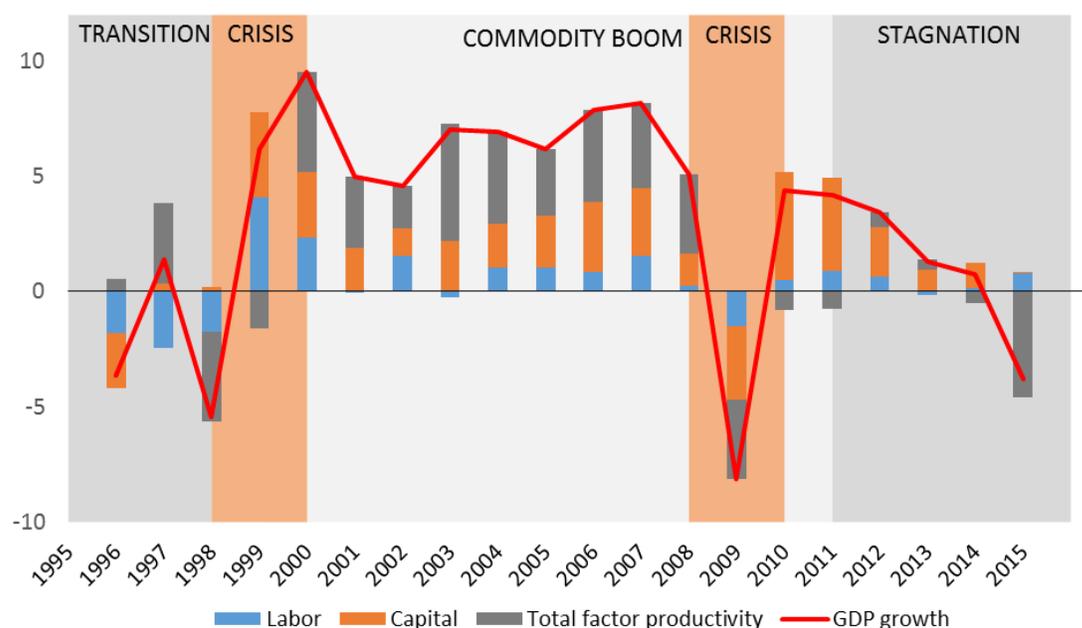
the vulnerable. Russia's constraints on productivity are examined in the next chapter. Given the continued importance of fiscal policy for protecting the most vulnerable from adverse shocks and for supporting investment growth, fiscal sustainability will be discussed as a requisite in chapter 4.

125. Finally, macroeconomic stability over the long term will require economic diversification, for which good governance is a requisite. Private investment is encouraged by regulatory certainty; the less variation in how the rule of law is applied, the better. The government needs to provide effective regulatory institutions that promote robust competition and curtail opportunities for corruption. Good governance, as a major requisite to growth and prosperity, is discussed in chapter 4.

Introduction

126. Sustaining Russia’s past economic achievements will require foremost an increase in productivity to allow for more diversified growth.²⁴ Efficiency gains in the past have been obtained primarily through structural transformation—the reallocation of economic activity across broad sectors (Figure 2.1). By contrast, little has been achieved through productivity growth in firms; productivity growth is related to the accumulation and upgrading of capabilities like managerial skills, technology adoption, and innovation. Factor accumulation to foster economic growth and progress are one side of the story. However, after a decade of empirical research on economic growth, economists have concluded that although physical and human capital accumulation play a crucial role in accounting for economic progress in some countries, total factor productivity (TFP)—a measure of efficiency and technological change—explains the bulk of cross-country differences in both the level and growth rate of per capita GDP (Easterly and Levine 2001). At the macroeconomic level, TFP growth in the average country accounts for more than half of growth in output per worker.²⁵ At the microeconomic firm-level, the evidence is that large and persistent differences in productivity levels across firms are ubiquitous (Syverson 2011).

Figure 2.1. Productivity Growth, 1995–2015, Percent



Source: Rosstat and Russian Economic Barometer data.

²⁴ A number of different measures can be used to evaluate the efficiency with which firms transform labor, capital, and intermediate inputs into production. The two most commonly used are (1) labor productivity (e.g., sales over labor) or labor share (e.g., sales over labor costs) and (2) total factor productivity (TFP). These measures may be correlated: efficiency gains obtained through technological change (TFP) will make labor more productive. However, labor productivity and TFP may not be correlated if productivity gains are obtained through capital accumulation rather than innovation or the adoption of new technologies. Thus, identifying the pattern of productivity growth and economic growth is crucial for policy-making.

²⁵ For example, recent empirical evidence shows that the typical Latin American country would have increased income per capita by 54 percent since 1960 if its TFP had grown at the same pace as in its counterparts in the rest of the world (Pages 2010).

127. Russia's post-transition growth model generated large benefits, but in the long run growth will depend on Russia's ability to increase firm productivity at the sectoral level. Russia achieved significant productivity growth through structural transformation—the reallocation of resources across sectors. Productivity gains in the early 2000s were due to growth in mining and retail trade, where output growth was driven by capital input; growth in manufacturing was limited due to high-quality imports, mainly from Europe, and low-cost competition from Asia. Services did expand, but mostly because of temporary catch-up growth, because they were previously underdeveloped. However, there is now considerable potential for more rapid sectoral productivity growth in Russia. Such productivity gains can be attained either through the reallocation of factors of production (e.g., labor, capital, land), and therefore economic activity and market shares, to more productive firms (the *between* component of aggregate productivity growth) or through the accumulation of internal firm capabilities, such as improving innovation capacity, ability to adopt technology, managerial skills, and workforce skills (the *within* component of aggregate productivity growth). Evidence shows that productivity gains obtained through improving internal firm capabilities tend to account for more than the contribution coming from the reallocation of economic activities to the most efficient firms.

128. This means that for Russia, the economic policy focus should switch more to firm-level productivity. Because productivity is one of the main drivers of competitiveness and is a crucial factor for economic growth and shared prosperity, firm-level productivity diagnostics are critical to guide the design and application of economic policies geared to foster productivity growth. That type of analysis also helps to improve the effectiveness of firm-level programs by providing information to better target productivity growth programs when there is heterogeneity in firm attributes and performance. Empirical studies show that productivity-enhancing policies, such as improving product market competition to ignite innovation, may not have a significant impact if the productivity gap between the best and the worst performer is large (Aghion et al. 2005). Similarly, policies designed to reduce the fixed cost of exporting may not have a large effect on aggregate exports if productivity dispersion is high and if the productivity cutoff (the minimum efficiency level required for successful entry into the export market) is close to the top of the productivity distribution, indicating a large efficiency gap between the median and the best firm.

129. Russia has substantial potential to revive productivity growth by removing economy-wide, firm-level, and individual-level constraints on productivity growth, which in turn could lead to more diversified growth. This chapter identifies four drivers of productivity growth in Russia that interact and underlie long-term productivity performance: investment in physical capital, well-functioning competitive markets and global integration, innovation, and skills. Through these pathways of productivity growth, Russia could ultimately achieve more diversified and sustainable growth. Efforts to diversify the economy so far have had modest success, despite significant policy efforts. However, the product space analysis shows that about half of its nonoil products were exported by Russia competitively, i.e., with revealed comparative advantage. This also indicates that based on its existing production capabilities, Russia can become competitive in other sectors and products (annex 2.1).

130. Economy-wide constraints to productivity include factors that held back investment in physical capital, which prevented the country from overcoming significant infrastructure gaps. Underinvestment in infrastructure limits connectivity, which not only affects the profits of firms, for example through higher transport costs, but also affects income opportunities and the well-being of people through limited labor mobility or less access to services. In particular, attracting private investors in sufficient numbers remains a challenge, given their concerns about geopolitical and governance risks (see chapter 4). Trade distortions like persistent nontariff barriers (NTBs) and lack of trade facilitation on the one hand and market distortions like a high regulatory burden and lack of competition on the other hand are economy-wide constraints on productivity that limit innovation, investments in technology, and allocation of resources

to the most efficient firms. Several of these economic inefficiencies are the result of governance weaknesses, which prevent the levelling of the playing field for businesses (see chapter 4).

131. At the firm level, productivity growth could be boosted through more dynamic entrepreneurship and better capabilities to innovate. But this is conditional on addressing economy-wide productivity constraints to provide the right incentives, including for improving corporate governance (see chapter 4). At the individual level, productivity growth will depend on narrowing the skills gap for workers and on labor markets overcoming the information asymmetries that impair the efficient matching of workers with jobs and skills and prevent Russian firms from expanding and creating new high-skill and high-paying jobs.

Evidence and Lessons from Past Productivity Growth

Benchmarking Russia's Productivity

132. A snapshot of firm-level data shows that productivity in Russia is lower than the average for countries in the region and the world²⁶; higher productivity dispersion²⁷ may reflect large economic distortions. Economic distortions in factor prices (e.g., the cost of capital) and product prices (e.g., discriminatory policies that favor certain goods) could negatively affect aggregate productivity at the sectoral level. This heterogeneity of policy treatment across firms may prevent the efficient allocation of resources to the most productive companies. However, productivity dispersion may also reflect the market power of some firms (i.e., lack of competition) or the presence of adjustment costs (i.e., uncertainty and volatility in sales), which tend to constrain the capacity of small firms to grow. Measured through the median labor share,²⁸ Russia's overall productivity is below the average of the BRICS and neighboring ECA countries; Russia's performance in services is particularly below comparators (Figure 2.2). Variation in sector performance when productivity is measured through revenue TFP is high (Figure 2.3).²⁹

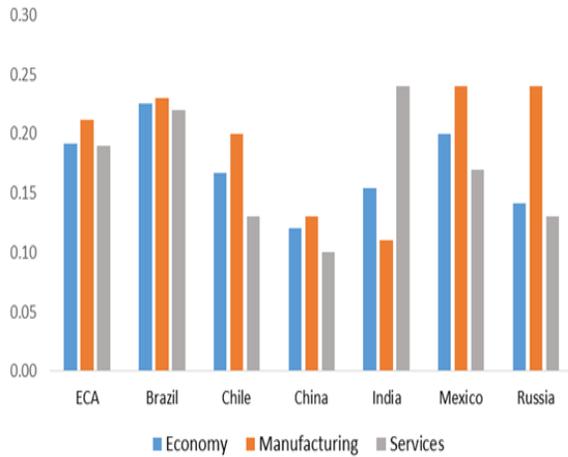
²⁶ Two measures of efficiency are used: (1) median labor share (e.g., ratio of the wage bill for permanent workers to total sales) and (2) TFP. For comparison, Brazil, China, Chile, India, Mexico, and the average of the ECA region are shown.

²⁷ Productivity dispersion is measured as the productivity ratio of the 75th and 25th percentiles.

²⁸ The median labor share is the ratio of the wage bill for permanent workers to total sales.

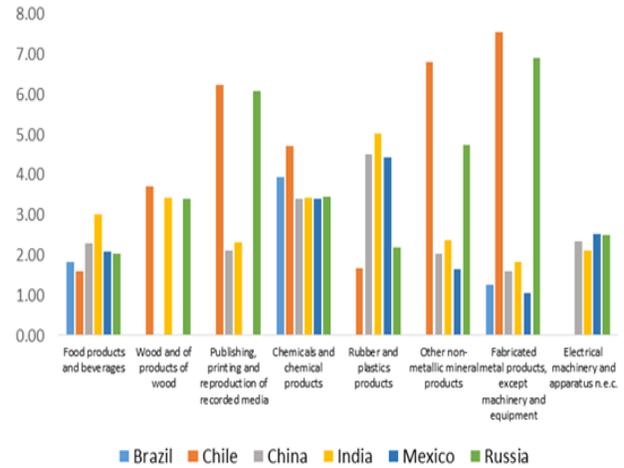
²⁹ The best measure to capture TFP is *physical TFP* or *TFPQ*, defined as the deflated value of sales (output) minus the contribution of labor and capital. In practice, since firm prices are often not available in the data, sales per worker, sales per hour worked, *revenue TFP* or *TFPR*, and physical TFP are the measures most commonly used to capture productivity. Although labor productivity and TFPR will not exclusively reflect a firm's technical efficiency, they are good indicators of the competitiveness of a firm in a market. Even with observed output prices, it is necessary to control for differences in input prices to obtain a good measure of physical productivity. In the absence of input prices, TFP estimates using revenue as output can provide more accurate estimates than estimates obtained when only output is correctly deflated, since the impact of prices on outputs and inputs tend to cancel each other out. In order to compare different productivity measures, the analysis uses one labor productivity indicator (sales per worker) and an estimated TFP that represents the residual of estimating a traditional Cobb-Douglas production function of sales on labor, capital, and material costs. In essence, this is the portion of output not explained by the contribution of the intermediate inputs, labor, and capital used in production. Its level is therefore determined by how efficiently those inputs and factors of production are utilized.

Figure 2.2. Median Labor Share



Source: Enterprise Survey, World Bank.

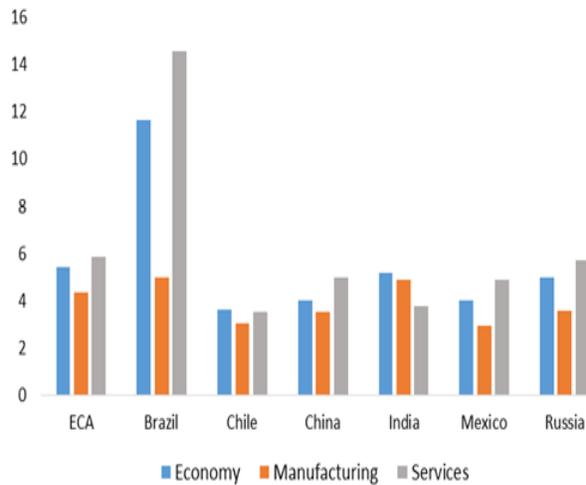
Figure 2.3. Median TFP



Source: Enterprise Survey, World Bank.

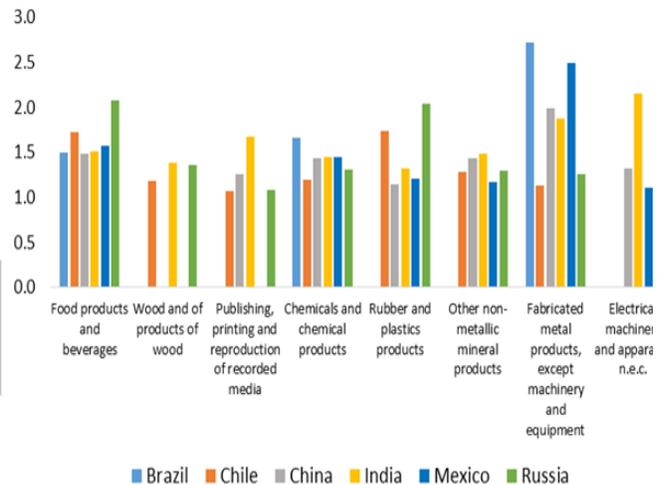
133. Labor productivity dispersion, an indirect measure of factor misallocation, is especially high in the services sector (Figure 2.4). Among the top 10 manufacturing sectors, TFP dispersion³⁰ is relatively high in sectors where productivity performance is weak, such as food processing and rubber and plastics production (Figure 2.5). These sectors could benefit most from policy interventions, since removing distortions related to market and policy failures could lead to productivity gains and employment growth. From a policy perspective, high productivity dispersion also signals the need to design tailored policies for firms with specific attributes and performance.

Figure 2.4. Dispersion of Labor Productivity, 75/25 Percentile



Source: Enterprise Survey, World Bank

Figure 2.5. Dispersion of TFP, 75/25 Percentile



Source: Enterprise Survey, World Bank.

³⁰ Dispersion is measured as the inter-quartile ratio: the productivity level of the bottom 75 percent of firms versus the productivity level of the bottom 25 percent.

134. Sector-level productivity could be improved by more efficient capital and labor markets and higher competition. Productivity-enhancing policies that lower the cost of labor and capital could be especially important for the services sector in Russia. International comparison of TFP in manufacturing sectors shows that such productivity gains could be made in particular in rubber, plastic and chemical production, and food processing. Better allocation of factors, enabled by competitive and fair markets, could bring great benefits to the services sector and in the rubber, plastic, and food production industries.

Productivity Dynamics

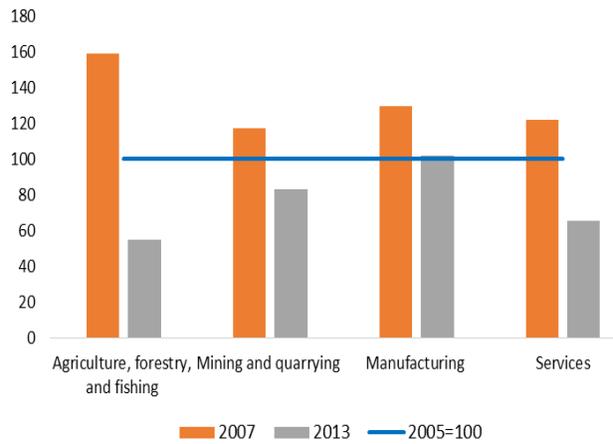
135. Looking at firm-level productivity trends over the past decade, it has weakened as a driver of economic growth in Russia, indicating that the economy's competitiveness declined across all sectors. In fact, firm-level TFP has been declining since 2005 in all sectors except manufacturing (Figure 2.6). TFP also declined in all services subsectors other than financial services and ICT (Figure 2.7). At the same time, productivity dispersion has risen since 2005, which may imply increasing economic distortions. In every year the services sector exhibits much more productivity dispersion than the primary and manufacturing sectors, suggesting that economic distortions in services may play a more important role over time. These economic distortions ultimately create an uneven playing field, limiting the entry and expansion of more efficient firms and the exit of less efficient ones.

136. Productivity gains have been obtained primarily through better allocation of resources across firms, where factors of production were allocated to more profitable firms, most likely due to their greater market power. A dynamic decomposition of firm-level data shows that aggregate productivity growth, measured by revenue productivity, was driven primarily by better allocation of resources across surviving firms rather than within-firm improvements. The exit of firms increased productivity growth in the manufacturing sector because exiting firms were on average less productive than incumbent and surviving firms. Firm entry increased productivity growth in the services sector because entrants were more productive on average than incumbent firms.³¹ However, the revenue TFP measure does not distinguish between firms that are more profitable because they are more efficient and those that are able to set higher mark-ups. Thus, aggregated gains in revenue TFP are likely to reflect the reallocation of factors to firms that have more market power.

137. Most worrisome, the contribution of incumbent firms to aggregate productivity was negative: they did not accumulate internal capabilities related to innovation, new technology adoption, and upgrading the skills of their workforce. The contribution to productivity over the past decade of new entrants and exiting firms was negligible, and in the case of the services sector, exiting firms had performed better than incumbent firms. The latter fact may indicate that economic distortions impair the ability of more profitable firms to survive in the services sector. These results suggest, on the one hand, that gains in aggregate TFP growth could be made if market competition allowed for capital and labor to be reallocated in a way that more productive firms grow and less productive ones shrink or exit. On the other hand, the results also suggest that improving productivity growth at the firm level—through accumulation of capabilities in the form of innovation capacity, ability to adopt new technologies, and enhancing managerial and workforce skills—could generate large increases in overall productivity growth in Russia.

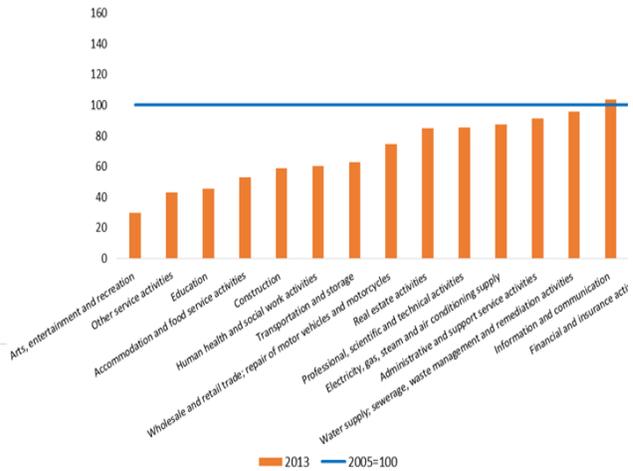
³¹ In order to explore the sources of aggregate productivity growth, the Melitz and Polanec (2015) decomposition was employed; this decomposes aggregate productivity growth into three components: (1) the contribution of surviving firms, which is further separated into one component induced by a shift in the distribution of firm productivity (the unweighted mean change in the productivity of surviving firms) and another induced by market share reallocations (the covariance between market shares and productivity for surviving firms); (2) the contribution of entering firms; and (3) the contribution of exiting firms.

Figure 2.6. Firm-level TFP, Index 2005=100



Source: Orbis.

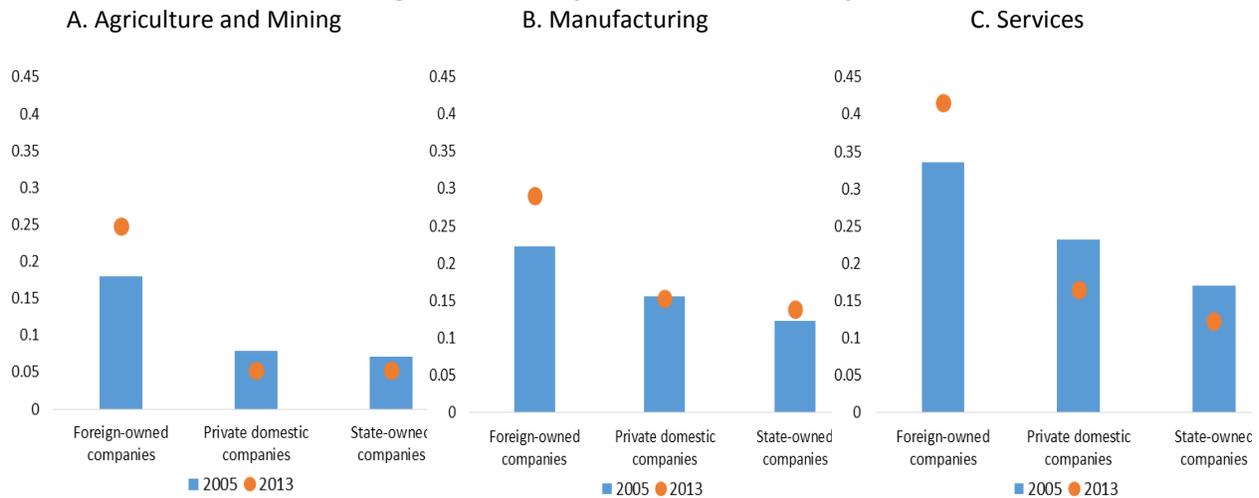
Figure 2.7. TFP Evolution in Services, Index 2005=100



Source: Orbis.

138. Although constraints on firm-level productivity are often the same for all types of firms, the ability to overcome challenges associated with post-entry growth usually varies with a firm’s attributes, which include such characteristics as size, age, and ownership. In Russia, young, private, and foreign-owned firms achieve the most rapid productivity growth. Foreign-owned companies especially play a key role in revenue TFP growth in Russia across all sectors and are the only firms that displayed significant TFP growth from 2005 to 2013 (Figure 2.8). Among domestic firms, state-owned companies (SOEs) are the least productive, and their TFP declined or stagnated from 2005 to 2013. Interestingly, a decade ago productivity in small- and medium-sized enterprises in manufacturing and services was equal to or greater than productivity in large firms, but large firms showed more resilience over time, and by 2013 their productivity outperformed micro and small enterprises. The higher profitability observed in large firms could be due to efficiency gains but is also likely to be linked to higher product mark-ups or lower input and factor costs, indicating how high levels of state ownership and market concentration affect productivity trends in Russia.

Figure 2.8. TFP by Sector and Ownership



Source: Orbis.

139. This dynamic analysis supports the findings from international benchmarking that firms in the services sector would benefit most from policies to promote productivity growth. Agricultural productivity also appears to be significantly constrained by an uneven playing field that prevents efficient businesses from prospering. Within the services sector, important service providers, such as for education, health, tourism, transportation, and wholesale trade, have great potential to benefit from productivity-enhancing policies, especially the removal of barriers to the entry of innovative and productive firms and the exit of unproductive incumbents. The findings on firm-level characteristics point in particular to the importance of young firms to productivity growth. The TFP analysis also illustrates the importance of diverse ownership, especially ownership through foreign direct investment (FDI), which appears to better equip firms to realize productivity growth. Within all sectors, increasing the efficiency of SOEs would remove a large drag on productivity growth because they consistently underperform in terms of TFP growth. Finally, policies to promote firm capabilities and the competitive environment for small and medium-sized firms could lead to sustained productivity gains.

Economy-wide Productivity Constraints: Physical Infrastructure, Connectivity, and Energy

Physical Infrastructure Challenges

140. The growth of Russia's capital stock has slowed in recent years, and inadequate infrastructure poses great challenges to economic growth. The Global Competitiveness Index (GCI) ranks Russia's infrastructure relatively high (35th out of 140 countries), above all the other BRICS countries (Figure 2.9). However, the aggregate ranking masks significant differences in the quality of the different types of infrastructure measured. While Russia scores very high on air transport capacity (12) and mobile connectivity (18), the quality of its roads is among the worst in the world (123), and the quality of air transport (77) and port infrastructure (75) is worse than in OECD countries.

141. It is difficult and expensive to move people and goods in Russia, which ultimately hinders trade and limits economic opportunity. Russia performs poorly across all international dimensions (customs, international shipments, infrastructure, tracking and tracing, timeliness, and logistics competence) and

most domestic dimensions of the World Bank Logistics Performance Index (LPI),³² lagging behind all the BRICS countries (Figure 2.10). Enhancements in the quality of logistics services could lead to an increase in trade, in particular exports.³³ It is estimated that a 10 percent improvement in transport sector efficiency could increase Russia’s GDP by 0.8 percent (OECD 2015). Increased efficiency could play a particularly strong role in raising incomes in poorer regions, such as in the South, Siberia, and the Far East.

Figure 2.9. Infrastructure Pillar of the Global Competitiveness Index

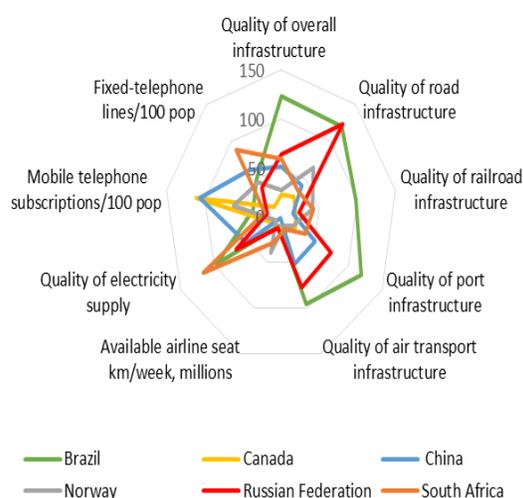


Figure 2.10. International Dimensions of the Logistic Performance Indicator



Source: World Economic Forum Global Competitiveness Report 2015–16. Source: Logistics Performance Index, World Bank 2016.

142. Underinvestment has led to generally poor and declining conditions in Russia’s infrastructure. Russia has a long way to catch up both on increasing infrastructure investment as a share of GDP and in terms of private sector participation. Russia’s public spending on infrastructure amounted to less than 1.0 percent of GDP a year in 2012–14 (Figure 2.11). For example, according to Russia’s own requirements for maintenance and basic expansion of its transport network, the financing gap for maintenance and reconstruction for federal and regional roads is estimated at about 1.1 percent of GDP, with the largest gap in the regional road network (World Bank 2012b). Russia budgets less for infrastructure than China and South Africa. While Russia compares better in public infrastructure investment to Brazil and India, in those countries the share of private sector participation in transport investment is much higher than in Russia (Figure 2.12). The share of private sector participation in cumulative infrastructure investments in Russia was estimated at 16 percent in 2006–10, compared to 40 percent in India, 66 percent in Chile, 29 percent in the United States, 44 percent among new EU members, and 64 percent among old EU members (Ernst and Young 2014). The overall infrastructure deficit in transport has a direct impact on the ability of businesses to source inputs and to produce and deliver outputs to markets internationally in a cost-competitive manner.

³² The LPI is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in trade logistics and what they can do to improve their performance. The LPI 2014 provides comparisons for 160 countries.

³³ Various studies confirm the strong impact on trade of logistics quality (Korinek and Sourdin 2011). Overall, enhancements in transport infrastructure also strongly affect trade, and these investments have greater impact in middle-income countries.

143. Russia’s vast infrastructure needs are recognized in various strategies and programs dedicated to infrastructure development. A database of large infrastructure projects announced in Russia over the past five years (Ernst & Young 2014) includes 325 projects, with implementation of about half of them planned for 2015–20 and a time horizon of up to 2030 for the other half. The investment needs of these projects are estimated at about US\$1 trillion, equivalent to 75 percent of Russia’s 2015 GDP. Depreciation of capital stock, particularly in transport, energy, public utilities, and social infrastructure, is the main driver of the need for large infrastructure investment. With fiscal constraints growing, attracting private capital to finance infrastructure will be critical. This can be done by scaling-up public-private partnerships (PPPs) and opening infrastructure sectors to direct private investment.

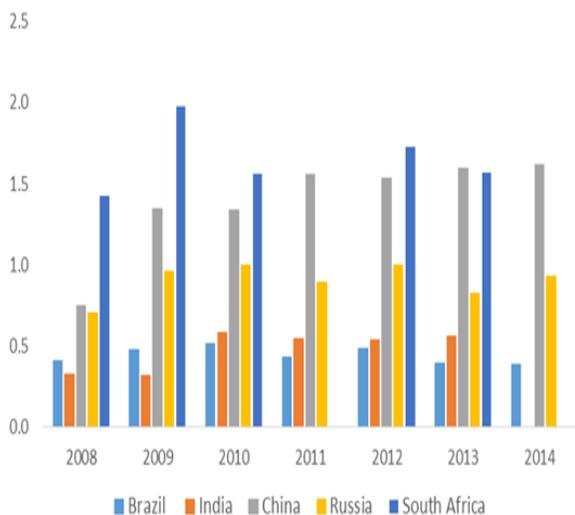
144. Constraints on the development and implementation of PPPs limit private sector participation in infrastructure. In general, competition is limited and the market is dominated by large SOEs. Attracting private investors in sufficient numbers remains a challenge, given their concerns about perceived political and governance risks, including the legal and regulatory framework and the difficulty of protecting property rights (see chapter 4). The shallow domestic capital market limits access to finance for PPPs. Private investment is also constrained by three other issues: (1) fragmentation of the legal framework between the national and subnational governments, and its complexity³⁴; (2) the lack of capacity to prepare and deliver projects at federal and subnational levels, including the absence of a solid public investment management framework³⁵; and (3) the high cost of, and restrictions on access to, commercial financing.³⁶

³⁴ A national law on PPPs enacted in 2015 provides some common principles among the different regions in how projects are prepared, structured, and tendered. The law, however, does not replace subnational laws but is an additional mandatory framework for any subnational PPP project that requires viability gap funding from the federal government. Russia also has a concession law and a law for deferred procurement (long-term investment agreement).

³⁵ Anecdotal evidence suggests that subnational governments in Russia lack the capacity and resources to prepare projects. The Ministry of Economic Development provides some guidance and recommendations to prepare and evaluate PPP projects but capacity and resources in the sector remain low. Moreover, the cost of preparing PPP projects is becoming a barrier in Russia’s current economic context, and the overall benefits of PPPs are also being questioned.

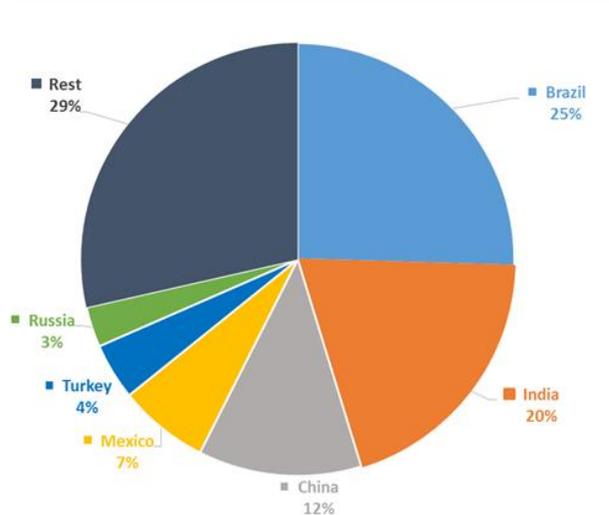
³⁶ As of today, access to financing and the cost of financing are the most important constraints. The depreciation of the ruble and the economic sanctions amplified the effects of the lack of a developed domestic capital market. In the case of the Russian Highway Company (AVTODOR), most of the projects already tendered or in preparation are financed through federal viability gap funding; private finance is limited to 25–30 percent of the total cost. This amount of private finance may include financing from development banks and other SOEs as investors in PPPs.

Figure 2.11. Public Spending on Infrastructure, Percent of GDP, 2008–15



Source: Ministry of Transport of Russian Federation, BRICS Joint Statistical Publication, 2015.

Figure 2.12. Private Participation in Infrastructure Investment, 2010–14



Source: Private Participation in Infrastructure database, World Bank.

145. Significant efforts have been made to facilitate implementation of PPPs, but more needs to be done. The government is improving the regulatory framework for PPPs to align it with good international practices, eliminate inconsistencies between federal and regional legislation, and develop model documentation for PPPs. While this is a required condition for the uptake of PPPs, it is not sufficient. The government will need to build capacity within the public sector, especially in the regions, to understand when certain PPP mechanisms can be used, develop PPP projects, and bring them to market for private sector financing. Infrastructure projects are generally very complex, legally, financially, and technically. Preparation of such projects will require building capacity to assess project viability, analyze risks, compute social and economic returns, and supervise projects to completion. The successful track record of institutional capacity-building in the roads sector³⁷ is a notable example that can be replicated in other sectors, including municipal infrastructure. In addition to capacity building, the federal government will also need to help overcome the unwillingness of regional authorities to delegate certain infrastructure rights to the private sector. Furthermore, a large-scale rollout of PPP projects will not be feasible without a significant increase in the availability of affordable long-term debt and equity financing.

146. While certain infrastructure subsectors will continue to be dominated by public investment even with greater availability of PPP mechanisms, some have considerable potential for greater private sector participation. These include energy generation and transmission, ports and airports, transport logistics (e.g., railcars, warehouses, and storage), solid waste management, facilities for industrial zones and clusters, telecommunications, and broadband. The entry of new private players in these subsectors is currently hindered either by the prevalence of the public sector in strategic enterprises (e.g., airports, energy) or by dominance of oligopolistic and quasi-oligopolistic private groups. Policies to promote greater private sector participation should include competition-enhancing measures and the introduction

³⁷ Russia has a federal road agency, Rosavtodor, which is responsible for managing most of the road network through public funding. Avtodor is a toll road agency in charge of building key highways and roads on the basis of PPPs in areas experiencing bottlenecks. This means toll roads with part state and part private financing. It manages about 3,000 km of key federal roads.

of longer-term commercial-level tariffs. The government role in these sectors may need to be reoriented toward ensuring quality services and equitable access. Greater direct private sector participation in infrastructure will not be possible without greater availability of long-term financing instruments, which can be achieved through further development of the local capital market.

147. The provision of public infrastructure depends not only on more diverse sources of financing but also on improvements to the institutions that manage public investment. Public investment in infrastructure needs to reflect both cost-benefit and macroeconomic considerations that take into account financing and capacity constraints. An important survey of economic issues affecting infrastructure (Estache 2007) shows that investment planning and policy coordination are essential to avoid bottlenecks that slow national and regional growth or distort urban-rural resource allocations. Thus, despite evidence that insufficient infrastructure is constraining economic growth in Russia (especially in certain regions), the economic impact of public investment will also depend on institutional issues related to planning and implementation of large-scale infrastructure initiatives. For instance, in the road sector, significant efficiency gains from current spending can be realized by (1) reviewing the procurement methods for civil works; (2) introducing performance-based management contracts; (3) introducing improved asset-management techniques and ensuring that the programming of road works incorporates economic principles; (4) creating a more commercially oriented national road agency; and (5) improving strategic planning. In the railway sector, the key challenges are to improve efficiency, improve operations and maintenance, and finance a technically and economically sound expansion program to keep up with rising demand.

Connectivity: Transport, Logistics, and ICT

148. Russia's connectivity infrastructure is rapidly aging, and the transformation to a more productive and diversified economy will require a better transport and logistics supply. Improvements to the capacity and quality of domestic and international connectivity are not only essential for a growing, globally integrated economy but also for boosting the income of the bottom 40 percent of the population and for addressing the needs of a growing middle class. To meet those objectives, Russia will need to address several connectivity gaps.³⁸

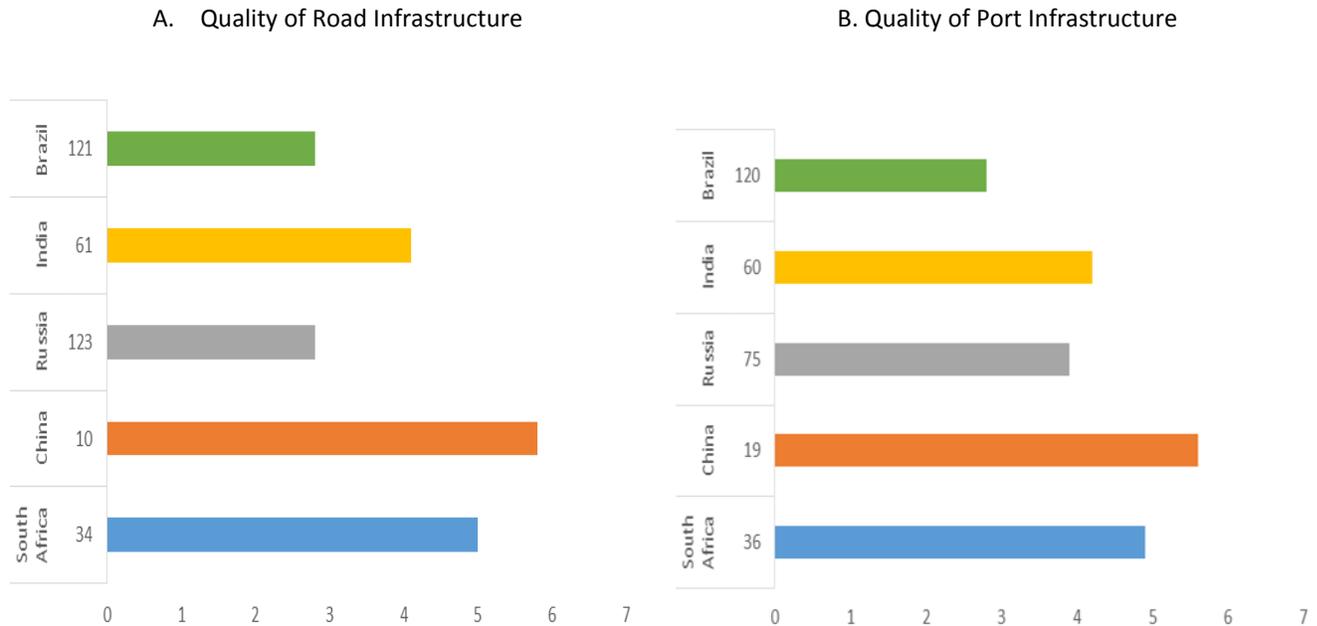
149. Russia's transport network is vast, but it is unevenly distributed geographically and suffers from poor quality. This is especially evident in the road network and in ports (Figure 2.13).³⁹ Russia lacks a nationwide highway. About 76 percent of regional roads do not meet the regulatory standards for transport operating conditions, which raises the cost of road transportation. More than half of the local road network is unpaved, resulting in uneven geographic accessibility. The quality of Russia's roads and ports is among the lowest in the BRICS countries and is increasingly viewed as a key constraint on Russia's competitiveness.⁴⁰

³⁸ The consensus has gravitated to the notion that the quality and quantity of infrastructure matters significantly for growth and production costs (Estache et al., 2007).

³⁹ The Russian highway system covers a total of 948,000 km of roads, including 416,000 km that serve specific industries or farms and are not maintained by governmental highway maintenance departments. Of the total road network, only 336,000 km are paved. There are about 2 million people living in areas without access to all-year roads.

⁴⁰ Russian seaports have received sufficient investments to meet current and medium-term needs; however, bottlenecks in the intermodal infrastructure (rail and road access and logistic facilities) and low efficiency in customs and other border-crossing procedures still limit their effective use (Rosmorport 2012).

Figure 2.13. Russia’s Quality of Road and Port Infrastructure



Source: World Economic Forum Global Competitiveness Report 2015–16.

150. The deterioration in transport asset quality is a proxy for insufficient spending on maintenance and rehabilitation, leading to a growing backlog and to high transport costs. For example, repairs to the extensive railway system have not kept up with infrastructure degradation and increasing transport demand.⁴¹ Improving the quality of railway infrastructure is particularly important because railways dominate freight transport and serve large Russian industries, notably with raw materials, which often have no other transport alternative to rail. Changes to the regulatory framework governing the rail sector are critical: the viability of the national railway company (RZD) is determined mainly by the tariff structure, annual tariff indexation, and financial support from the government.⁴²

151. Russia’s transport connectivity challenge is partly attributable to its vast territory, unfavorable weather conditions, and difficult terrain. Due to weather conditions in many remote areas, the road network does not provide reliable connections. This sparsity reflects in part the traditional reliance on the railway system, the large size of the country, and the geographic concentration of economic activities. Public road density, at 37 km per 1,000 square km, is very low compared to that in Canada (110 km/1,000 square km), a large country with a similar climate. Density rises to 110 km/ 1,000 square km in the European part of Russia, but it falls as low as 6 km/1,000 square km in the Far East. More than 40 percent of Russia’s total land mass does not have reliable access to the network because many of the roads are seasonal. In fact, only two-thirds of all settlements have all-season roads. In addition, the highest tier

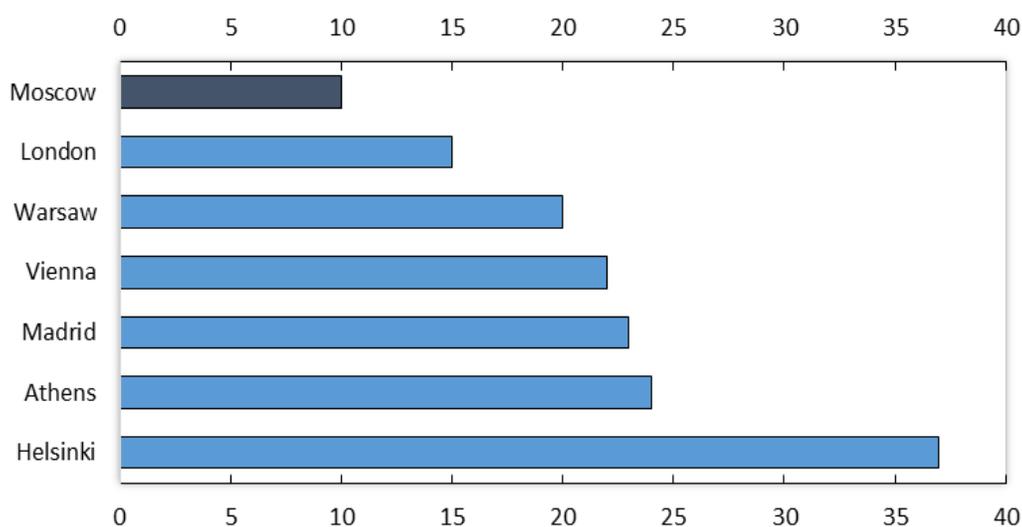
⁴¹ Capacity is below demand particularly in sections along the main export trade flows. The length of sections with capacity lower than demand was roughly 9 percent of the total railways network in 2012. If current trends continue, this will double by 2017 (IERT 2012).

⁴² These factors will determine RZD’s cash flow and its overall financial performance. There is a need to review the process for the indexation of freight tariffs to ensure adequate cost recovery and effective introduction of the Public Service Obligation. Priority should also be given to maintenance and rehabilitation and to ensuring that rail infrastructure investment in peripheral regions is justified from a financial and economic point of view (e.g., review the need for 10,000 km of high-speed rail).

(federal) roads, which account for 8 percent of the total network length and carry 30–40 percent of total road freight and passenger traffic, is used to capacity.⁴³

152. Traffic congestion on the core road network incurs additional transportation costs and in cities leads to long commuting times, hindering urban growth (Donchenko 2013). Congestion results in high prices for goods and low competitiveness. The regions most affected are those that are not connected to the main railway and road transport systems or are far from the western part of the country where the main trade and service centers are located.⁴⁴ Connectivity to major urban centers (e.g., Moscow and St. Petersburg) is less of a challenge for regions that are nearby.⁴⁵ Yet growing congestion in major urban areas already poses a significant challenge not only for intra-urban but also regional traffic. In general, the lack of efficient public transport systems and of measures to manage transport demand limit the economic benefits from agglomeration. Increased congestion reflects a significant increase in car ownership, and long traffic jams have become the norm in many cities (World Bank 2013b). For example, the average traffic speed in peak hours in Moscow is much lower than in other European capitals (Figure 2.14), generating high congestion costs. Road congestion is increasing the costs of doing business in cities and reducing their attractiveness to investors.

Figure 2.14. Average Traffic Speed in Peak Hours, km/h



Source: OECD 2015.

153. For many Russian regions, poor transport connectivity means economic isolation from markets and trade opportunities, limiting their growth prospects and the income of the bottom 40 percent of the population. Transport connectivity indicators, representing the travel time from each regional center to the five regions it trades with most, weighted by trade volumes, show great disparity across regions

⁴³ There continue to be severe bottlenecks due to the lack of investment in expansion of the road network. Road congestion in the western and central regions is hampering the benefits of urban-led regional growth. The increasing demand for road space has not been supported by an appropriate increase in road expansion. Insufficient road infrastructure has been widely cited as a key factor constraining Russia's competitiveness (OECD 2015). Traffic volumes are above road capacity on the main federal roads around the largest cities and in the Western and Central regions. Road users underpay for using the road system, and vehicle growth and use are encouraged by subsidized fuel. More than a third of the main federal roads are overloaded—generally those near large cities, especially within the Moscow and St. Petersburg regions. The majority of roads are not built to optimal design standards and are not suitable for heavy vehicles.

⁴⁴ Travel from Moscow to Vladivostok takes six days by car if there is no significant congestion.

⁴⁵ The density of roads and railways is about 4.4 times higher in the western part than the country average.

(Figure 2.15). In the best-connected regions, travel to the main trade partners averages less than 42 hours, but it can take up to eight times longer for some of the least-connected regions. Long travel times could have both economic and transport-related reasons: (1) due to the lack of economic density and diversification, some eastern regions do not have much to trade among themselves and hence are forced to trade at longer distances with western regions, and (2) transport connection both in terms of physical infrastructure and service availability is poor between eastern regions, increasing the travel time. The poor transport connectivity of regions is also a major constraint on boosting the income of the bottom 40 percent of the population. In fact, the pattern of western Russia being better connected than the regions in the Far East corresponds to the pattern of regional poverty rates.

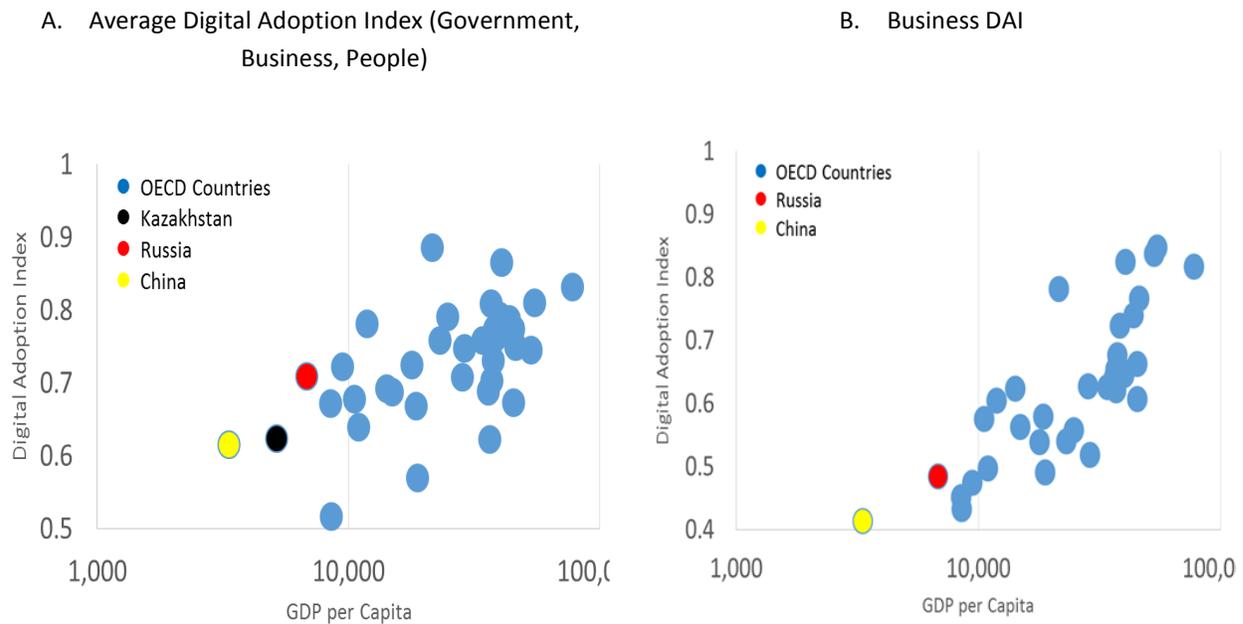
154. Russia’s connectivity in ICT (information and communications technologies) compares favorably with other countries, but Russian firms have not fully realized the benefits of ICT adoption. ICT, if used effectively by governments and businesses, offers considerable potential for increased innovation and productivity-based growth. ICT penetration in Russia is relatively high: there are 63.4 mobile broadband subscriptions per 100 people and 17 fixed, compared to 78.2 and 29.5 in Europe, 77.6 and 18 in the Americas, 49.7 and 13.6 in countries in the Commonwealth of Independent States, and 42.3 and 8.9 in Asia (National Research University 2016). Russian households are intensive ICT users: 66.8 percent of them have broadband access and 68.3 percent have mobile phone subscriptions, with on average more than two subscriptions per household. The Russian government also performs well in digital adoption, ranking 27th in the EU e-government survey. Russian businesses, however, lag behind the government and the population in terms of ICT adoption. The Digital Adoption Index (DAI) for Russian businesses (0.48) is the highest among the BRICS countries, though it falls considerably behind that of developed economies, such as Canada and Australia at 0.63 and Norway at 0.75.

Figure 2.15. Transport Connectivity Indicator for Russian Regions, 2014



Source: World Bank.

Figure 2.16. Digital Adoption Index⁴⁶



Source: World Development Report 2016.

155. Russian companies struggle to absorb new ICT technologies and to use them effectively to increase productivity and develop new business models, products, and services. Despite significant gains in infrastructure coverage and availability in recent years, Russian businesses struggle to take full advantage of ICT. For example, in 2014, 87 percent of Russian companies used the Internet—with most of them (81 percent) using broadband—but only 40 percent had a website. In comparison, 75 percent of companies in Australia, 78 percent in Canada, 79 percent in Norway, and 95 percent in neighboring Finland had a website (Federal State Statistics Service 2016). Small and medium enterprises (SMEs) are less likely to take advantage of ICT due to budgetary constraints and limited availability of financing and skilled workers. Weak innovation capacity, together with uneven access to ICT infrastructure and e-government services, are key factors constraining ICT adoption by businesses (see section on Innovation Challenges in this chapter).

156. The level of ICT use by businesses in Russia correlates with the level of its ICT infrastructure development, which is geographically uneven and concentrated in the western part of the country and in urban areas. While mobile broadband coverage is high in Russia, addressing the gap in infrastructure, primarily in fixed broadband coverage, would help bridge the country’s digital divide and enable businesses to take advantage of ICT.⁴⁷ The State Commission for Radio Frequencies has made the necessary radio spectrum available to operators at relatively low cost, which by 2020 should make mobile broadband available to 90 percent of the population. Russia also has demonstrated impressive growth in

⁴⁶ The DAI was constructed as part of the [World Development Report 2016: Digital Dividends](#) to measure the spread of digital technologies within and between countries. It draws on original and established data to provide a worldwide, comprehensive picture of technology diffusion across the three segments of the economy: businesses, people, and governments. For more information, see <http://www.digitaladoptionindex.org/methodology.html>.

⁴⁷ Broadband is very affordable in Russia. Fixed broadband tariffs adjusted for PPP in Russia are among the lowest in the world due to the competitive regulatory framework introduced by the government. The large number of competing providers, combined with low regulatory barriers, including the low cost of licenses, spectrum, and rights of way, paved the way for some of the most affordable broadband prices in the developed world.

the fiber-to-the-home segment and plans similar rapid growth of fiber optic infrastructure.⁴⁸ However, given the size of the country, the many sparsely populated areas, and the low level of socioeconomic development in some regions, Russia faces challenges in expanding fixed broadband access. For some ICT indicators, differences between Russia's regions are much higher than in Europe, the BRICS countries, and developing economies (World Bank 2015a). For example, in the most connected regions in Russia the share of households with Internet access is 44 times higher than in the least connected regions, while connectivity in Europe exceeds that of Africa by only about eight times.⁴⁹ Similarly, fixed broadband connectivity in some Russian regions with predominantly rural populations does not exceed two subscriptions per 100 persons, comparable to countries like Bolivia or Bangladesh, and is 0.3 to 6 percent of the level in the best-performing regions within the Russian Federation (Federal State Statistics Service 2015). Overcoming the substantial urban-rural divide (2–3 times on average) and last-mile connectivity are key issues. At present, Russia does not have a legal framework for Bitstream Access and Local Loop Unbundling, which prevents using the existing and planned last-mile infrastructure more effectively.⁵⁰

157. Fair competition and nondiscriminatory access to ICT infrastructure needs to be ensured, and institutional capacity needs to be built for implementing regulations related to the ICT sector. The long-term sustainability of broadband development in Russia will also depend on how the government handles the growing market share of state-owned Rostelecom, which dominates the telecom market: the Russian state currently is both the policymaker and the majority owner of the largest broadband network operation in the country. This dominant role of the government discourages needed private investment and raises concerns about the government's ability to deliver on its ambitious plan of providing broadband services to 90 percent of the population by 2020, including in second-tier cities and small, sparsely-populated settlements. International best practices suggest that if such a plan is to be cost-effective, the government will need to provide incentives—including grants, loans, and an open-access model for infrastructure use—to private, local commercial operators to invest in last-mile service delivery. Long-term sustainability will also depend on whether the government will carry out strategic and regulatory reforms, including establishing a national independent regulatory authority with sufficient institutional capacity to implement regulatory reforms and enforce ICT sector regulations; developing a national broadband plan that improves governance and fosters competition in the sector; and setting standards and procedures for shared use of infrastructure.

Energy: Electricity, Oil, and Gas

158. Russia has one of the biggest energy sectors and centralized power systems in the world.⁵¹ The Russian energy sector still provides the main revenue for the federal budget and accounted for 43 percent of total industry profits in 2015. Energy constitutes more than half of Russian exports, and the sector generates a third of Russia's GDP. Russia ranks first in the world in oil production, second in gas production, and fifth in electricity production. Even though there was a wave of privatization in both the

⁴⁸ A 2014 law envisions a new universal connection service based on fiber-optic-line access points in settlements with a population of 250–500 people that provide data transfer rates of at least 10 Mbps. Rostelecom was selected as the sole operator of this service and will need to build 200,000 km of fiber optic networks.

⁴⁹ <http://www.statista.com/statistics/249830/households-with-internet-access-worldwide-by-region/>.

⁵⁰ Infrastructure-sharing should help prevent inefficient duplication of networks in reaching last-mile connectivity. Sharing would also help make broadband access more affordable, including for the bottom 10–20 percent of the population, for whom access still is a challenge.

⁵¹ The Unified Energy System of Russia combines 69 regional power systems that are connected to each other with transmission lines of 220–500 kV and higher and are operating in the (synchronized) parallel mode. The length of the transmission lines is about 138,000 km. Within the centralized power system, over 700 generation facilities with installed capacity of 235GW are generating 1026 GWh.

power sector and the oil and gas sector, state-controlled corporations still dominate both and the level of competition is low. Despite the far-reaching electricity sector reform from 2001 to 2008 that resulted in the privatization of generating assets and the liberalization of electricity markets, the final consumer price for electricity is still highly regulated, leaving little room for competition. The energy generation capacity is old, and overcapacity discourages new investments in the power sector, together with other impediments, such as corruption, nontransparent tariff-setting, inefficient cross-subsidization, and serious nonpayment problems.

159. Russia's power sector is dominated by thermal plants, which account for about two-thirds of total electricity production. Hydro and nuclear plants produce the rest, contributing about 17 percent each. The dominant share in thermal generation is produced by gas-fired facilities (42 percent), followed by coal-fired facilities (18 percent). Although in 2013 the government approved a support mechanism for renewable energy in the wholesale electricity market⁵² and in 2015 a support mechanism for renewable energy on the retail electricity market,⁵³ the share of renewable energy is still less than 1 percent. The government resolution that sets out state policy on increasing the share of renewable energy in order to improve energy efficiency for the electricity sector expects the renewable energy share to reach 4.5 percent by 2024.⁵⁴ Overall, the power generation mix is not expected to change much within the next decade or two.

160. Russia's energy balance is positive and as a net exporter of energy it is expected to play an important part in the planned Common Electricity Market of the Eurasian Economic Union (EEU). About 1.7 percent of total generation is exported and less than 0.15 percent of total consumption is imported. According to the EEU agreement, the Common Electricity Market of the member countries should be in place by 2019; a program for developing the market is being discussed. Once the common market starts functioning, member countries could benefit from large savings by combining generating capacity reserves. However, the economic effect is expected to differ by country, since national electricity prices differ significantly. According to a preliminary assessment by the Eurasian Economic Commission, the economic benefit once the common market is in operation will be about US\$500 million a year. The development of this common electricity market may play a significant role in the further development of the energy sector in the region: the common market concept envisions ultimately a total unification of the electricity market after the gas market is unified.

161. The Russian economy is one of the most energy-intensive economies in the world, and the potential for energy efficiency is still largely untapped. In 2008, the government set an ambitious target: reducing the country's energy intensity by 40 percent by 2020. The accompanying policy measures, including adoption of the Law on Energy Saving and Energy Efficiency, have yielded mixed results. While the policy measures envisioned spanned all the key sectors of the economy, implementation has been

⁵² In 2013, the government approved Decree No. 449 of 2013, which established a capacity-based mechanism that supports renewable electricity deployment through the wholesale market (for generators with installed capacity over 5MW). This approach is unique in the global context, because instead of promoting renewable energy based on output, it rewards installed capacity. The scheme is based on Capacity Provision Contracts through which competitively selected renewable power projects receive capacity payments for a period of 15 years for maintaining readiness to generate electricity on demand. The total volume of the support scheme is 5.9GW (1,520 MW of solar, 3,600MW of wind, and 751 MW of small hydro). A significant barrier to the implementation of this mechanism is the high local content requirement, which ranges from 65 to 70 percent depending on the type of technology.

⁵³ The retail electricity market is regulated at the regional level. Generators below 25MW are eligible to participate in the retail electricity market.

⁵⁴ Of the total planned by 2024, 1,445 MW have already been tendered. Solar energy attracted most of the investors, accounting for 80 percent of the planned capacity that was tendered. Wind and small hydro were less successful, with only 5 percent tendered for the former and 9 percent for the latter, because of uncertainties about the support mechanism, including the high local content requirement.

weak and inconsistent. As a result, the pace of change is slower than is needed to achieve the 2020 target. Most measures were related to energy audits and the labeling and classification of buildings and appliances but lacked follow-up measures. Most of the regional energy efficiency programs remain on the level of declared intentions and have only been implemented partially. The reasons why Russia is not achieving its target for energy saving include the lack of consistent policies and regulations, both federal and regional; a lack of incentives for investing in energy-saving projects because of slumping oil and other fossil fuel prices, the elimination of government subsidies to the regions to finance regional energy-efficiency programs, limited access to new foreign investment due to the sanctions and the weaker ruble, and the lack of financing mechanisms to encourage energy efficiency. Detailed fine-tuning of the regulation and an implementation framework for the financing mechanisms are necessary to revive the energy-efficiency law.

162. Although the average age of Russia’s power-generating capacity is approaching 35 years, investment in new and more efficient capacity is mired in challenges, in part related to incorrect demand projections and the structure of the power sector. Recent investment reduced the average age of the generating capacity to 32.5 years in 2014, but the average is nevertheless projected to reach about 35 years by 2020. An overestimate of future growth in electricity demand at the final stage of the power sector reform⁵⁵ resulted in overinvestment in power generation and transmission.⁵⁶ As part of the Capacity Provision Contracts⁵⁷ Program, 27.5 GW of new generating capacity was commissioned in the last five years. Total investment in the power sector (generation and transmission) exceeded US\$100 billion. The bulk of the program has already been implemented, and major new investment is not expected. However, the decommissioning of old and inefficient generating capacity is proceeding much more slowly than expected before large investments were approved. Together with the sluggish growth in electricity consumption, this has resulted in a capacity surplus of 20GW. Yet, about 18 GW of the old capacity is on the list of mandatory or must-run⁵⁸ power plants, and consumers must cover their higher operating costs.

163. Russian power sector assets are not attractive for private investors. Besides the issue of overcapacity, other factors discourage investment in the power sector. Capital expenditure levels for generating and transmission capacity in the public sector are about double those in the United States, the EU, and China. This may be in part explained by more difficult logistics, higher import duties on equipment, and the higher cost of capital and transaction expenses but a considerable share is due to nontransparent pricing and corruption. The cost for private generation projects is significantly lower in countries that are benchmarks for Russia and lies within the range of 20–35 percent. Since 2014, the power sector has suffered from limited access to capital due to sanctions and the cost of capital has increased, making its assets even less attractive for investors.

164. Competition in the power sector is limited by a number of structural and regulatory features. In the European part of Russia and in Siberia, the electricity market is largely liberalized, so that generation

⁵⁵ According to the projections done in 2007 (before the electricity sector reform), electricity production in 2015 should have been 1,482 billion kWh; in reality it was 1,063 billion kWh.

⁵⁶ The length of transmission lines of 110kV and higher increased by about 30 percent, and the total capacity of transformers at substations by about 45 percent.

⁵⁷ Capacity Provision Contracts (DPM is the abbreviation in Russian) are long-term regulated capacity contracts concluded during the corporate restructuring of the former quasi-monopolist RAO UES of Russia. After the privatization, new owners of and investors in its generating assets were obliged to take on commitments for the construction of certain volumes of generating capacity. Since the capital expenditure level is regulated by the government, the prices paid for this capacity are also regulated. These agreements play a key role in ensuring investment in electricity-production facilities.

⁵⁸ “Mandatory” or must-run power plants are often inefficient and noncompetitive but are considered necessary for power system regulation or heat supply. These plants receive the capacity payment at a regulated level, which is usually higher than the market price.

and consumption are balanced by the market. The electricity markets in the Far East and in several other remote zones are still heavily regulated. Overall, the power sector is competitive in generation and energy supply⁵⁹ but there is a monopoly on transmission and dispatch.⁶⁰ The unbundling⁶¹ of power sector assets was completed in 2008 as part of sector reform. However, competition within the sector is low; state-controlled companies provide about 50 percent of generation capacity. Competition on the retail market is even lower, and there is still no choice for residential and limited choice for commercial consumers. In addition, the share of regulated capacity, and regulated electricity prices, is high. Prices for capacity of nuclear, hydro, and mandatory power plants, together with the capacity sold under Capacity Provision Contracts, are subject to government regulation. Prices for electricity produced by the mandatory plants, together with prices of electricity for residential consumers, are also regulated, as are dispatch service fees and transmission and distribution tariffs. Thus, not more than 20 percent of the power provided to end users is not regulated.

165. The vast majority of electricity is used for mineral extraction and production, but household consumption has expanded rapidly in the last decade. Extraction of minerals and the industrial sector are the largest consumers of power (52.7 percent), followed by households (13.7 percent) and the transportation and telecommunications sector (8.5 percent). Wholesale and retail trade, agriculture, construction, and other types of economic activity together consume only about 16 percent. Losses constitute 10 percent of consumption, which is high.⁶² Total electricity consumption grew by 13 percent from 2005 to 2013; household consumption grew by 34 percent, largely as a result of the acquisition of new household appliances by the middle class. Consumption by the construction sector grew at the same rate because of the boom in large infrastructure projects and residential building construction, but construction uses only 1.2 percent of all the energy produced. Although industrial consumption grew by 12.8 percent over the same period, in 2013–15 consumption fell because of the slowdown in the Russian economy. The latest projections of the Ministry of Energy expect consumption growth to resume in 2016 at 1 percent annually until 2018 and slow to 0.6 percent thereafter.

166. Large cross-subsidies, high levels of nonpayment, and the structure of electricity end-consumer prices also diminish the incentives for private investment in the centralized power system. Half or more of the electricity price paid by Russian consumers covers transmission and distribution costs, about twice as much as in other countries. In 2015, regulated tariffs fell in real terms due to limited tariff increases and double-digit inflation, further reducing the attractiveness of the sector to investors. Total power sector cross-subsidies in 2015 are estimated at about US\$4 billion. About 30 percent of this amount goes to residential electricity consumers. The remainder results from an inadequate tariff-setting methodology in the transmission and distribution sector, created by the nontransparent allocation of network expenses between consumers of low and of high voltage, the distribution of network losses, and other discrepancies. The Power Network Development Strategy aims to resolve these issues by 2022 and retain subsidies for residential customers only. Finally, nonpayment is a large problem. Total debt on the wholesale and retail electricity market is estimated at about US\$3.5 billion. A large part of the debt comes from “socially and technology important” consumers who cannot be cut off, according to the legislation; another part of the debt stems from fraudulent registered energy supply companies and housing

⁵⁹ Generation refers to power production; energy supply companies buy electricity on either the wholesale or the retail market and resell it to the end user. Supply companies do not own any assets.

⁶⁰ Transmission refers to the transport of electricity through the network. Transmission companies own and operate transmission lines. Dispatch is provided by a system operator, which plans the power system regimes.

⁶¹ Unbundling refers to separation of the assets of the vertically integrated utility into smaller and separately controlled business units according to functional activity (i.e., generation, dispatch/control, transmission, or distribution).

⁶² In any network infrastructure (electricity, heat, gas, and oil) there are losses for two reasons: technological (because of resistance and other physical characteristics of the network), and commercial (nonpayment and theft). By comparison, network losses in the U.S. and China are 6 percent, in Germany 4 percent, in Greece 7 percent, and in India 18 percent.

management companies.⁶³ These factors increase costs for the final consumer and stimulate their interest in alternative power solutions that provide an opportunity to save on power system infrastructure costs.

167. The Russian oil and gas sector is dominated by two state-controlled companies, Rosneft and Gazprom. Both are publicly traded corporations with the government as majority owner. They are vertically integrated companies with a wide range of activities: exploration and production, refining, marketing, transportation, petrochemicals, oil and gas product distribution, and others. Gazprom's gas market share is 65 percent and Rosneft's oil market share is over 35 percent. There are also more than 200 smaller private and state-controlled companies in this sector. The biggest in the gas sector are Novatek (8 percent of the market), Lukoil (3 percent), and Surgutneftegaz (1.5 percent), and in the oil sector Lukoil (16 percent), Surgutneftegaz (11.5 percent), Tatneft (5 percent), Bashneft (3.75 percent), and Rusneft and Slavneft (each 3 percent). Russia's biggest oil and oil products transportation system (72,000 km) is owned by Transneft, another state-controlled company.

168. In recent years the government has been acting to move oil and gas assets away from private and foreign investments and has been focusing on the nationalization of oil and gas assets. Most recently, the drop in oil prices is limiting investment. Since 2014, Russia's oil and gas sector has been affected by the sanctions regime, which is preventing new foreign investment, limiting access to external finance, and imposing restrictions on the import of advanced technologies for exploration and production, which could become a serious obstacle for future development of this sector.

169. There is also an oil and gas transport monopoly, and in recent years expansion of the pipeline system has largely driven investment growth in Russia. Gazprom once had an absolute monopoly on the transport and export of Russian gas. In 2009, Novatek⁶⁴ was the first independent gas producer to gain access to the Gazprom transport infrastructure and supply its customers directly. Investments in pipeline expansion were in the past important drivers of investment growth in Russia. Gazprom approved the Force of Siberia gas pipeline project, which has a planned annual capacity of 61 billion m³ and is expected to start delivering 38 billion m³ per year to China by 2019.

170. Liquefied natural gas (LNG) production plants and loading nodes for LNG tankers are important development and investment areas in the gas sector. After successful completion of the LNG production project Sakhalin 2 in 2009 by Gazprom, together with Shell, Mitsubishi, and Mitsui, the next generation of LNG projects is expected to be commissioned within the next five years. The Yamal LNG project, which started in 2015, will be controlled and operated by Novatek, with co-investments by Total, the China National Petroleum Corporation, and the Silk Road Fund (partly financed through the National Welfare Fund). A number of other LNG projects are planned to connect Russia to Asian markets, such as the Vladivostok and the Sakhalin 1 LNG projects.

171. Rosneft and Gazprom are also important sources of demand for sophisticated industrial goods. Investment by these two giants amounted to about 2.5 percent of GDP in 2015. Rosneft's investment expanded from RUB391 billion in 2011 to RUB730 billion in 2014. Despite some decline in investment in 2015 (to RUB660 billion), Rosneft is planning to invest RUB1 trillion in 2016–18. Gazprom's investment grew less rapidly and was in the range of RUB700–1,000 billion over the last five years. The same level is planned for the near future. Taking into account sanctions and the promotion of import substitution since

⁶³ There have been reported cases where an energy supply company or a housing management company registers as a shell company, accumulates debt, and immediately initiates bankruptcy. These companies commit fraud without facing consequences because they have no tangible assets on their balance sheets.

⁶⁴ Novatek is a private Russian gas production company with over 8 percent market share. This company was successful in obtaining access to the gas pipeline system and now uses gas pipelines to supply domestic consumers directly. It is also attempting to access export pipelines.

2014, these investments could stimulate the economy and drive innovation in the sector now that access to the U.S. and EU markets of sophisticated oil and gas equipment is limited.

Economy-wide Productivity Constraints: Trade and Market Distortions

International Trade and FDI Competitiveness

172. Despite recent progress in trade liberalization, Russia still has considerable potential to leverage greater exposure to international competition as a driver of efficiency and productivity gains. For the Russian Federation, the environment of post-World Trade Organization (WTO) accession has created both opportunities and challenges. Under its Accession Protocol, Russia's trade-weighted average most-favored nation (MFN) tariff is scheduled to drop substantially by 2020 from the time of accession in 2012, and its nontariff measures (NTMs) will be subject to WTO disciplines, such as the SPS (Sanitary and Phytosanitary) and TBT (Technical Barriers to Trade) agreements. At the same time, Russia has been active in the Eurasian Customs Union (EACU), superseded now by the Eurasian Economic Union (EEU) with Kazakhstan, Belarus, Armenia, and Kyrgyzstan; the EACU removed most duties on Russian exports to the EEU but also extended the use of Russian NTMs, particularly technical regulations, to the other EEU countries.

173. In a post-WTO environment, Russia must balance the policy challenges of pressures on import-competing industries with new opportunities to export to its neighbors and for Russian producers to enhance productivity by importing. To date, Russia's trade policy remains below best practice in terms of tariff and nontariff barriers (NTBs), and the country's performance in trade logistics considerably trails that of peer countries. Russia's overall openness to trade is comparable to that of India and China, but its ratio of exports-to-GDP is higher than in all other BRICS countries except South Africa (Figure 2.17). Given its size and the depth of its domestic market, the economy is reasonably open, but trade is below potential as measured by a simple regression of the trade-to-GDP ratio on per capita income and population (World Bank 2015b).

174. Because Russia's trade is highly concentrated in a few products and markets, aggregate figures require careful interpretation. Mineral fuels and other commodities account for about 90 percent of exports. Thus, high exports reflect natural resource wealth as much as competitiveness in tradables; however, the high level of imports is mostly made up of finished consumer goods rather than productive inputs, and is largely a byproduct of significant natural resource earnings. Moreover, Russian exports tend to be concentrated in raw materials and intermediate goods rather than in the final stages of the value chain.⁶⁵

175. Trade policy has become increasingly liberal, although there is room for improvement. Reforms over the past decade have reduced tariffs, quotas, and trade subsidies. Nonetheless, Russia's MFN applied tariff rate still averaged close to 10 percent in 2013, lower than that of Brazil or India but well above that of advanced and other emerging economies (figure 2.18

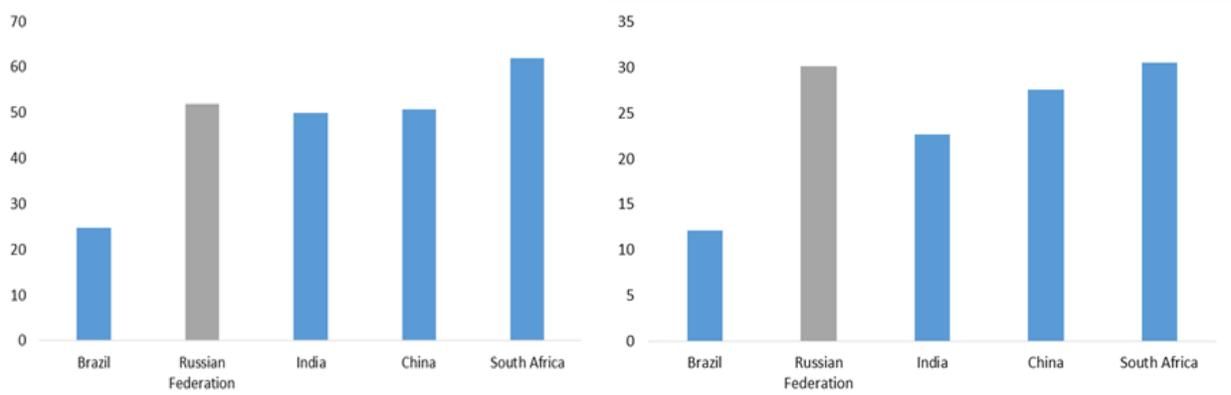
176. Figure 2.18). Russia's accession to the WTO, however, is expected to bring significant benefits by (1) providing greater certainty to firms that import tariffs on intermediate goods and equipment will not rise above bound tariffs, and (2) presaging a drop in the trade-weighted average MFN tariff—including specific tariffs— from 7.8 percent in 2012 to 5.6 percent by 2020. Moreover, there are wide variations in the tariffs applied to different industries. Average tariffs on capital goods are relatively low; at 4 percent

⁶⁵ In 2012, the share of final goods in Russia's total exports accounted for a mere 5 percent.

in 2013 they were substantially below those of Brazil, India, and China, though higher than those of Mexico and South Africa.

Figure 2.17. Trade Openness, 2006–14

A. Trade (Export and Imports), Percent of GDP B. Exports of Goods and Services, Percent of GDP

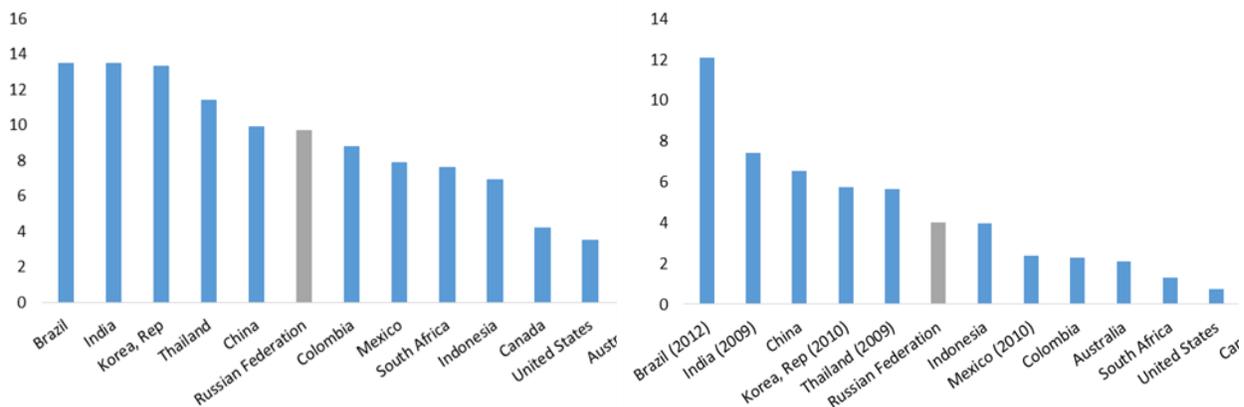


Source: World Development Indicators.

177. As tariffs decline, for most goods NTBs could well become more significant obstacles to deeper trade integration. The Overall Trade Restrictiveness Index for Russia is higher than for India and China and only slightly lower than that for Brazil. Licensing policies and country-specific tariff rate quotas may be limiting the ability of Russian firms to benefit from competition, thus inhibiting productivity growth and investments in innovation. Finally, Russian technical regulations governing standards for goods (based on the GOST system)⁶⁶ are distinct from standards prevailing in most of Russia’s trading partners other than the EEU countries and come at the cost of stifled innovation and additional compliance costs for Russian producers and exporters.

Figure 2.18. Tariff Rates, 2013

A. Simple Average MFN Tariff, Percent B. Average Tariff, Capital Goods, Percent



Source: World Bank, World Integrated Trade Survey.

⁶⁶ The acronym GOST is derived from a Russian phrase meaning “state standard” (*gosudarstvennyy standart* in Romanized form).

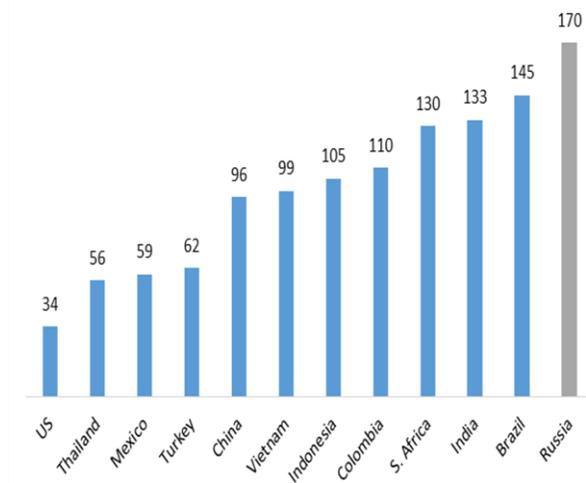
178. The fragmented institutional structure for trade promotion is an additional constraint. At the federal level, the function is divided between the Ministries of Industry and Trade, Economic Development, and Agriculture. At the regional level, every ministry and department that deals with economic development and enterprise support has its own section dealing with export promotion. This is in contrast to international experience, which suggests that export promotion agencies have a significant positive effect on exports through greater scale efficiency.

179. In addition to relatively high tariff and nontariff barriers, Russian firms face burdensome procedures associated with the export and import of goods. The World Bank 2016 *Doing Business* report ranks Russia 170th out of 189 economies on ease of trading across borders, far behind the other BRICS. Russia similarly falls far short of the standards of emerging economies on the LPI, with the most important constraint being customs (Figure 2.19). According to the *Doing Business* report, the time it takes for exports and imports to pass through customs is relatively high (96 hours on average for both) relative to comparator countries (Figure 2.20).

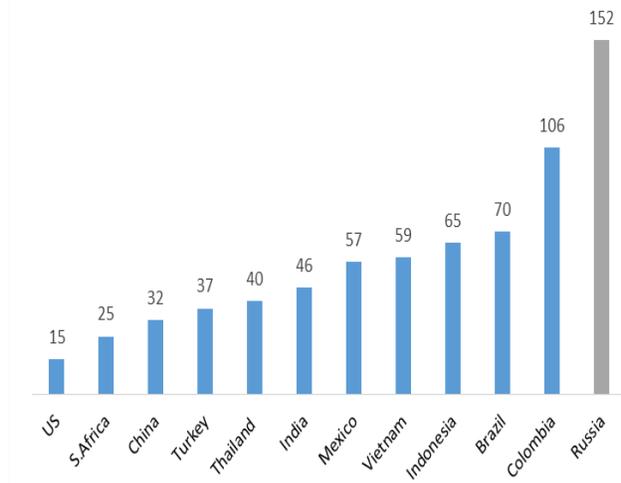
Figure 2.19. Trading Across Borders and Logistics Performance in Trade Ranking, 1=Best

Doing Business Ranking: Trading Across Borders

Logistic Performance Index Ranking: Customs



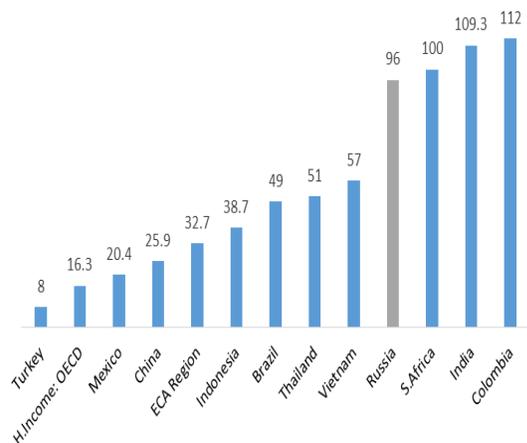
Source: World Bank Doing Business 2016 Report.



Source: Logistics Performance Index 2016.

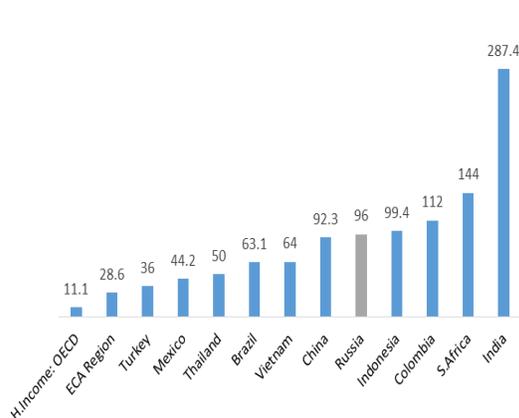
Figure 2.20. Time to Clear Customs

A. Exports – Border Compliance in Hours



Source: World Bank Doing Business 2016 Report.

B. Imports – Border Compliance in Hours



Source: World Bank Doing Business 2016 Report.

180. Before 2014, Russia’s FDI inflows were comparable to those of other BRICS, though round-tripping was common.⁶⁷ After removing FDI inflows that reportedly originated in Cyprus, Bermuda, and Caribbean countries, the ratio of Russia’s FDI inflows to GDP averaged about 2.4 percent over 2007–13, comparable to the level for Brazil (Figure 2.21). Correcting for round-tripping, FDI hit a post-2008 peak during the first quarter of 2013, when net inflows reached US\$69 billion.⁶⁸ While the regional distribution of FDI was highly concentrated, FDI has recently diversified across sectors. In 2005–12, FDI in secondary Russian activities (manufacturing, utilities, and construction) grew four times faster than in mining and fossil fuels, and in services it grew three times faster. This is in part due to the reduced value of investments in fossil fuels after the oil price drop of 2008–09. Sectors with the most dramatic improvements in FDI were technologically-intensive manufacturing, utilities, construction, and financial intermediation. These investments have been linked to technological and quality upgrading (Kuznetsov 2010). Foreign producers of motor vehicles widened the range of affordable and higher-quality cars in Russia, and the expansion of FDI in chemicals leveraged Russia’s comparative advantage in fossil fuels as well as bringing foreign firms into pharmaceuticals. Similarly, foreign firms have introduced new construction services. Minority participation in Russia’s telecommunications sector has brought modernization through technology transfer, although there has also been significant round-tripping here.

181. However, Russia’s ability to attract FDI deteriorated markedly after the 2014 geopolitical tensions and sanctions, and round-tripping intensified. Net FDI inflows equaled US\$69 billion in 2013 but fell to less than one-third of that in 2014, mainly caused by a steep reduction of foreign investment during the third and fourth quarters of 2014, in which aggregate net FDI inflows were negative, indicating capital flight. Despite a tenuous recovery in the first half of 2015, total net FDI was still far below previous years. The departure of foreign capital that began in 2014 was particularly severe because it affected all major economic sectors, especially in the third quarter of 2014. The modest rebound in FDI that began in the first half of 2015 focused largely on mineral fuels. Between 2007 and 2012, about a third of FDI in Russia may have been round-tripping, possibly motivated by, among other factors, deficiencies in property rights,

⁶⁷ A practice whereby domestic investors send their capital abroad to later bring it back and re-invest it in the home country as foreign rather than domestic capital.

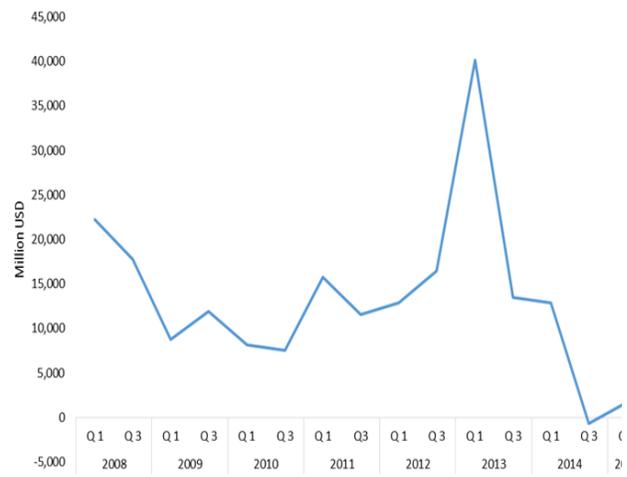
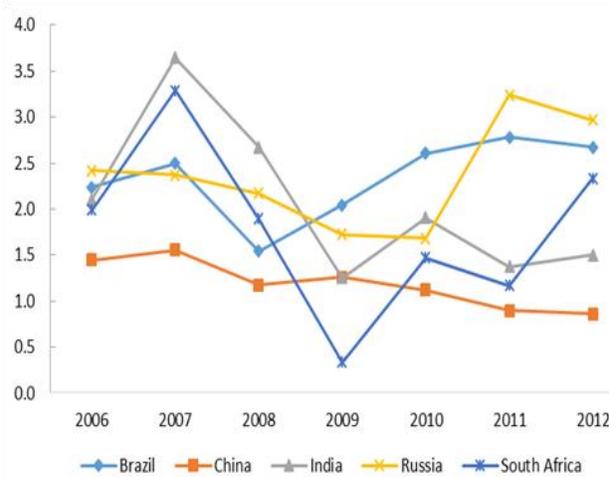
⁶⁸ The large spike in 2013 was due to a historically large single investment by the British Petroleum (BP) Company in the oil-refinery sector. It acquired a 20 percent share in Rosneft, using cash from BP’s sale to Rosneft of its 50 percent stake in the vertically integrated TNK–British Petroleum consortium.

poor enforcement of the laws in the domestic market, and to a minor extent tax advantages. This trend has since intensified, with round-tripping possibly accounting for over 50 percent of incoming FDI in 2014 (Figure 2.22).

Figure 2.21. FDI Inflows

A. Annual FDI inflows/GDP, Excluding Round-Tripping

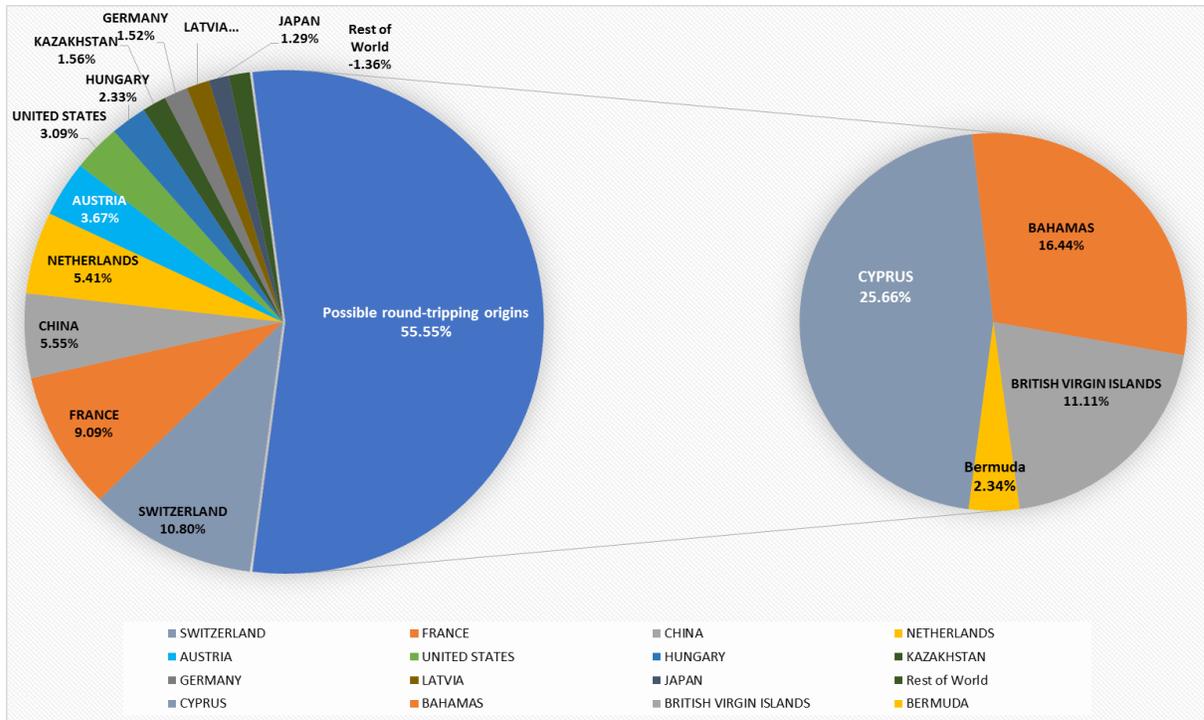
B. Net FDI Inflows to Russia, 2008–15



Source: UNCTAD and Central Bank of Russia.

Source: Central Bank of Russia.

Figure 2.22. Sources of Russian Net Incoming FDI, 2014



Source: Central Bank of Russia.

182. The economic sanctions of 2014 restrict FDI by targeting both financial transactions in general and investments in the oil sector in particular. The regime has inhibited the international operations of Russia's largest banks and prevented Russian firms from acquiring international debt or making cross-border financial transactions. Sanctions also have partially blocked the oil sector from acquiring new technology and equipment, and some prospective FDI projects have been frozen. Russia's oil sector is the country's primary destination for FDI, and by targeting the oil sector the economic sanctions had an immediate and deeply negative impact on FDI inflows.⁶⁹

183. Recent FDI trends are likely to limit the ambitious plans to improve the export competitiveness of Russian firms; a longer-term challenge will be to establish the conditions whereby Russia can attract efficiency-seeking rather than market-seeking investment. Low FDI will not only affect the growth performance of Russia as a whole but could have significant repercussions for regional growth. Even before the recent drop in FDI, foreign investment was largely oriented toward the domestic market and has not contributed to export competitiveness or to shifting production and exports toward more technology-intensive and higher-value-added products. In other words, most FDI has been motivated by the size and characteristics of the domestic market, in part to obtain access to otherwise closed markets in some sectors. However, efficiency-seeking FDI is necessary to improve Russia's ability to participate in global value chains (GVC). Russia's participation in GVCs remains quite weak, with insufficient incentives to encourage greater participation.

184. Attracting efficiency-seeking FDI to sustainably diversify Russia's export profile presents an especially difficult challenge in the current external context; meeting it will require exceptional improvement in the investment climate. Enhancing the quality of regulation, removing obstacles to accessing productive factors, and harmonizing product standards with international norms will be essential to attract more investment, particularly in poorer regions and new economic sectors. While there is considerable scope for analysis, Russia's ability to further integrate into global markets will have critical implications for both its regional and national development objectives.

Domestic Regulations and Competition

185. Progress in de jure regulatory simplification has been impressive. As measured by the World Bank Global Doing Business report, Russia moved up in the overall rankings from 120th position (out of 183 economies) in 2012 to 51st (out of 189 economies) in 2016, for the first time outperforming the other BRICS in the aggregate ranking (Figure 2.23).⁷⁰ This momentum in regulatory simplification was largely triggered by President Putin's Decree of May 2012, which set out the national target for Russia to join the ranks of the 20 best-rated economies globally in the Doing Business rankings; it directly linked the performance of federal government agencies (e.g., the Property Registration Agency and the Federal Customs Service) to corresponding improvements in the Doing Business indicators.⁷¹ Improvements in

⁶⁹ Participants in the economic sanctions regime include Australia, the EU, Japan, Norway, Switzerland, Ukraine, and the U.S. The particular nature and timing of the economic sanctions varies by participant.

⁷⁰ Over this period, Russia's ranking improved on several dimensions: in Getting Electricity from 183rd position to 29th (Brazil ranks 22nd, India 70th, China 92nd, and South Africa 168th); in Property Registration from 45th to 8th (China ranks 43rd, South Africa 101st, Brazil 130th, and India 138th); and in Paying Taxes from 105th to 47th (South Africa ranks 20th, China 132rd, India 157th, and Brazil 178th).

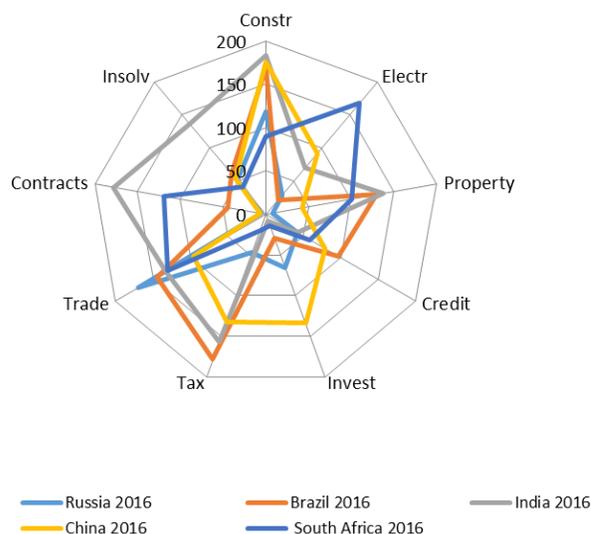
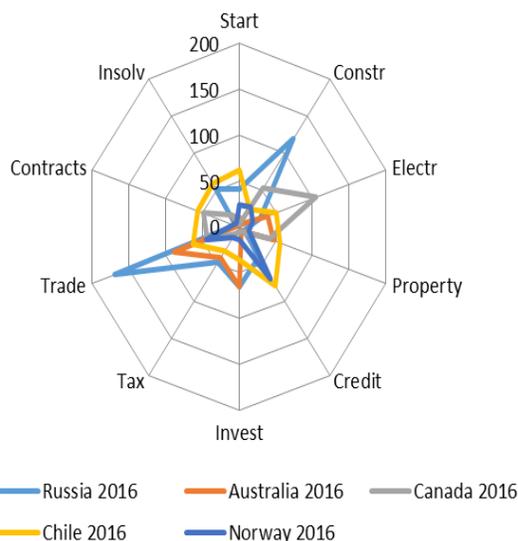
⁷¹ The Russian Government followed through with the original impetus imparted by President Putin's May 2012 Decree by embarking on a national Entrepreneurship Initiative program, which resulted in the development of a number of detailed reform roadmaps designed to improve business environment conditions in key areas, such as enterprise registration, access to electricity, and obtaining construction permits. In addition, efforts to reform the investment climate extended to Russian regions under the auspices of the Agency for Strategic Initiatives (ASI), which developed standards to guide regional policymakers on how to improve the regional business environment and attract investment. ASI also developed a national rating system to compare the performance of Russia's regions and stimulate positive competition among them in terms of investment climate reforms. The

Russia's investment climate were also reflected in the GCI, in which Russia ascended by close to 20 positions in the span of four years, from 67th 2012–13 to 45th in 2015–16. Russia likewise moved up from 48th position in 2012 to 43rd in 2014 in Bloomberg's Best for Doing Business report, which assesses a country's business environment more broadly than the GCI, covering additional dimensions ranging from the macroeconomic environment and the quality of infrastructure and institutions to financial market development, goods market efficiency, and innovation. Nevertheless, Russia's aggregate performance in the GCI and the Bloomberg report trails that of some of its peers.⁷²

Figure 2.23. Russia's Doing Business Performance

A. Benchmarking Russia with Resource-Rich Countries

B. Benchmarking Russia with the BRICS Countries



Source: World Bank Doing Business Report 2016.

Note: Abbreviations in figure 2.23B correspond to the following Doing Business indicators on starting a business: Constr: Dealing with construction permits; Electr: Getting electricity; Property: Registering property; Credit: getting credit; tax: paying taxes; Invest: protecting minority investors; Trade: Trading across borders; Contracts: Enforcing contracts; and Insolv: Resolving insolvency.

186. Several domestic regulatory challenges remain, and declining investment trends point to investment climate constraints beyond the regulatory. Significant room for improvement is seen in several Doing Business dimensions, specifically Trading Across Borders (Russia is ranked 170th), Obtaining Construction Permits (119th), and Protection of Minority Investors (66th).⁷³ On these dimensions Russia's

rating covers some 45 indicators spanning four areas: business environment, effectiveness of institutions, infrastructure, and SME support programs. This created strong political incentives for governors to implement reforms because their performance evaluation and key performance indicators (KPIs) are also based on this new domestic regional rating. In addition, to facilitate dialogue between the business community and the government and provide a conduit for investor protection and advocacy, a federal Investors Ombudsman office was established in May 2013, and its investor "hotline" arrangements were replicated at the regional level.

⁷² Russia trails China (28th) in the GCI, and in Bloomberg's ranking it also trails China (28th), South Africa (31st), and Brazil (38th).

⁷³ For example, comparing Russia to China in the area of export procedures tracked by the Doing Business Report shows that in Russia it takes twice as long and costs over five times as much to prepare the required documentation (43 hours versus 21, and US\$500 versus US\$85) and it takes over four times as long and costs over twice as much to complete border control formalities (96 hours versus 26 and US\$1,125 versus US\$522). Although the amended methodology used in the Doing Business report for

performance trails most of the BRICS countries and is also far behind comparable resource-rich economies (figure 2.23).⁷⁴ More importantly, increased investment has not followed improvements in the ratings, indicating the persistence of economy-wide investment climate constraints that are not captured by those indicators. In particular, governance weaknesses often prevent higher economic efficiency, investment, and growth. These weaknesses range from continued regulatory uncertainty, the difficulty of protecting property rights, and corporate governance failure to the perception of corruption (see chapter 4).

187. The private sector perceives corruption, access to finance, workforce skills, and taxes as severe problems. The GCI for 2015–16, the World Bank Enterprise Survey (2011–12), and the most recent EBRD-World Bank BEEPS survey in Russia (2012) identified access to finance, corruption, tax administration, and workforce skills as the biggest obstacles to business operations there. The BEEPS survey, which compared 37 regions within Russia, registered significant differences by region in the top obstacles reported, which suggests that investment climate constraints may vary within Russia. This was also the result of the World Bank 2012 Subnational Doing Business survey, which compared the performance of 30 regions on 4 indicators (Company Registration, Getting Electricity, Obtaining Construction Permits, and Property Registration). The BEEPS survey also found differences in perception between firms: SMEs were concerned about competitors' practices in the informal sector, but large, old, and manufacturing firms were more concerned about workforce skills. A 2016 survey of 400,000 companies in 81 regions, carried out by the Russian Agency of Strategic Initiatives, revealed that burdensome inspections, high corruption, and poor quality of roads hinder entrepreneurs most.

188. While firm entry conditions have improved markedly, business operations are constrained by burdensome licensing and operating requirements. Russia's regulatory requirements for business activities and business operating standards, including multiple obligatory safety and sanitary standards, make it difficult for businesses to operate. The requirements are also sources of corruption and harassment, leading to a degree of regulatory uncertainty that negatively affects firm investment decisions. Many of the existing standards are outdated or not directly concerned with consumer and environmental protection, which are the priority focus of modern risk-based business licensing and inspection regimes.

189. Russia has recently embarked on reforming its regulatory enforcement system. It plans to submit a new draft federal Law on Government and Municipal Controls (Surveillance) to the Duma shortly.⁷⁵ This legislation represents a renewed effort to reform the business inspection regime, balance business and public interests, and improve market surveillance while moving away from unnecessary regulations, inefficient enforcement, and rent-seeking behavior. One of the biggest challenges in reforming the Russian inspections program is the sheer size and extent of the regulatory system. The legislative base, including technical regulations, is too large to be revised in its entirety, especially as there is no pre-formed *acquis communautaire* package to replace it, as was the case for Eastern European countries when they joined the EU. This means that progress in the short to medium term will need to come from better delivery of existing regulatory systems, for instance through smart control systems.⁷⁶

the Trading Across Borders indicator no longer factors in the cost of domestic transportation in calculating the rankings, the cost of shipping a container within Russia is nearly five times as high (US\$958 from Moscow to the port of St. Petersburg) as in China (US\$179 from the largest business city Guangzhou to Shanghai).

⁷⁴ OECD high-income countries have an average aggregate rank of 25.

⁷⁵ This is a second attempt to reform state control agencies, following a previous Law on Inspections that was never properly implemented.

⁷⁶ The key will be developing a checklist as a link between the supervisory / legislative level and the control / operational level: checklists can help run a regulation through a risk filter and can be used as the basis for inspections. Higher salaries for government employees combined with measures to improve integrity within the public service would also help. However, when fiscal space is shrinking, this may also require a politically unpopular reduction in public employment.

190. Competition conditions in Russia have not significantly contributed to productivity growth. Competitive markets encourage investment, innovation, higher productivity, better business processes, and job creation. Typically, competitive market conditions drive productivity growth by shifting markets toward more efficient producers and inducing firms to become more efficient so as to survive. Firms operating in a competitive environment are more likely to innovate (Bassanini and Ernst 2002, Bloom, Draca, and Van Reenen 2011) and to increase their productivity (Acemoglu, Aghion, and Zilibotti 2006 or Aghion et al. 2005). Competitive markets boost investment (Alesina, Spolaore, and Wacziarg 2005), generate employment, and ultimately speed up economic growth and improve the general welfare. Firms facing vigorous pressure from competitors have strong incentives to reduce their costs, innovate, and become more efficient and productive than their rivals. This process motivates firms to offer competitive prices, higher quality, and new and more varied goods and services. Competition in input (upstream) markets, such as transportation, energy, telecommunications, construction services, and professional and financial services, helps drive efficiency and productivity growth in downstream sectors—the users of the inputs. Conversely, lack of supportive market conditions adversely affects productivity. Most of Russia’s productivity gains in the last decade have come from utilization of excess capacity, but specialization and technological updates were the main factors of the productivity gains of earlier reformers in Eastern Europe.

191. The analysis of geographic and product market structure within Russia reveals a high degree of concentration, with significant variations across regions and sectors (World Bank 2011b). This corresponds with the observation of a high concentration of wealth and productive assets in the economy that impacts several governance dimensions, as discussed in chapter 4. Firm market power, as proxied by price-cost margins (PCMs), indicates a low level of competition, with Russian firms registering larger PCMs⁷⁷ than the ECA average in every manufacturing sector except food, garments, and chemicals. Market entry rates were particularly low in Russia (World Bank 2008)—even though entrants showed labor productivity rates 10 percent higher on average in the entry year than incumbents. Exit rates, although difficult to estimate, were probably also much lower than in other economies, considering that enterprise restructuring in Russia trails that of countries like Poland and Turkey. A recent study highlighted the relationship between firm exit and competition, which has important policy implications (Gonzalez et al. 2015). If Russia is going to rely on new firms providing new products or services in new markets as a source of economic diversification, there will be a need to address not only exposure to high volatility—as is typical for a resource-rich country with a dominant resource sector—but also to promote competition.

192. The large presence of the state in economic activities may also create an uneven playing field. It is difficult to estimate the magnitude of state involvement in the economy because national statistics do not provide estimates of the share of GDP produced by SOEs.⁷⁸ According to the latest government list, over 4,100 SOEs play prominent roles across much of the Russian economy, and the public sector accounts for a considerable share of economic activity, with revenues amounting to at least 71 percent of GDP and spending to 68 percent of GDP (IMF 2014). Beside infrastructure (railway, pipelines, nuclear), several other sectors of the economy are dominated by SOEs, including the financial sector (banking, pension funds, and insurance),⁷⁹ extractives (oil, gas, diamonds), and the media. These companies usually occupy

⁷⁷ Cross-country comparisons of PCM should be interpreted with caution, given differences between countries in the costs of capital formation.

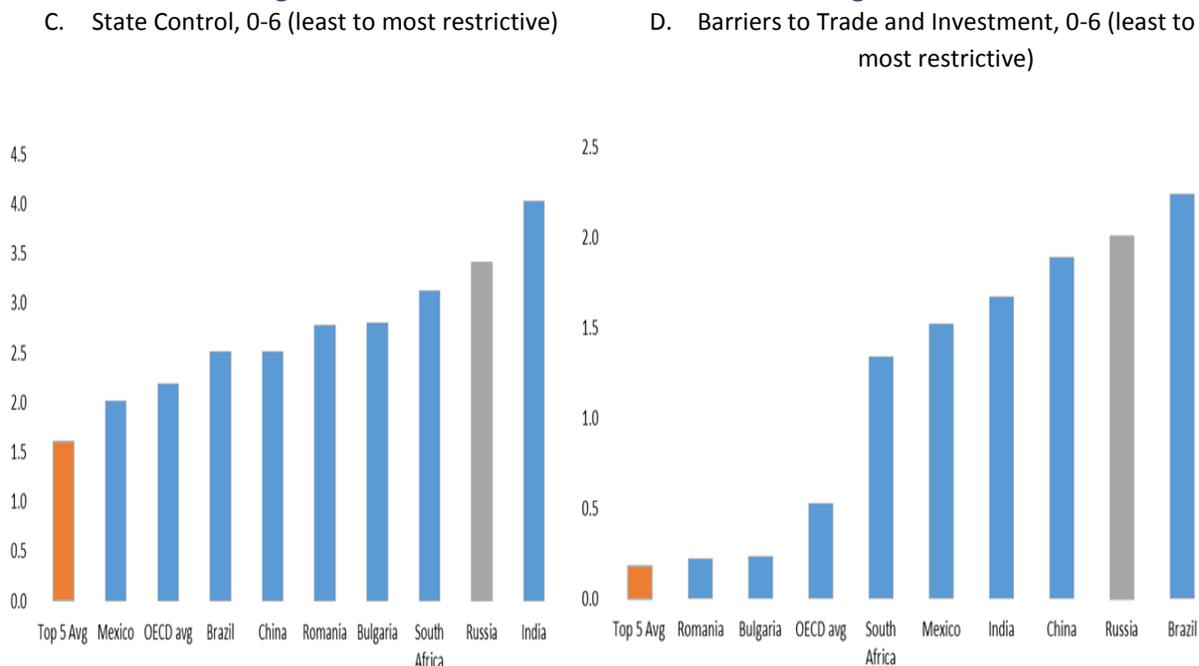
⁷⁸ Statistics on public sector investment, employment, and capital stock are available but are likely to be significantly understated because enterprises owned by a company controlled by the state are considered private entities (e.g., Gazprom Neft, which is owned 75 percent by Gazprom).

⁷⁹ State ownership in the banking sector has even increased in recent years. The 1990s had seen a decrease in state ownership, but the failure of systemically important private commercial banks in 1998 triggered a reversal. The 2008 global financial crisis

dominant positions in their markets with scope for private sector participation—including by foreign investors—tightly controlled (World Bank 2011b). A 2012 BNP Paribas report suggested that the efficiency of the Russian SOE sector is lower than that of the private sector, with labor productivity more than 30 percent below the national average.

193. Restrictive product market regulations can stifle competition. According to the OECD Product Market Regulation, Russia exhibits the most restrictive product market regulations among developed economies (Figure 2.24), mainly associated with the state presence in the economy and barriers to trade and investment.

Figure 2.24. Restrictiveness of Product Market Regulation



Source: OECD Product Market Regulation Database 2013.

194. Competition-related barriers that affect trade and investment also require particular attention, especially those associated with the regulations and anticompetitive actions of regional authorities. Despite actions taken at the regional level to identify barriers to competition, a World Bank assessment found that several regional programs did not identify such barriers at all or did not provide an in-depth analysis of them. Meanwhile, the stage of development of competition and regulation of the infrastructure, manufacturing, and service sectors varies substantially by industry (World Bank 2011b).

195. Considerable progress has been achieved in establishing a functioning legal and institutional competition framework,⁸⁰ but several challenges need to be addressed to make this framework more

further strengthened the dominance of majority-state-owned banks, which provided a safe harbor and served as bail-out vehicles during a turbulent period. The state has a direct or indirect controlling interest in at least 32 banks, bringing state ownership to about 60 percent of total banking system assets in Russia; the two largest groups capture almost half of the system’s assets, compared to less than 10 percent on average in other developed countries and about 20 percent in emerging market countries (IMF 2016).

⁸⁰ The competition law covers restrictive agreements, abuse of dominance, mergers, unfair competition, competition restrictions by public authorities and state or municipal preferences (state aid), and competition advocacy. The Federal Antimonopoly Service (FAS) is well-positioned within government to enforce competition policy, but it also has a broader role on such economic issues

effective in enhancing competition. On the competition perception indicators of the GCI (2015–16) Russia ranks 83rd out of 144 countries on effectiveness of antimonopoly policy (a high rank indicates poor performance), higher than Brazil (73), Mexico (67), and neighboring countries such as Poland (50), the Czech Republic (39), and Turkey (34). Several areas would benefit from improvement, in particular the economic analysis required for competition enforcement, the detection and prevention of the most harmful anticompetitive practices (notably hard-core cartels), the merger review process, the review of abuse of dominance,⁸¹ a review of federal regulations to take into account their effects on competition, and embedding competition principles in broader federal and regional government policies⁸² (OECD 2013). Other competition-related measures are equally important: (1) promoting competitive neutrality principles between SOEs and the private sector; and (2) ensuring that state aid is transparent to minimize competition distortions. Pro-competition policies in key service industries (such as transport, construction, and professional services) would increase competition, promote entry, and reduce the prices of services.

Access to Finance

196. Russia’s financial sector is crucial to the development of the economy but provides limited support to investment growth through financial markets. While the sector itself has been enjoying dynamic growth and rapid development for the last decade,⁸³ further stable growth, sustainable development, and capacity to finance investment are constrained by a number of factors. In the GCI for 2015–16 (WEF 2016) Russia ranks 95th out of 140 economies on financial market development (Figure 2.25),⁸⁴ significantly lower than Brazil (58th), India (53rd), China (54th), and Turkey (64th). Difficulties in accessing finance, specifically credit, is one key obstacle for businesses in Russia. According to the current GCI (WEF 2016), access to finance is the third biggest constraint for businesses operating in Russia, after corruption and tax rates; 15 percent of firms in Russia identify access to finance as a major constraint (World Bank 2012a), compared to about 2 percent in China.⁸⁵ While bank account usage is widespread among firms (100 percent have a checking or savings account), only 21 percent had a bank loan or line of

as monitoring spikes in the prices of socially important goods, control of the activities of natural monopolies, tariff regulation, and public procurement as well as unfair competition matters and compliance with trade and advertising laws.

⁸¹ The FAS has been criticized for being overly aggressive, particularly toward SMEs. In 2013, FAS reviewed over 55,000 cases, more than any other national antimonopoly agency worldwide. Over one-third of the cases investigating abuse of market position were against SMEs, often in rural areas where the local market demand could not support multiple businesses. Only 11 percent of cases reviewed by FAS involved a firm within the top 100 Russian companies in terms of annual revenue (U.S. State Department 2015).

⁸² The government has recognized the need to improve the competition framework and has taken some initiatives to promote market competition. It adopted a Competition Standard in 2015 to provide incentives and guidance to regional authorities to develop actionable and measurable competition programs. All regional competition programs were due for review by the federal authorities in 2016, which should provide a sense of how well understood the role of competition is at the regional level and of specific measures planned by regional authorities to open local goods and services markets in a variety of sectors, ranging from tradable goods to public service provision.

⁸³ Its size reached nearly 170 percent of GDP measured as follows: as of July 1, 2015, banking sector assets to GDP (100 percent); nonbank financial sector (insurance, pension funds, other) assets to GDP (13 percent); stock market capitalization to GDP (37.2 percent); and bond market turnover to GDP (17.6 percent).

⁸⁴ Financial market development is one of the pillars of competitiveness that directly influences the level of productivity in the economy. In composing the GCI, financial market development is assessed in terms of efficiency (availability of financial services to businesses, affordability of financial services for businesses, financing through local equity markets, ease of access to loans, venture capital availability) and trustworthiness and confidence (soundness of banks, regulation of securities exchanges, legal rights index).

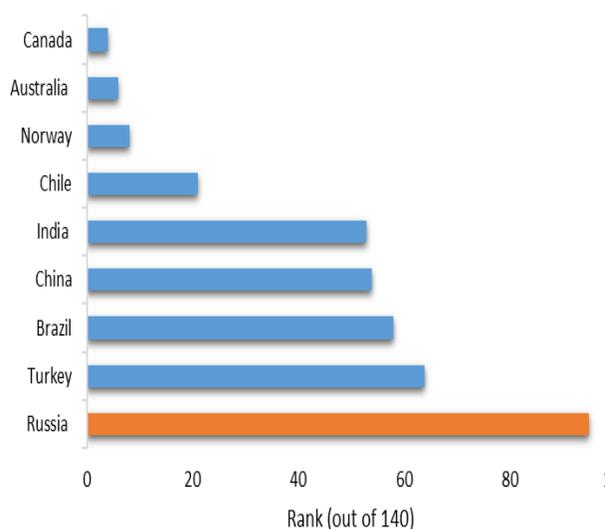
⁸⁵ However, Russia improved access to credit by adopting a new law on secured transactions that established a centralized movable collateral registry and allows a general description of a combined category of assets granted as collateral. This is reflected in the 2016 Doing Business report, where Russia rose from 61st to 42nd on ease of getting credit.

credit, which is substantially below the upper-middle-income country average (43 percent) and the ECA average (39 percent) (World Bank 2012a).

197. Russia’s shallow financial sector affects how well it can support the accumulation of physical and human capital or increases in TFP. The economy lacks stable and diversified long-term financing for the investment required to enhance productivity and growth. Low financial depth is attributed to the dominance of the banking sector, which results in a relatively low ratio of private credit to GDP. The financial sector in Russia is mostly bank-based (banking assets amounted to 100 percent of GDP as of July 1, 2015), with a relatively small nonbanking sector (13 percent), and a developing capital market (55 percent). The ratio of bank credit-to-GDP is among the lowest among comparator countries (Figure 2.26). This low level of credit from the banking system has resulted in Russian enterprises relying much less on bank financing and more on internal and state resources to fund investment. Moreover, the deposit base, a main source of funding for banks, provides mainly short-term capital rather than long-term financing. In addition to over-reliance on bank financing, the limited access to global capital markets due to sanctions limits firms in the near term to local sources of funding. The continuing recession further limits the capacity of the banking sector to provide loans, given the pressure on bank capital due to rising NPLs.

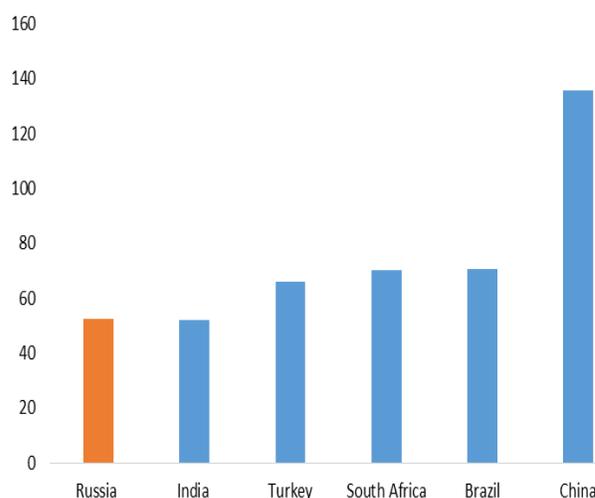
198. Over the medium and longer term, diversifying and deepening the financial sector are priorities to support strong and sustainable economic growth. Recognizing the limitations of the financial sector in contributing to economic growth, the Central Bank of Russia recently drafted a three-year strategy for financial market development (CBR 2016). The strategy aims at supporting growth and development of the real sector and stimulating growth in the financial sector. In particular, it calls for better and more competitive access by Russian companies to domestic debt and equity financing and sets out a road map for development of capital markets and the nonbank financial sector, as well as improving financial inclusion for individuals and SMEs.

Figure 2.25. Financial Market Development Ranking



Source: WEF 2015–16.

Figure 2.26. Bank Private Credit-to-GDP Ratio, Percent



Source: FinStats 2015, as of 2013.

199. The overall state of financial inclusion in Russia is relatively advanced, but gaps in financial inclusion remain. Not surprisingly given its geography and population density, Russia faces a challenge in

reaching the last mile— those segments of the population that are difficult to reach and serve on a sustainable basis. Physical access to financial services remains centered in major urban areas, and account penetration drops outside of the urban centers, as well as for the low-income and the elderly. In addition to the gap between urban and rural areas, disparity between regions is also high, with certain geographical pockets, as in the Northern Caucasus, underserved. Given the need for coordinated action to further advance financial inclusion in Russia, a national financial inclusion strategy should be developed. Financial inclusion initiatives should seek to address, inter alia, factors that stifle productivity, such as easing access to credit for SMEs, and increasing the number of people with savings accounts, thereby boosting national savings.

200. While the Russian economy has developed rapidly in recent decades, the banking sector has kept a relatively simple structure with a traditional business model focused on corporate lending, leaving SMEs underserved. Historically, the Russian banking sector primarily supported large and state-owned enterprises. Retail lending is still a relatively small component of bank assets, in part reflecting the relatively young mortgage market. Access to finance was the top obstacle for SMEs and young firms in particular, and to a much lesser extent for large firms (World Bank 2011a).⁸⁶ Overall, Russia has one of the lowest shares of firms with a loan or a line of credit in the ECA region. SMEs also experienced a higher rejection rate for loan applications. More than two-thirds of SMEs that needed a loan were credit-constrained (either discouraged from applying for a loan or rejected when they applied), compared with less than one-third of large firms. SMEs are also challenged by the high cost of finance, limitations on collateral, the limited number of suitable financial products for SMEs outside the banking system, and weak financial knowledge and skills.

201. Constraints for SME access to finance on the supply side have intensified during the current recession. Banks are challenged by more difficult macroeconomic conditions, which raised their cost of funding and led to high NPLs, which in turn limited their ability to issue new loans. The flight to quality and higher risk aversion shifted the attention of banks back to large corporations. As a result, the SME share of total credit declined to the lowest level ever, 11 percent, while credit to large corporations increased to 62 percent. The current economic crisis has forced banks to tighten their underwriting criteria for SMEs, while the substantial rise in bank cost of funding pushed up interest rates on SME loans. There is little access to long-term funding for banks outside government support programs, with the SME Development Bank being the only source of longer-term funds for banks on-lending to SMEs. Nonbank financing sources, such as microfinance and leasing, are underdeveloped.

202. While SMEs account for 20 percent of Russia's GDP and 25 percent of total employment, loans to SMEs equal only 12 percent of GDP. The share of SMEs in total fixed assets is also low: SMEs own only 5 percent of total assets and generate about 6 percent of total investment in fixed assets. Since the smallest SMEs tend to be the least productive firms in the economy, access to credit for those able and willing to expand may be critical to increase their productivity. The ratio of credit to SMEs as a percentage of total credit (11 percent) is lower than their contribution to Russia's GDP and is half the OECD average (25 percent). Moreover, credit to SMEs has gradually been declining in importance during the current recession as more credit has been directed to larger enterprises. Only 6.3 percent of such firms in Russia used bank loans to finance investment, compared to 19 percent in other upper-middle-income countries. In Russia 84 percent of SMEs rely on internal financing for their investments, compared to an average of 66 percent in upper-middle-income countries (World Bank 2012a).

⁸⁶ The Business Environment and Enterprise Performance Survey (BEEPS) is conducted regularly by the EBRD and the World Bank. BEEPS V was conducted in Russia in 2011–12; it covered 4,220 enterprises in 37 regions.

203. The government has signaled strong support for the SME sector, with emphasis on strengthening the legal and institutional frameworks and developing financial and nonfinancial support measures for SMEs. The most recent policy measures taken by the government to improve SME access to finance are (1) adoption of an SME Development Strategy through 2030, which sets out an action plan for increasing access to finance for SMEs, among other priority areas; (2) establishment of the Federal Corporation for SME Development and introduction of a federal credit guaranty program; and (3) development of SME securitization to diversify sources of funding. The SME Development Strategy sets an ambitious target of doubling the share of SMEs in Russia's GDP by 2030, to 40 percent. To achieve this target, the strategy calls for improved access to finance for SMEs that would increase to 23 percent the ratio of SME loans to total credit by 2030.

204. SMEs could become a more important source of growth and jobs in Russia if their access to finance were improved. In the short to medium term, the Russian government intends to significantly improve the regulatory and institutional environment for SMEs, improving access to finance and reducing the costs and administrative burdens they face. The government intends to reinforce its guarantees facility through the new Federal Corporation for SME Development, which combines the former Agency for Credit Guarantees and the SME Development Bank. The Corporation for SME Development intends to provide information to SMEs and about them, enhance the financial and business skills of entrepreneurs and their access to financial instruments, reduce the information gap they face in accessing finance, and otherwise facilitate their access to finance.

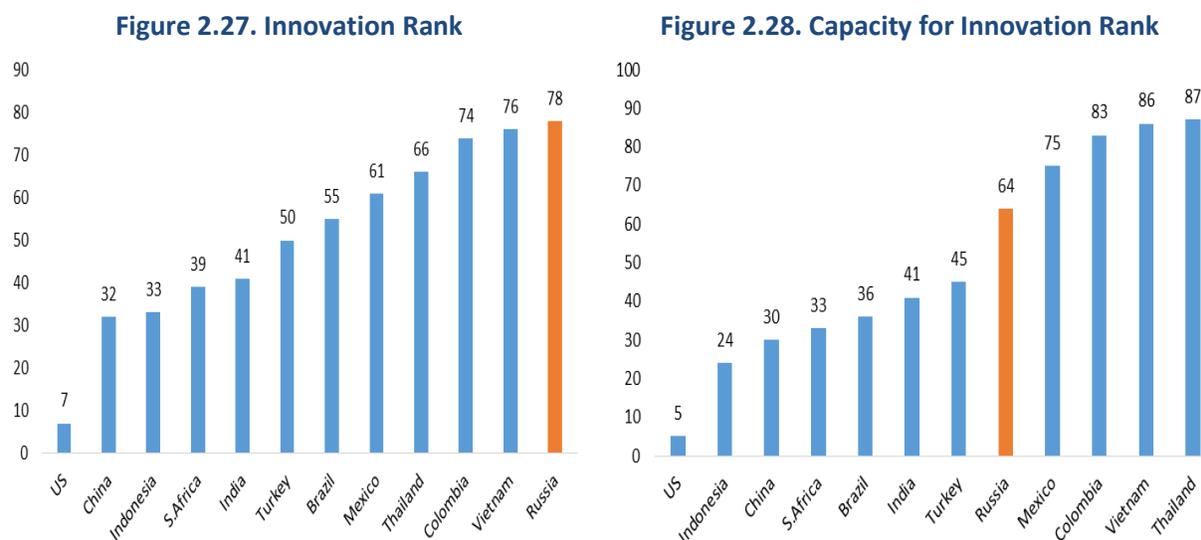
205. If the Russian economy is to grow and increase its productive capacity, the capacity of the domestic financial sector to fund investment needs to be improved. In the short term, this means maintaining the stability of the financial system and strengthening the banks while ensuring that credit continues to flow to new investments. Stability of the financial sector, strengthening well-run banks, and expanding access to underserved segments would require: (1) continued efforts to remove/liquidate weak, poorly run banks with unsustainable business models; (2) diversification of the financial sector away from the banking-sector-dominated model and diversification of financing products; (3) enforcement of market discipline across all banks (including state-owned and policy banks); (4) development and implementation of a credible plan for privatization and reduction of the state presence in the sector, where it has increased as a result of ongoing takeovers of failed banks; and (5) improving the financial literacy of the population.

Firm-level Productivity Constraints: Innovation Activity and Capacity

Innovation Challenges

206. Innovation is recognized as a major driver of industrial development and productivity growth. Catch-up innovation refers to the introduction by businesses of new-to-the-firm technologies, organization, and processes that allow them to narrow their gap in productivity relative to top national and global businesses. Catch-up innovation means improving productivity within each firm; it consists of firms engaging in learning processes. Frontier innovation refers to the generation and commercialization of new-to-the-world technologies. Both types of innovation require firms to invest in different types of soft, intangible knowledge capital assets (Dutz et al. 2015). Importantly, these investments go significantly beyond traditionally-measured research and development (R&D) expenditures to include allocating resources to decide what to produce and how, learning about evolving best global practices, adapting

them to their firm’s context, and managing associated risks.⁸⁷ The World Economic Forum has developed two measures to assess a country’s actual innovative activity and its capacity to innovate. Russia ranks very low on innovative activity and in the middle of the field among a group of OECD and middle-income peers on capacity to innovate (Figure 2.27 and Figure 2.28).



Source: WEF 2016.

Note: Rankings are composite indices incorporating quality of scientific research institutions, company spending on R&D, university-industry collaboration in R&D, government procurement of advanced technology products, availability of scientists and engineers, and percent of patent applications.

207. According to Russia’s own measure of innovation activity, its industry shows low levels of innovation—both catch-up and frontier—compared to OECD and BRICS peers. Only 10 percent of enterprises report technological innovation activity, compared to about 30–40 percent in OECD countries (Rosstat 2015). Even within this group, only a small minority is undertaking more sophisticated forms of R&D, with purchasing equipment being the main mechanism. Within catch-up innovation, the leading form is purchasing or replacing equipment, which is relatively easy. However, the use of international standards (e.g., ISO9000), and the uptake of IT (e.g., as indicated by enterprises engaging in e-commerce) are both comparatively low. In relation to new product development, 75 percent of Russian R&D occurs in public institutions rather than industry, and innovative products as a percentage of total sales are low compared to peers. This indicates that companies are not generating significant returns from innovative activities, and that the markets in which they operate are not demanding innovation. Furthermore, the low share of businesses engaged in innovation has been static for over a decade. Innovation is a dynamic process that needs to be practiced continuously if commodity producers are to achieve continuous productivity improvements, and if noncommodity industries are to develop specializations that will allow them to compete in external markets. With so few Russian businesses engaged in innovation, specialization is difficult to achieve.⁸⁸

208. Russia’s innovation environment in general is constrained, and Russian companies show relatively weak innovation performance. The ability of companies to improve efficiency and come up with innovative products and services that use new technologies is at the core of productivity growth.

⁸⁷ Corrado, Hulten, and Sichel (2005, 2009) introduced and measured this concept and found that intangible knowledge capital assets comprise a substantial share of TFP.

⁸⁸ A key feature of highly innovative firms is that they are not episodic but persistent innovators; see Coad and Pritchard 2013.

Russia's growing software exports are a clear success story: almost half of the software products developed by Russian companies are exported, the software industry is the biggest employer in the IT sector, and its workers enjoy the highest compensation (Federal State Statistics Service 2016). Yet, according to the Global Innovation Index (2015), the overall performance of Russian companies on the main innovation indicator, creation of new ICT-enabled business models (ranked 90th of 133 countries) and organizational models (76th) is relatively low, far behind Norway (11th and 3rd), Canada (20th and 12th), Australia (34th and 17th), and all the BRICS countries except India. This poor performance reflects the wider constraints on innovation in Russia: the economy remains dominated by the state, and government rather than business is the main driver of innovation. This adversely affects competition, which is the driving force behind innovation. Businesses face administrative barriers, a weak regulatory environment, and a shortage of qualified workers (WEF 2013).

209. Although Russia has built a significant innovation-based IT services sector over the last decade, the high-technology manufacturing sector, which is traditionally a generator of frontier technologies, is small (Box 2.1). The IT services sector has been able to draw upon the technological expertise of the Russian workforce and grow at the margins of the bureaucracy, possibly because it operates in new markets not previously controlled or regulated. However, this is a globalized industry in which skills are highly portable, and retention can be a challenge. At the same time, the high-technology manufacturing sector remains relatively small despite its science base. The Russian defense and space sectors are major globalized high-tech sectors, but there are few others. Globally, large oil and gas production companies spend little on R&D, so the sector is not perceived as innovative. However, the process of exploration and extraction remains highly knowledge-intensive, particularly given the potential offered in such areas as deep-water Arctic offshore development. Unlike Norway, Canada, and Australia, Russia does not appear to have developed a domestic extractives services and technology sector that would draw on the Russian innovation system.

210. Innovation policy receives considerable attention in Russia, given the country's long history of scientific and technological achievements. However, the Russian innovation system⁸⁹ faces a number of challenges and has struggled to have a significant impact on Russian economic performance. This can be partially attributed to supply-side issues that policy makers should continue to address, but economic structure and the nature of domestic markets also play a major role in the demand for and use of innovation.

211. Russia's innovation system has a number of strengths, but since the Soviet era performance in several areas of research has declined and the country has failed to build new areas of strength. Russia has a large, publicly-funded research base that incorporates a relatively well-developed education system and high tertiary education attainment. It has traditional strengths in certain natural sciences, particularly physics, chemistry, and the geosciences, and produces more engineers per capita than Korea. Government spending on research is about at OECD levels. However, the number of scientific journal publications and patents and the degree to which Russian researchers are cited by other researchers have decreased. The research sector also appears poorly integrated globally, there is little international investment in Russian R&D, and international collaboration is rare. This lack of international linkages stands in contrast to China, which 20 years ago had a far less sophisticated public research (and education) system but has accelerated its output while working hard to integrate its innovation system internationally, attract R&D activity, and bring back leading Chinese researchers from the West to seed its local innovation ecosystem.

⁸⁹ There are various definitions of an innovation system, for example: "the elements and relationships which interact in the production, diffusion and use of new, and economically useful, knowledge ... and are either located within or rooted inside the borders of a nation state." (Lundvall 1992)

Box 2.1. ICT in Russia: Ready to Contribute to Productivity Growth?

Russia's ICT industry has demonstrated remarkable progress in recent years. The domestic ICT market as of 2014 is estimated at about US\$60 billion, and Russian ICT companies also demonstrate competitiveness and participate in the global market. Exports of ICT hardware expanded from US\$0.6 billion in 2005 to US\$3.6 billion in 2014. Exports of ICT services increased from about US\$1 billion to US\$4.5 billion over the same period. The sector accounts for an estimated 3 percent of GDP and total employment (Federal State Statistics Service 2016). Furthermore, the multiplier effect of ICT employment is estimated to be about 2.5, i.e., each job in the ICT industry generates more than 2 new jobs in other sectors (WEF 2013).

Russia's IT services sector is one of its few noncommodity industries that has built a successful track record both domestically and globally. The domestic IT market is estimated at US\$25 billion in 2014 (equal to 1.5 percent of GDP) and presents ample commercial opportunities. The total export volume of IT services, mostly comprised of software and data processing, grew from US\$200 million in 2004 to US\$2.7 billion in 2014. The annual average growth rate of Russia's IT exports over this period outpaced the global average. While its export of IT services is still well below India's, Russia's IT developers have positioned themselves to deliver more sophisticated solutions for more complex tasks.

Telecommunications is relatively well-regulated, with mostly private fixed and mobile firms driven by commercial considerations and providing service that meets European standards. The market for mobile services is very competitive, and Russian mobile operators have expanded outside Russia. The market for broadband services is competitive in major cities, oligopolistic in minor cities, and monopolistic in some regions. The primary issues continue to be the state's conflict of interest as Rostelecom is both shareholder and sector regulator, and effective enforcement of current regulations. Because the fixed-line incumbent continues to dominate fixed broadband in regions where population density and incomes are low, service provision there suffers.

The ICT sector has many opportunities, including greater penetration of ICT solutions in product development and service delivery, digital entrepreneurship, and the expansion of shared IT infrastructure. In the annual Global Information and Technology Report (WEF 2015), Russia moved up in the Global Networked Readiness Index (GNRI)—which rates current market conditions and the state of connectivity—from 80 (of 133 countries) in 2010 to 41 (of 144 countries) in 2015. Russia's position in the GNRI is boosted by its favorable rankings on (1) the quality of the labor force, (2) the affordability and penetration of mobile and broadband connection, and (3) the high level of ICT usage by the government.

However, major constraints range from access to finance, which is becoming the worst constraint for ICT firms, to the risk of brain drain and skills mismatch, which could undermine the sector's fundamental strength. The GNRI identifies the following challenges: (1) an unfavorable regulatory environment, extremely poor intellectual property protection, and the inefficiency of the judicial system, and (2) a weak business and innovation environment, including inadequate availability of the latest technologies and a low level of firm technology absorption. Both issues limit the impact of ICT on the development of new products, as well as access to and provision of services. Finally, the unresolved geopolitical crisis weakens the ICT sector's long-term potential. GNRI ranks Russia 108th in terms of availability of the latest technologies. This issue is exacerbated by the sanctions, which prohibit exports of dual-use technologies. Sanctions also limit the availability of venture capital. What was a lively venture capital market has ceased to function as funds for investment in Russia are on hold.

As the world enters the so-called fourth industrial revolution, IT is transforming the ways people learn, produce, and socialize. This could lead to another wave of significant innovations to drive growth. The expansion of cloud and telecommunications technologies provides new tools for enterprises to reduce ICT costs and contribute to productivity growth. It is thus more important than ever for Russia to promote telecommunications and Internet connectivity, address existing constraints on ICT development, and create an environment conducive to ICT uptake across sectors.

212. Business innovation is not an end in itself; it occurs because companies have problems to solve, markets to defend, or opportunities to grasp. If the markets in which Russian businesses operate provide little incentive to innovate because they face too little competition or are unsure whether they will be able to keep the benefits of innovation, they will not innovate. In Russia, there are a number of industry and market obstructions that either diminish or deter the drive to innovate. SOEs dominate various

sectors, blocking competition or buying young innovative businesses, and are often neither innovative nor purchasers of innovation.

213. Businesses also need capable management to initiate and lead the innovation process. The capacity for business innovation requires capable management, which affects both the intent of businesses to innovate and how well they do so. Russian management performance gets relatively poor grades.⁹⁰ Furthermore, research indicates that SOEs tend to be worse-run than other types of businesses, so their dominance within Russia is a particular impediment to raising productivity.

214. Weak firm capability, such as lack of planning for technology adoption, is a key factor constraining ICT usage by businesses. SMEs especially are less likely to take advantage of ICT due to lack of both budget and skilled workers. The share of SMEs in Russia's GDP is 20 percent, but only 2.1 percent of their products and services are innovative (RVC 2015). Overall, only 17 percent of Russian companies plan budgets for technological modernization (Higher School of Economics 2015), so overall adoption of ICT remains slow.

215. Entrepreneurs in Russia are comparatively few. Attitudes to entrepreneurship are also comparatively negative, reflecting a perception that there are no entrepreneurial opportunities and that external conditions are not conducive to starting a business. Although Russia has a vibrant tech start-up scene (Moscow is ranked 13th in one global assessment, with a particular strength being the technical expertise of its people [Compass 2015]) and it receives considerable public investment, the sector is relatively small and geographically concentrated. And although SMEs are generally less productive than larger firms, in other economies they do provide a constant source of new ideas and business models and create new markets. However, Russia has relatively few SMEs, and while their share in Russia's GDP is about 25 percent, only 2 percent of their products and services are innovative (RVC 2015).

Innovation Support System and Policy

216. Russia has an active innovation policy and a wide range of initiatives targeting basic and applied research and industry innovation. In 2011 it enacted an overarching *Strategy for Innovative Development of the Russian Federation 2020*. The strategy has a number of specific key performance indicators, including increasing private sector R&D, high-technology exports, innovation intensity, the quantity and quality of publications, citations, and patents, and business revenue from research. Supporting this strategy are a wide range of other innovation interventions, among them significant support for technology start-ups through incubators, accelerators, and venture funding mechanisms. There is also support for R&D and technology, particularly emerging technologies (nanotechnologies and biotechnologies) through technology platforms, engineering centers, and SOE innovative development programs. Specific support for regional innovation-based economic development through clusters, special economic zones (SEZs), and tax incentives is planned. There have also been a series of major reforms to the Russian Academy of Sciences and efforts continue to build a cohort of world-class research universities.

217. Critiques of the 2020 Innovation Strategy and the suite of current innovation policies note a number of weaknesses. The strategy focuses mainly on high-technology innovation with far less attention paid to catch-up innovation and building management skills in traditional industries, yet this is the building block on which more sophisticated innovation needs to be built and which makes it difficult for SMEs to enter supply chains and inter-regional trade. There are also limitations in policy design (e.g., M&E), coordination within government, cooperation, and horizontal and vertical integration. Regional

⁹⁰ EBRD Management, Organization and Innovation Survey. <http://www.ebrd.com/what-we-do/economic-research-and-data/data/moi.html>.

innovation efforts vary in quality and relevance, and are often reliant on the federal government for funding. Government procurement for innovation, an area where Europe and the United States have extensive programs, is problematic in Russia despite the significant economic role of the state and of SOEs.

218. Some of these weaknesses reflect the immaturity of Russia’s innovation system. Despite the large investment, gaps continue to be reported (RVC 2015) in entrepreneurship skills, commercial innovation knowledge within the research sector, and the quality of deals. These are not skills that can be developed overnight. Similar deficiencies are reported in the legal and intellectual property environment. There are areas that stakeholders believe are not improving, such as public procurement and the departure from Russia of promising technologists and entrepreneurs rather than the return of its diaspora.

219. Without broader policy and administration reform, the impact of innovation policy will be limited regardless of its quality. Breznitz’s discussion (2007) of Ireland, Israel, and Taiwan, China illustrates a range of state policies that facilitate innovation. In each case, the key is not that the state is able to create the best policy but that it helps to ensure that the environment is conducive to successful innovation, one that is on balance more nurturing than obstructive and limits predation (Balzer and Askonas 2015). Regardless of the performance and impact of most of these supply-side interventions, demand conditions within the economy and industry structure itself will limit the contribution of Russia’s innovation system to economic development and productivity growth. It may be possible to build high-performing, innovation-intensive export industries that operate within a mediocre domestic economy (e.g., India and IT services, Israel and the technology sector), but it is unusual. Further, Russia’s large domestic markets should be a strength in allowing Russian industry to build scale and capacity. However, weak domestic competitive conditions continue to suppress the ability to capture the returns from innovation—and therefore suppress innovation itself.

Individual-Level Productivity Constraints: Skills

The Widening Skills Gap

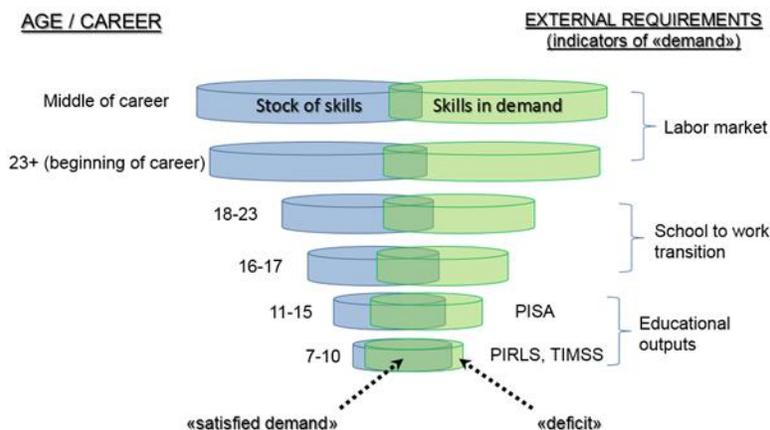
220. Productive and innovative economies make new demands on workers’ skills, and this is also true for Russia (World Bank 2013a). Innovative companies increasingly seek employees with high-order cognitive skills (such as the ability to solve problems) as well as social and behavioral skills (e.g., the ability to work with people). Russian employers reported especially severe shortages of these skills—more severe than shortages of technical skills. Thus, workers with such skills have better employment opportunities and higher incomes. The 2012 BEEPS study (World Bank 2012a) found that Russia’s private sector considers the lack of worker skills and education to be one of the most severe constraints on its expansion and growth. This change in labor demand in turn requires both qualitative changes in the type of skills taught in the education system and continuing opportunities to renew skills.

221. Despite the very high level of formal education attained by Russian workers, the current quality and content of education does not build the skills demanded by the labor market. From 1995 to 2010, although the share of employees with less than secondary education declined from 47 to 24 percent, and the share of employees with higher education degrees increased from 20 to 29 percent (Federal Service for State Statistics 2016), nevertheless a skills gap persists. Problem-solving abilities are a major issue. The greatest unmet need for this skill is among specialist employees in innovative companies. When skills shortages are reviewed by qualification groups, in addition to problem-solving abilities often managers are seen as lacking decision-making abilities, leadership qualities, knowledge of foreign languages, and the ability to work with people; specialists lack decision-making ability and the ability to work independently or cooperatively with others; blue-collar workers lack conscientiousness.

222. Innovative and traditional companies differ in their need for skills, and innovative companies in general report a larger skills gap than traditional companies, with the lack of problem-solving skills being the largest shortfall. Although innovative firms are often in a better financial situation than traditional firms, they still cannot bridge the skills gap by simply paying a skills premium, because the skills they need differ from those currently available in the labor force. Often innovative firms seek a mix of skills in their employees and new hires, such as open-mindedness and creativity in leadership, specialists who communicate well, and creative blue-collar workers who show initiative.

223. Empirical evidence shows a growing skills gap as students progress through the Russian education system, which widens further as they enter the labor market (Figure 2.29). The development of basic cognitive skills (literacy and numeracy) in students is very good in primary education (according to the Progress in International Reading Literacy Study [PIRLS], Russia is among the top global performers in reading). As students progress in their studies, secondary education provides them with an adequate supply of knowledge but is less successful in building high-order cognitive skills. As measured by the Program of International Student Assessment (PISA), the OECD international standardized tests in reading, math, and science for 15-year-olds, the quality of secondary education in Russia is higher than in other countries with similar per capita GDP but still below the OECD average. While practical job experience appears to be an important source of skills development for students, especially for social and behavioral skills, in reality opportunities are limited. As students enter university education, the skills gap widens and the acquisition of work skills is insufficient. While cognitive skills improve substantially during student tertiary studies, universities focus on developing basic cognitive skills rather than the cognitive, social, and behavioral skills that are critical for employers. Thus, university students have few opportunities to acquire the skills demanded by the labor market, including the ability to work in teams, leadership, and openness to new ideas, which is linked to innovation.

Figure 2.29. The Widening Skills Gap



Source: World Bank 2013a.

Note: Benchmarks for the skills demanded are set by the expected learning outcomes reflected in international education quality assessments and reported by employers in the firm survey conducted for this SCD.

224. The Russian education system, despite its high attainment levels, is facing challenges in developing student high-order cognitive skills and the noncognitive social skills that are needed by Russian firms, particularly innovative firms. This situation is in part explained by the legacy of the centrally-managed and highly state-regulated education system. While the skills development system is no longer guided exclusively by the state as customer and provider of educational services, the

mechanisms that would facilitate interactions between employers and educational institutions have not yet been fully formed. The number of private education and training providers is small. Often public educational institutions conduct their activities on the basis of traditional and outdated concepts, content, and practices and not the real needs of the beneficiary, whether employer, student, or worker.

225. While Russia is a major destination for immigrants, the current skills gap is not being bridged by migration. Despite the fact that the contribution of foreign countries to the stock of skills could range from 4 to 6 percent of the working-age population, it appears that almost 90 percent of the migrants coming to Russia are from countries where the average cognitive skills of workers are lower than in Russia, as estimated by average PISA scores.

Skills Development Policies

226. Russia has recently launched a number of promising policy measures to establish a better institutional framework for skills development. Introduction of a National Qualifications System is in progress, with the qualifications framework already adopted and the first set of occupational standards being prepared. A large number of educational standards were revised based on labor market requirements and occupational standards. In 2012 Russia joined the international WorldSkills movement, which sets modern standards for delivering vocational education and training. National development agencies (e.g., Skolkovo, Rosnano, RVC, the Bortnik Foundation, and the Agency of Strategic Initiatives), with support from the government, are providing financial, organizational, and intellectual support for establishing a better innovation infrastructure and developing local R&D capacity. The higher education sector is rapidly evolving: top-performing universities receive financial incentives and advisory support for raising educational and research outcomes to the best international standards and are driving regional economic and social development.

227. Incentives are needed for educational institutions to ensure the quality and relevance of the skills they are providing, and for enterprises to invest in training. Most education and training providers still focus on formal certification of graduates, principally through diplomas. Despite the recent introduction of performance-based budgeting in tertiary education, the financing of educational institutions and staff salaries still primarily depends on inputs, such as staff workload and numbers of students and graduates. Enterprises rarely influence the skills supply by participating in educational institution management processes and quality assessment of the system and institutions. Most OECD countries provide significant incentives (e.g., tax exemptions, subsidies, or skills development vouchers) for the private sector to invest in workforce skills development by, for example, providing internship opportunities for TVET students, training employees, engaging in curriculum development, and participating in governance of the education sector. Unfortunately, such incentives are underutilized in Russia and are mostly limited to regional pilot initiatives to provide subsidies to firms to invest in skills development. Russian firms still see little benefit in spending scarce resources on supporting an education system that delivers skills of limited relevance to them.

228. The high level of information asymmetry in the demand for and supply of skills and jobs has to be overcome. Russia does not have an easily usable system for gathering, analyzing, and reporting labor market information for policy-making. Thus, there is a general lack of information about educational and career pathways and employment opportunities. At the same time, tertiary institutions that put in place educational and training programs have no reliable information on the skills and competences demanded

by employees, students, and employers. An important source of such information could become the development of occupational standards,⁹¹ which is progressing well in Russia.

229. A number of measures are proposed to guide the education system to meet the demands of the labor market:

1. Effective incentives should be introduced to change the content, forms, and methods of skills training by training providers. Also required are mechanisms for quality assessment and evaluation of educational services. Employers should be given incentives to invest in training their employees, cooperate with the educational system in designing education and training programs, and participate directly in training activities, quality assessment of programs, and learning outcomes.
2. There is a need to enlarge the capacity of the skills development and assessment system by expanding the range of education and training programs, especially vocational; involving specialist-practitioners from businesses in education and training; and aligning practices used in managing educational institutions to the practices used in businesses.
3. Finally, a modern information system for the labor market, vocational and higher education institutions, and training providers could facilitate the exchange of information on skills demand and supply between key stakeholders.⁹² Professional intermediaries between the labor market and education system could contribute significantly to an increase in information transparency for both employers and education providers.

Conclusion

230. As Paul Krugman famously said (1994), "Productivity isn't 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." Productivity is not only central to achieving a country's growth potential and building a diversified, sustainably growing economy, it is also crucial for sharing prosperity and reducing poverty, since not all transitions out of poverty or out of current income levels require a change in the type of work undertaken. For example, in many countries, increases in shared prosperity were dominated by higher productivity and income within the same sector, rather than changes in income sources (Dang and Lanjouw 2012; Christiaensen, Lionel, and Kuhl 2011; Christiaensen et al. 2009). In other words, productivity is essential to create better jobs and help households attain social mobility, regardless of the sectors in which those households work.

231. Russia's long-term growth will to a large part be determined by sectoral productivity growth, making economic policies directed to raising firm-level productivity increasingly relevant. Such productivity growth can be achieved through more efficient allocation of factors of production toward more productive firms and through the accumulation of internal firm capabilities, such as improving innovation capacity and workforce skills. Many of Russia's impediments to higher economic efficiency, investment, and ultimately diversified growth are related to governance weaknesses, which are discussed in chapter 4.

⁹¹ Occupational standards are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underlying knowledge and understanding. They cover key activities undertaken within the occupation in all the circumstances the job holder is likely to encounter. They can be used to develop TVET curricula and provide managers with a tool for a variety of workforce management and quality control actions.

⁹² As a result, workers and students at all levels will have a rationale for designing their educational paths and making appropriate adjustments; educational institutions will be able to fine-tune their offerings to the needs of employers and develop courses and programs relevant to current and future demands; and employers will have access to information on the quality of educational programs of specific institutions and the qualifications, skills, and competencies of their graduates.

232. The analysis in this chapter suggests that since 2007 the role of firm-level TFP as a driver of economic growth in Russia has eroded. More interestingly, the trend in TFP growth reversed in a worrying pattern from the mid-2000s to the 2010s: TFP *increased* across *all* sectors in 2005–07, particularly among firms in agriculture, yet productivity declined in *every* sector in 2007–13. Productivity gains in Russia have been obtained primarily from a better allocation of resources across firms, meaning that factors of production, such as labor and capital, are allocated to more profitable firms. However, since the available measure of productivity is revenue TFP, it may be that those firms are more profitable because they are more efficient or because they are able to charge more.

233. Since 2005 market distortions seem have played an increasingly debilitating role in Russia's economy, negatively affecting especially firms in the services sectors. The analysis found only low levels of allocative efficiency⁹³ in manufacturing and agriculture and misallocation in services and mining. Overall, the contribution of incumbent firms to aggregate productivity is negative, meaning they are not accumulating internal capabilities like innovating, adopting new technologies, and upgrading the skills of their workforce. At the same time, the contribution to aggregate productivity of new entrants and departing firms is negligible; in the services sector, in fact, exiting firms had better performance than the average for firms that stayed in the market. This points to issues related to the high concentration of wealth and productive assets in the Russian economy, which adversely impacts competition and the creation of a level playing field for firms (see chapter 4).

234. The findings suggest a number of policies geared to foster growth in firm-level productivity. Such policies should focus on (1) leveling the playing field for firms by stimulating competitive markets and eliminating barriers to the entry of productive firms and the exit of unproductive incumbents; and (2) upgrading firm capabilities, such as managerial skills, innovation, and technology adoption, in order to help firms, especially start-ups and SMEs, to become more competitive. Improvements in corporate governance would be an important part of this reform agenda (see chapter 4). The findings point to a reform agenda that combines policies to overcome both external and internal constraints on a firm at the same time. Alternatively, what might be advisable could be a sequential approach that focuses first on improving the external context in which firms operate through competition policy, investment climate reforms, and improved connectivity, and second on strengthening the capabilities of firms by building up innovation and skills.

235. The importance of skills development and the mismatch between skills and job requirements raises serious development issues. Improvements in the Russian educational system should address such issues as the content of the curriculum, the quality of teaching, and access to education. And worker productivity is affected by a range of concerns, including health status and the ability of the economy to effectively use older workers as the population ages. These issues are considered in chapter 3. Finally, all of these improvements will require strong public institutions and adequate fiscal resources, which are discussed in chapter 4.

⁹³ Meaning that factors of production such as labor and capital are allocated to more profitable firms.

Chapter 3. *Pathway Two: Reducing Vulnerability by Deepening Human Capital Gains and Improving Access to Services*

Introduction

236. Better jobs are the key to continued shared prosperity. Reducing vulnerability to poverty and ensuring future income gains for the bottom 40 percent of the population will require more higher-productivity, better-paid formal jobs. The less favorable economic environment has slowed the improvements in labor market conditions seen up to 2008, which drove the reduction in poverty and growth in the incomes of the bottom 40 percent. Fiscal transfers, particularly pensions, became more important after 2008 in sustaining income growth. Looking forward, given the constrained fiscal situation, jobs will once again have to be the main driver of incomes and shared prosperity.

237. Facilitating the reallocation of employment from low-pay, low-productivity industries and professions to higher-productivity activities will depend on supportive macroeconomic and business climate reforms. A restructuring of economic activity that favored more skill-intensive sectors with higher pay benefitted the labor force, including the bottom 40 percent, starting in the early 2000s. The economy shifted from production of tradable to nontradable goods, with a large decline in agriculture and manufacturing activity coupled with employment growth in construction, public administration, trade, and financial intermediation. In the first half of the 2000s, the reallocation of labor from tradable to nontradable sectors reflected the transition of the economic structure to a more modern one through structural reforms. From the mid-2000s on, growth in the service sector was driven by expanded domestic demand in the wake of booming oil prices (see chapter 1).

238. The particularities of Russian labor market adjustment have complicated the reallocation of workers to higher-productivity firms or jobs. Adverse shocks in Russia typically reduce real wages rather than raising unemployment. This form of adjustment, linked to specific institutional features of the labor market, tends to protect workers from the adverse impact of shocks, which is particularly important given Russia's low unemployment benefits, but it also has meant there has been little reallocation of workers to higher-productivity work.

239. Informality increased during the 2000s; most new jobs created were informal. In 2015, just over a fifth of total employment is estimated to have been informal.⁹⁴ The number of formal jobs that have disappeared has exceeded the number created in every year since 2009 as jobs shifted from the formal to the informal sector after the 2008–09 crisis. The lack of new formal jobs and the expansion of informality could impair productivity because employers are less likely to invest in training informal workers, which makes workers more vulnerable given their lack of access to adequate social protection and leads to erosion of the tax base, which could limit the provision of social services and threaten the sustainability of the social insurance system.

240. Increasing shared prosperity requires creating more formal jobs and ensuring that those at the bottom of the distribution can access them. Inequality of opportunity is still a barrier to shared prosperity (see chapter 1) and results in losses of human capital potential at the lower end of the distribution.

⁹⁴ Source: Rosstat based on Labor Force Survey (LFS) data, which defines as informal those working in firms or for household, or individual entrepreneurs that are not registered as legal entities.

Therefore, devoting more resources to services that influence individual productivity, especially education and health, is important not just for individual welfare but for national economic growth.

241. Russia's aging and shrinking labor force is another reason why increasing individual productivity is so important. Enabling people to work longer will require reducing premature mortality and making the population (especially men) healthier, improving skills, and targeting the worrying indications of growing inequality in education. Labor force participation is relatively high, but there is an opportunity to raise the participation of certain groups, such as young women and older people. Relatively inexpensive disease prevention programs, coupled with behavioral changes by individuals, could greatly reduce early deaths due to cancer and cardiovascular disease. This would increase the welfare of those affected, reduce the burden of care on family members (particularly women), and increase the pool of potential workers, thus boosting economic output. For example, if in 2010–15 the mortality rate among Russia's working-age population (36.9 percent) had been reduced to that of France (17.9 percent), there would have been 1.9 million fewer deaths—reversing two-thirds of the total decline in the working-age population that occurred during that period.⁹⁵ Better health would also increase productivity. Those suffering from alcohol abuse and poor mental health, which afflict many Russian workers, tend to earn less and work fewer hours than healthier workers. Improved health also would reduce health care costs. As an illustration, the estimated health-care and non-health-care costs of cardiovascular diseases are high for the Russian economy,⁹⁶ and a considerable amount could be avoided through prevention.

242. Educational attainment is high, but the quality of education and skills could be strengthened to generate progress in individual productivity. On the one hand, the shortage of skills necessary to participate in an innovation-based economy has its roots in the general education system and is affected by concerns about insufficient funding and quality. On the other hand, lack of access to education limits the productive potential of future labor market entrants. Concerns with access disproportionately affect some vulnerable groups, such as the bottom 40 percent or people living in remote areas. Lack of access to high-quality early childhood development programs is a particular cause for concern, because early education is closely linked to development of cognitive skills.

243. The constrained fiscal situation underlines the importance of improving the efficiency and effectiveness of social protection. Pension system adequacy is low, and fiscal sustainability is threatened by growing informality. Only about 55 percent of workers, 39.3 million people, contribute to the pension system,⁹⁷ yet there are 41.5 million pensioners.⁹⁸ Increasing the efficiency and effectiveness of social assistance while protecting those most in need requires better targeting of resources to low-income households, consolidating some programs, and simplifying the system while making it more transparent and easier to understand and operate.

⁹⁵ Calculations based on data from the United Nations (2015).

⁹⁶ Estimates put the cost of cardiovascular diseases to Russia at RUR 836.1 billion (€24,517.8 million or 3.1 percent of GDP) in 2006 and RUR 1076 billion (€24,400.4 million or 2.8 percent of GDP) in 2009. Non-health care costs dominate and are made up of productivity losses associated with premature mortality and morbidity and disability pensions; of total costs of cardiovascular diseases, non-health care represented 85.5 percent in 2006 and 78.7 percent in 2009 (Kontsevaya, Kalinina and Oganov 2013).

⁹⁷ Pension Fund data for 2013.

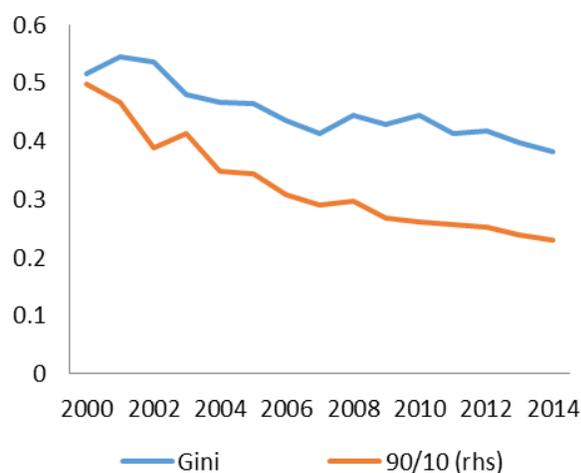
⁹⁸ Rosstat data for 2014.

Restoring the Role of the Labor Market in Driving Shared Prosperity

Reallocation of Labor to Higher Productivity Activities Has Slowed

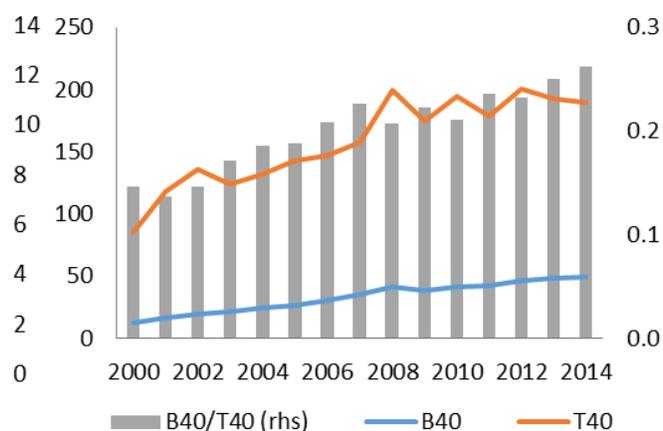
244. Starting in the early 2000s, real wages rose across the income distribution and wage inequality decreased (Gimpelson 2015a). Declining wage inequality mainly reflected an increase in the average wage at the bottom of the distribution, though there was also a leveling-off of wages at the top (Figure 3.1 and Figure 3.2). The rise in real wages and the reduction in wage inequality were driven by a reallocation of workers to higher-productivity sectors, a fall in the skills premium, and increases in the minimum wage.

Figure 3.1. Hourly Wage Inequality, 2000–14



Source: RLMS-HSE data.

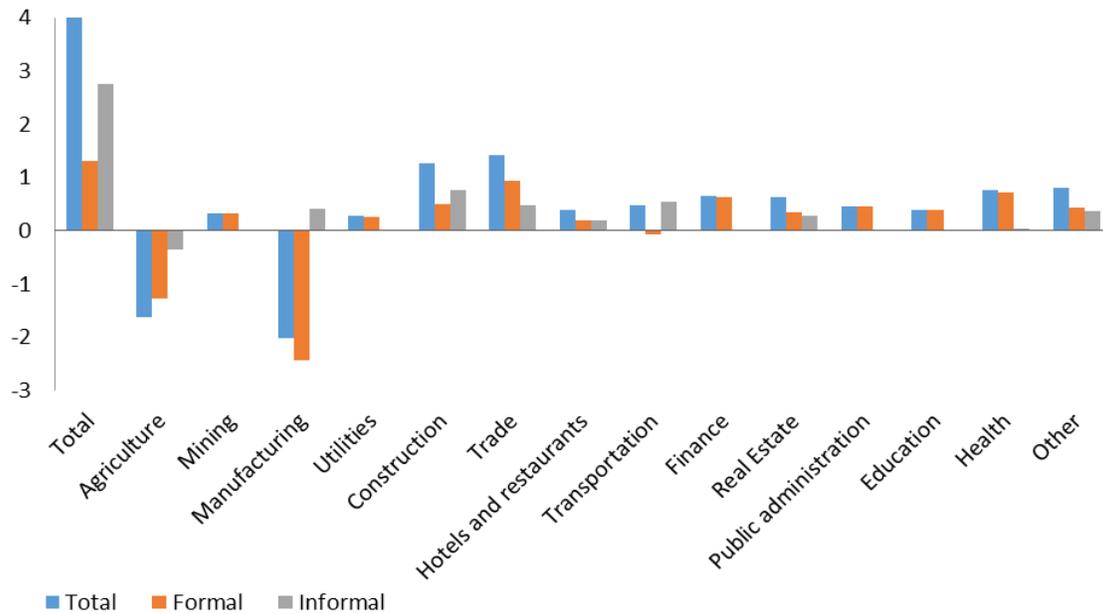
Figure 3.2. Average Hourly Wages, Bottom and Top 40 Percent, 2011 Constant Rubles per Month, 2000–14



Source: RLMS-HSE data.

245. A fall in the share of employment in low-pay, low-productivity industries was the principal driver of falling wage inequality and rising real wages. A restructuring of economic activity favored relatively more skill-intensive sectors with higher shares of university-educated workers (Gimpelson 2015b). Production shifted from tradable to nontradable goods as employment plunged in agriculture and manufacturing but increased in construction, public administration, trade, and financial intermediation (Figure 3.3). Many of the jobs that disappeared were low-skilled and poorly-paid: the share of agricultural workers in households in the lowest income quintile fell substantially, and the share of manufacturing workers in that quintile also declined. In parallel, there was a shift to higher-skilled and better-paid occupations.

Figure 3.3. Change in Employment by Sector, 2004–13, Percent



Source: Rosstat data.

246. A reduction in the skills premium also contributed to the fall in inequality. Wages at the top—in larger firms and higher-skilled activities—have grown less than wages at the bottom, reducing the wage gap between low and high earners. Fewer people are working in large, often publicly-owned, companies that pay higher wages, and more people are working in smaller firms. Returns to education decreased at all levels of the wage distribution; the decline was greatest at the top due in large part to the fall in the premium for university education (Calvo, Lopez-Calva, and Posadas 2015).

247. Productivity-enhancing labor reallocation slowed over the 2000s. The structural transformation to a more modern economy that began in the early 2000s led to substantial job creation in the nontradable sector. As structural change slowed, the commodity boom from the mid-2000s took a larger role in the reallocation of labor away from manufacturing and agriculture by boosting demand for retail trade and construction services (see chapter 1). Of concern is that this was coupled with growth in informality with potentially a negative impact on productivity. As adverse shocks started hitting in 2008, the particular model of Russian labor market adjustment meant that there was little increase in unemployment because the response consisted mostly of a fall in real wages (see Box 3.1). This protected people from the adverse impact of shocks, especially since unemployment benefits are low. However, it has meant that the reallocation of workers to higher-productivity firms or jobs has also been low.

Box 3.1. Low Unemployment, Variable Wages: Russia’s Model of Labor Market Adjustment

The unusual way in which the Russian labor market adjusts has been a feature of the economy since the transition (Layard and Richter 1995). The Russian labor market is characterized by relatively low variability in employment and unemployment indicators, and adjustment to real sector developments, including major macroeconomic shocks, occurs mostly through changes in real wages. This mode of adjustment reflects institutional features of the Russian labor market, such as low unemployment benefits, a high share of informality, and a high share of flexible compensation.

This model persists due to the incentives faced by workers, firms, and the government (Gimpelson and Kapelushnikov 2013). Workers accept wage cuts in adverse times to avoid unemployment, given weak union representation and limited outside employment options. For firms, the system allows them to adjust labor costs to changing economic circumstances. The government benefits because unemployment increases are low even in bad times, which supports social and political stability.

The model has certain advantages:

- Unemployment has remained low despite the economic shocks since 2008–09.
- More workers participate in the labor market, including the lower-skilled, so there is less risk of skill attrition due to long periods of being out of work.
- The budgetary cost of unemployment benefits did not grow substantially during the crisis.

However, there are disadvantages:

- The model of preserving jobs by supporting inefficient firms (through nonfulfillment of labor contracts--e.g., wage arrears, unpaid leave, and subsidies) means that low-productivity jobs are preserved in a large number of less-efficient firms. This slows down reallocation of workers to higher-productivity firms and jobs.
- Workers are more vulnerable due to poor enforcement of labor market legislation, and the model facilitates informal, low-paid employment.

248. The role of wages in increasing shared prosperity has declined in recent years (see chapter 1). Rising income from wages was the principal reason for the increase in incomes of the bottom 40 from 2000 to 2008, but since 2008, pensions, public transfers, and increases in public wages have played a greater role. Restoring the labor channel as the main contributor to the incomes of the bottom 40 is crucial going forward.

249. Workers from the bottom 40 face higher barriers to jobs, resulting in heightened chances of being unemployed (Table 3.1). They are more likely to be employed informally or to have less employment security. While the overall unemployment rate has decreased somewhat over the last eight years, that is not true of the unemployment rate among the bottom 40 percent of the population. Some improvement in their access to jobs occurred, as evidenced by higher labor force participation, but the increase in workers was almost fully absorbed by the informal sector; the share of self-employed and informally employed among the bottom 40 increased faster than among the top 60 percent of the population.

Table 3.1. Indicators of Labor Market Vulnerability, Bottom 40 and Top 60, Percent

	Labor Force Participation Rate		Unemployment Rate		Share of Informal or Self-employment in Total Employment	
	2007	2014	2007	2014	2007	2014
Bottom 40	49.5	58.0	11.6	11.3	17.3	26.9
Top 60	71.3	69.5	4.5	3.1	15.4	17.4
Total	63.1	65.2	6.6	5.9	15.9	20.4

Source: RLMS-HSE data for 2007–14.

Note: The share of informally employed based on RLMS-HSE data is similar to Rosstat estimates based on LFS data (see Annex 3.1). Bottom 40 denotes the bottom 40 percent of the income distribution (poorest) and top 60 the top 60 percent.

Informality Is Growing

250. Formal employment did not increase substantially even as the economy expanded. Rapid growth in output before the crisis was accompanied by low rates of corporate job creation and an expansion of informality. The reallocation of jobs from the formal to the informal sector continued after the crisis (Gimpelson and Kapeliushnikov 2014); the number of formal jobs that have disappeared has exceeded the number created every year since 2009.

251. Increasing informality was widespread in Russia. While estimates of the size of the informal sector vary depending on the methodology used (see Annex 3.1), it is estimated by Rosstat that in 2015 just over a fifth of total employment was informal, using a definition that encompasses those working in firms or for households, or individual entrepreneurs that are not registered as legal entities.⁹⁹ The incidence of informal salaried work is higher among young people with less education; informal self-employment is more usual for tertiary-educated, middle-aged men (Gimpelson and Kapeliushnikov 2014). Apart from purely informal jobs, many workers in the formal sector declare only a portion of their wages and hence underpay social insurance contributions: one estimate puts this type of informality at about 20 percent of those employed by firms and about 50 percent of the self-employed in the formal sector (Lehmann and Zaiceva 2013). Major losses of formal jobs were observed in tradables (manufacturing and agriculture), and informal jobs were created in trade, construction, and transportation. These sectors are traditionally less regulated and rely more on micro-businesses and self-employment. The reallocation into informality is part of a more general reallocation into the services sector and production of nontradable goods and services.

252. The impact of the minimum wage on the growth of informality has not been found to be strong. Analysis shows that the main factors driving informality were not rigid labor market institutions (see Gimpelson and Kapeliushnikov 2014): the minimum wage is set at a level that is hardly binding for the majority of firms, and in any case employment protection regulations are poorly enforced. Low unemployment benefits may have partly contributed to the rise in informality: workers who lost jobs in the formal sector could not afford to be out of work for long periods and thus were willing to accept insecure informal jobs. However, the main factors contributing to increasing informality were the business climate and the institutional environment.

253. There is no strong evidence that earnings in the informal sector are lower than in formal employment. Workers in the informal sector have been found to receive wages comparable to or higher than workers in the formal sector who have higher human capital (Lukiyanova 2015). However, the former work without a contract and so are less protected and could be more vulnerable. Interestingly, wage inequality is higher in the informal sector. More detailed research by sector is required to investigate the differences between wages in the formal and informal sectors.

254. The rise in informality over the last decade has increased opportunities for workers at the bottom of the income distribution, but it has also increased economy-wide vulnerability and may have impaired productivity. Recent analysis on labor reallocation between and within industries in 2002–12 found that the expansion of informality partially reduced the positive contribution to productivity growth of labor reallocation across sectors and firms (Gimpelson 2015b). That contribution declined in all sectors except for mining and financial services, suggesting an outflow from most sectors to less-productive

⁹⁹ Rosstat estimates based on the Labor force survey.

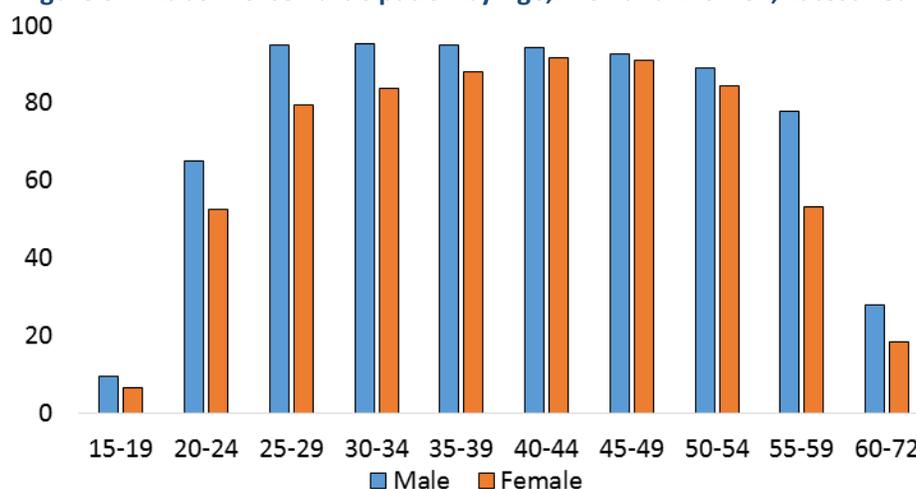
informal activities. The persistence of high and increasing informality also raises concerns about the trust between citizens and the state and signals mounting systemic weaknesses (Gimpelson and Kapeliushnikov 2014), among them incomplete or selective enforcement of formal regulations, exemptions from social insurance contributions, and the erosion of the tax base, with potentially adverse effects on the provision of social services and the sustainability of the social insurance system.

Russia's Aging Labor Force Requires Higher Individual Productivity

255. The aging of Russia's labor force could adversely impact productivity. There is significant erosion of health and skills among older workers that could limit productivity gains as the share of older workers in the labor market rises (see below on health and education). There are strong indications, including the risky health behavior of younger males and the likely negative impact of growing informality on on-the-job training, that the deterioration in health and skills could also become characteristic of the younger generation as it ages (i.e., it is not just something that affects the current cohort aged 50 and above). Thus one priority is improving the skills of the younger generation, since the foundation for participation in training and learning is set early in life, with the more educated being more likely to maintain and upgrade skills.

256. Raising labor force participation in Russia would help to mitigate, though not eliminate, the looming problem of a shrinking and aging labor force. The working-age population in Russia has been declining since 2010 and is projected to drop from 100 million in 2015 to 89 million in 2030, an even more rapid fall than that of the total population (United Nations 2015). Thus, Russia's old-age dependency ratio in 2010 will go up by 10.4 percentage points to 29.5 percent in 2030. As it is, Russia has a fairly high and growing rate of labor force participation: more than 68 percent of 15–72-year-olds are economically active, which is comparable to participation rates in Nordic countries and significantly above the averages for the EU and the OECD (Figure 3.4). Nevertheless, there is some potential to raise the participation of particular groups.

Figure 3.4. Labor Force Participation by Age, Men and Women, Latest Year



Source: Rosstat data.

257. Two groups have the potential to participate more in the labor force: women and older adults. Female labor force participation during childbearing years and after the female statutory retirement age of 55 is significantly below that of males (Figure 3.4). Women are expected to be the main caregivers for children and the elderly, and only a third of women report using childcare facilities (World Bank 2014). The gender gap in labor force participation could be closed with proactive policies that improve women's

ability to combine family and work and that increase older women's incentives to remain in the labor force. There appears to be substantial scope to lengthen the working life of Russians by removing constraints on labor force participation (for example, due to poor health, low skills, limited mobility, and the care burden) and raising the statutory retirement age. Labor force participation among the old is lower for the bottom 40 percent of the distribution, who have worse health and less education— both good predictors of earlier exit from the labor market.

Need to Increase Equality of Opportunity and Support Regional Convergence

258. Investment in human capital and complementary labor market reforms could increase equality of opportunity. Personal characteristics other than skills or initiative can affect the chances of obtaining formal and secure employment (Abrás et al. 2014). Even though unemployment in general is low compared to OECD countries, the unemployment rate among Russians aged 25–64 without upper secondary education (12.2 percent) was more than four times higher than among those with tertiary education (2.8 percent). From early on factors beyond the control of an individual, such as gender, parental income or education, ethnicity, and geography can curb a child's potential and later lead to the systematic exclusion of some groups from markets and economic opportunities. For example, parental education is the circumstance that has the most impact on the opportunity to have a job with 20+ hours of work in Russia.

259. Regional differences in labor market outcomes and incomes are large relative to other BRICS and the United States, and labor mobility is low. Regional inequality increased in the early transition period (Fedorov 2002) when financial constraints may have limited labor mobility (Andrienko and Guriev 2003). In the 2000s interregional disparities (including labor market outcomes) declined and regional incomes grew (Guriev and Vakulenko 2015), but there is still considerable variation in real incomes across regions. Nevertheless, labor mobility continues to be low. Given the substantial increase in real incomes in the 2000s, poverty traps declined in importance as an explanation for low labor mobility (Guriev and Vakulenko 2015). Explanations for low labor mobility include underdeveloped housing markets, regional regulations that impede the movement of labor, and high job search and moving costs (Andrienko and Guriev 2003; Bornhorst and Commander 2006; Guriev and Vakulenko 2015).

260. Women's better educational achievement does not translate into better or even equal pay for women. Female labor market participation was relatively high in 2014 at 68.1 percent in 2014, above that of the U.S., but below that of the Baltic and Nordic countries, which achieve labor participation rates well above 70 percent. The gender pay gap is large and has not narrowed much in recent decades; it had widened to 31 percent in 2010 compared to 27 percent in 1995. Relative to other high labor market participation countries the differences in pay by gender are notable; in Norway, for example, the gender pay gap is only 7 percent (World Bank 2014). Russian women are generally concentrated in lower-paid, typically female occupations and in jobs where their pay is more likely not to grow as they get older. The lowest-paid women seem to face a skills barrier, but for higher-income earners, women seem to be more qualified than men but are unable to access jobs that pay them as much as men with similar qualifications (World Bank 2014).

Policy Priorities for Labor Markets

261. Restoring the labor channel as a driver of income growth will require reforms to the business climate. Removing impediments to firm creation and the exit of low-productivity firms would facilitate the movement of workers from lower- to higher-productivity jobs (see discussion in chapter 2 on developing a more diversified and productive economy). Institutional and governance measures are also necessary to shift from informal to formal jobs, supplemented by further administrative measures to strengthen firm registration, social insurance enforcement, and tax compliance.

262. A wide-ranging effort is required to improve individual productivity, particularly to cope with Russia’s aging population. The promotion of healthier habits and lifestyles and more attention to preventive medicine and early diagnosis could help Russian workers to keep working to later ages. Encouraging firms to institute age management policies, for example, deployment of mixed-age teams or ergonomic workplace adjustments for older workers could prolong their participation in the labor force and maintain their productivity (Bussolo, Koettl, and Sinnott 2015). Continuous professional education and retraining opportunities across the lifecycle can increase productivity and enable workers to prolong their working lives (see discussion of skills below). Longer working lives could be encouraged by raising and equalizing the pensionable ages for men and women and by discouraging early retirement of able-bodied individuals (for example, by revising pension eligibility criteria, adjusting pension benefits, and shifting the fiscal burden associated with early retirement from the state to employers). Welfare and economic gains can also be achieved by increasing the opportunities available to excluded groups, for example, by focusing on policy interventions that support all children in getting a high-quality education, promoting policies that open access to jobs, and reducing the care burden faced by women. More proactive public employment services are needed to facilitate job search for the unemployed in Russia, especially unemployed older adults. And policies to develop housing markets and transportation networks, reduce regulations that impede the movement of labor, and assist individuals with high job search and moving costs would enable many workers to move to more productive jobs in other locations.

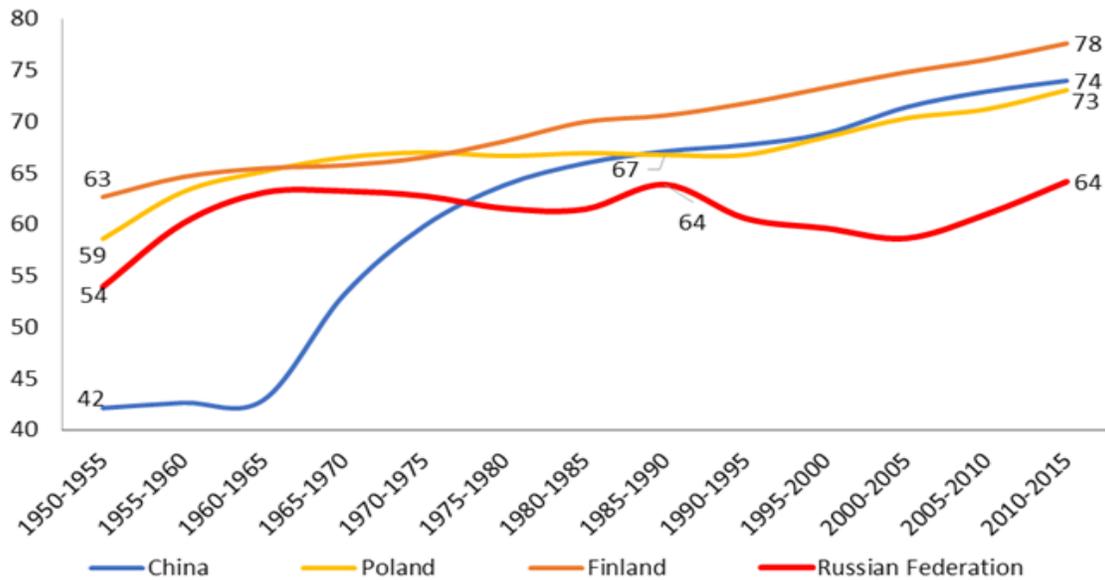
Meeting the Human Capital Challenge across the Lifecycle

263. As the working-age population ages and shrinks, individual productivity becomes ever more important. For the economy to grow, the productivity of the remaining workers—particularly older workers—must rise. There is scope to achieve higher productivity by investing more effectively in human capital to enable workers to stay healthy and build skills throughout their working lives. Of course, improving individual health and education outcomes across the lifecycle also would directly increase welfare.

Aging Cut Short

264. In spite of recent gains, Russia trails countries with much lower income levels in life expectancy gains. Life expectancy at birth was 70.9 years in 2014—far below that of Brazil (74) and China (76), countries with much lower per capita incomes. Male life expectancy is only 65.3 years, and there is a more than 10-year gap between male and female life expectancy. Men are dying needlessly in middle age. Since the early 1950s male life expectancy has gone up by only 10 years in Russia, compared to 32 years in China and 21 years in Brazil and, among regional comparators, 15 years in Finland and 14 years in Poland (see Figure 3.5). Noncommunicable diseases (NCDs), in particular cardiovascular diseases and cancer, as well as external causes, such as accidents and suicides, are the main contributors to premature mortality and disability in the Russian Federation. Population aging combined with the rising incidence of NCDs implies an increase in the share of population with more than one chronic disease or poor health condition.

Figure 3.5. Male Life Expectancy at Birth, 1950–1955 to 2010–2015



Source: United Nations 2015.

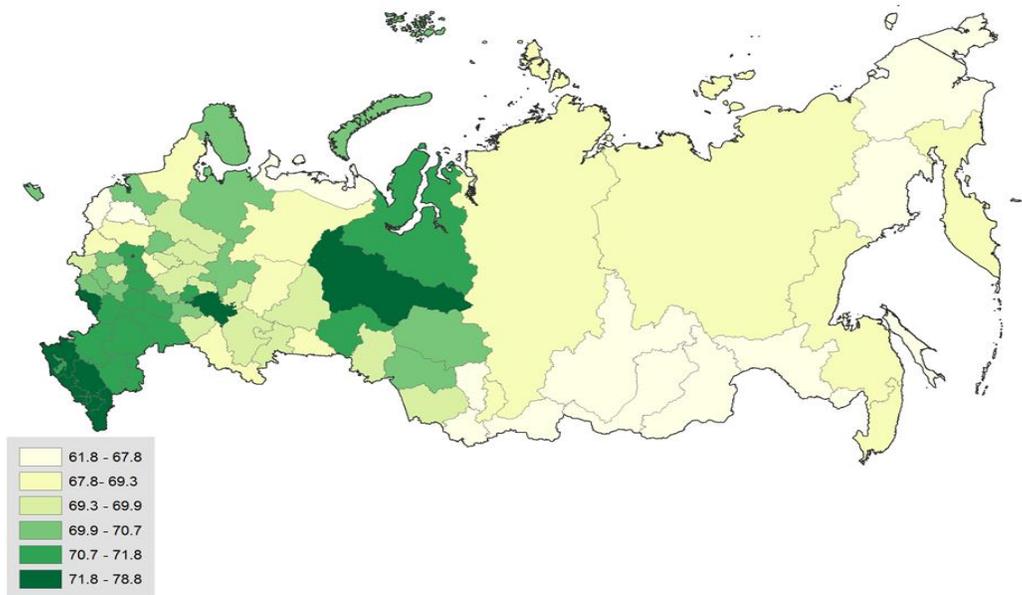
265. Some health-related indicators have improved in Russia in recent years. Life expectancy at birth went up from 65.5 years in 2005 to 70.9 years in 2014 due to a drop in deaths caused by NCDs. Mortality from cardiovascular diseases during this period decreased by 27 percent.¹⁰⁰ These outcomes have been achieved through strenuous efforts to reduce the main risks to health in Russia, such as new laws on tobacco control, as well as by improving health service delivery to patients with stroke and acute coronary syndrome. The general rise in incomes and reduction in poverty also has undoubtedly helped to reduce mortality. Since the late 1990s there have also been marked improvements in such key population health indicators as infant and maternal mortality, and mortality due to tuberculosis.

National Averages Mask Much Worse Health Outcomes for Some

266. National averages cloak large differences in health outcomes between regions and socioeconomic groups. Life expectancy (Figure 3.6) in far northeast Chukotka is 62.3 years (57.5 for men), but in Moscow city it is 76.7 years (72.8 for men). Between the regions with the best and poorest outcomes, there is more than a fivefold difference in total mortality rate (3.5 per 1,000 in the Republic of Ingushetiya versus 18.4 per 1,000 in Pskovskaya oblast in 2014) and in the infant mortality rate (4.4 in Saint-Petersburg versus 23.9 in Chukotskiy Autonomous Okrug in 2013). Urban communities tend to have better health indicators than rural. The mortality rate for the working-age population in rural areas was 6.6 deaths per 1,000 persons, compared to 5.3 in urban areas. There are also large gaps in life expectancy between the better-off and the less-advantaged, who have a much higher burden of cardiovascular disease. Both total mortality rates and deaths due to cardiovascular disease among 55- to 69-year-olds have been found to be much higher for groups with less education (Ivanova et al. 2014). This disparity is even more pronounced for men (Figure 3.7).

¹⁰⁰ Speech by the Russian Minister of Health at the International Conference “Public Health: New Challenges” in Yerevan (Republic of Armenia) in February 2016.

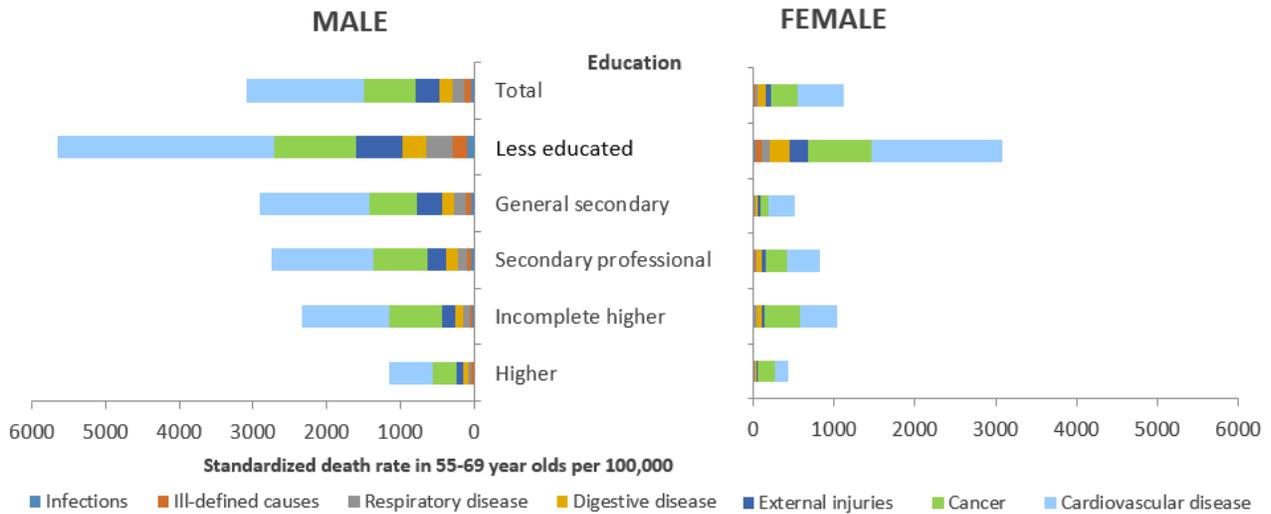
Figure 3.6. Life Expectancy at Birth across Russian Regions, 2013



Source: Rosstat.

Notes: The map displays regional borders as of 2008.

Figure 3.7. Mortality, 55–69 Age Group, by Educational Attainment and Gender, Russian Federation, 2011



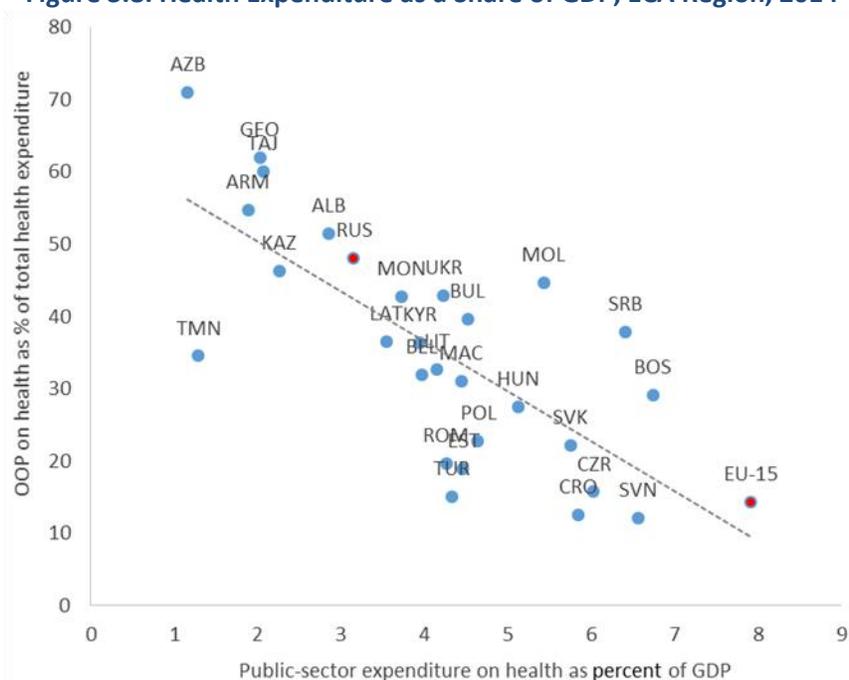
Source: Ivanova et al. 2014.

Public Health Spending Is Relatively Low

267. Relatively low public health spending in Russia results in high out-of-pocket spending on health. In 2013, public health spending was 3.2 percent of GDP (figure 3.8), significantly lower than the OECD

average of 6.5 percent. Public health spending fell significantly during the 1990s but rose during the oil boom and ensuing economic growth in the 2000s. Underlying this increase in public spending were reforms to improve the affordability of pharmaceuticals for vulnerable groups, invest in new diagnostic equipment for outpatient care, and ensure free access to inpatient care (Popovich et al. 2011). The share of out-of-pocket spending in total health expenditures, often a crude indicator of the degree of financial barriers to access to services, not only remains high (Figure 3.8) but has been increasing. Much of the increase in out-of-pocket spending has, however, occurred in richer areas, with most of the rise during 2005–12 concentrated in Moscow or St. Petersburg (Shishkin, Potapchik, and Selezneva 2014). By contrast, for the poor and for all groups except those living in Moscow and St. Petersburg, per capita inpatient out-of-pocket spending declined, reflecting the increase in free inpatient care and drugs. Inpatient care services have become much more pro-poor, especially for those over 65. Greater use of inpatient care by the elderly may be a consequence of lower financial barriers to access, but may also be due to higher financial barriers to accessing outpatient care.

Figure 3.8. Health Expenditure as a Share of GDP, ECA Region, 2014



Source: WHO 2012.

Note: GDP = gross domestic product, OOP = out-of-pocket spending.

268. Significant improvements in financial protection and equity have been achieved in the past two decades, but financial barriers to access are still a concern. The share of households making catastrophic health payments, defined as those for whom out-of-pocket spending exceeds 10 percent, 25 percent, or 40 percent of the monthly household budget, has declined quite remarkably (Figure 3.9 and 3. Figure 3.10). These improvements have been offset by substantial increases in out-of-pocket spending on outpatient drugs and services, particularly for the poor. Out-of-pocket spending on drugs, which are not included in the state guaranteed benefits package, tripled during 2000–12 after adjusting for inflation, while the share of patients who paid for outpatient care increased from 9 to 15 percent (Shishkin et al. 2014). The rate of growth in outpatient out-of-pocket spending was higher for the poor than for the rich. The share of those who paid for outpatient diagnostic tests and procedures has declined in line with improved public investment in this area. However, the fact that per capita out-of-pocket spending on diagnostic services

declined by 30 percent for those in big cities but increased for everyone else indicates that the residents of large cities may have been the primary beneficiaries of all the increased investment in diagnostic equipment. There has been little change in the distribution of use of outpatient services over time. For those aged 65 and over, outpatient care has become more pro-rich, and recent increases in utilization rates have been much greater in the big cities than elsewhere. Given the higher mortality due to NCDs among the less advantaged in Russia, this is of concern; greater access to primary and outpatient care for the prevention, detection, and management of NCDs is a priority. However, Russians were significantly less likely to forego care because of financial barriers to access in 2011 than in 2000 (Shishkin et al. 2014).

Figure 3.9. Share of Households Making Catastrophic Health Payments, Percent of Total Consumption

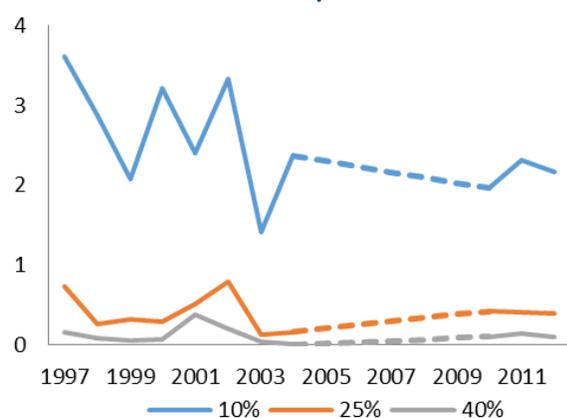
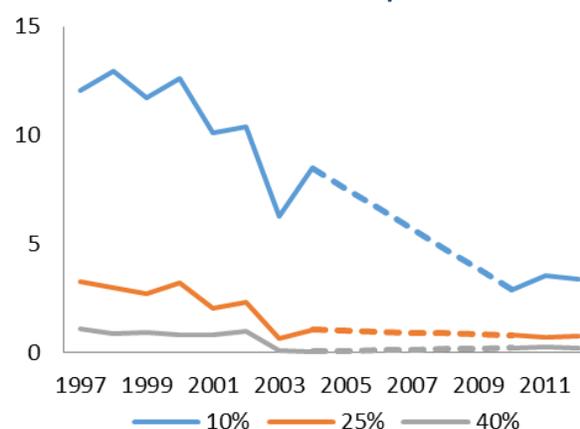


Figure 3.10. Share of Households Making Catastrophic Health Payments, Percent of Nonfood Consumption



Source: World Bank calculations based on Household Budget Surveys for the Russian Federation for 1997–2004 and 2010–12.

269. All this analysis points to an urgent need to increase not only the level of public health spending in Russia but also its quality and distribution. Recent increases have had a reasonably good impact on improving financial protection and access to inpatient care services. However, higher out-of-pocket spending on inpatient care by richer households and those living in large cities suggests that public health spending might fall short of providing high-quality, effective inpatient services. The increase in public health spending has been focused on inpatient care, leaving households to pay for half or more of all outpatient services, particularly drugs, with potentially adverse effects on use of outpatient care by the poor, especially the older poor. Given rapid aging and the high burden of NCDs, the Russian Federation needs to give urgent priority to cost-effective approaches to addressing NCDs, such as the pharmacological treatment of cardiovascular disease and diabetes. The latter would require reducing or eliminating the out-of-pocket cost of key outpatient drugs and strengthening access to good-quality outpatient care. Improving the efficiency of public spending would be a critical part of sustaining and expanding on recent gains in financial protection and equity.

270. In addition to its low levels, Russian health care spending is inefficiently allocated. Additional resources are needed to improve health outcomes, but these resources must be accompanied by reforms to increase value for money spent. The current configuration of health care provision, which emphasizes high-cost hospital and specialist care, limits the capacity of the system to adapt to emerging patient needs and reduces both its efficiency and its effectiveness. Despite a gradual reduction of hospital capacity in

the last decade, the number of hospital beds per 1,000 population in Russia is 1.6 times higher and the average length of stay 1.5 times longer than the EU average. The national average masks large regional disparities, with some sparsely populated regions having twice as many hospital beds per 1,000 population as more densely populated areas of the country. Health care is not geared toward health promotion and disease prevention. Outpatient services are underdeveloped, especially effective primary health care management of chronic diseases, outpatient surgery, day care and home care, and nursing care. At the same time, the number of general practitioners per 100,000 (47.2 in 2013) is significantly lower than the EU average (79.5) and has gradually decreased since 2010. The efforts of different healthcare providers that work with a patient are not sufficiently integrated.

271. There are significant regional variations in service delivery. In 2014, the number of physicians per 1,000 people varied from 81.5 in St. Petersburg to 26.5 in the Republic of Chechnya. The number of outpatient visits varied from 12.4 per person in Moscow city to 5.1 in the Republic of Chechnya. The largest number of beds per 10,000 people is in Chukotskiy Autonomous Okrug (132.4) and in other regions in the Far Eastern part of the Russian Federation, including the Republic of Sakha (Yakutia; 106.4 beds), Magadanskaya oblast (116.7 beds), and Sakhalinskaya oblast (115.7 beds). The smallest hospital capacity is in the Republic of Ingushetiya, which has 49.2 beds per 10,000 people. Some of the poorest regions appear to be at a disadvantage. Geographical dispersion likely contributes to increasing the needs for hospital beds. But the fact that Russia, like other ECA countries, has a high number of hospital beds can also be linked to the socialist legacy.

272. The rural population has much less access to medical care than those in urban areas. The average number of doctors in the Russian Federation was 44.7 per 10,000 people in 2012, but rural areas had just 13.1. The number of doctors per 10,000 persons in urban areas is 4.3 times higher than in rural areas (Schepin 2013). In 2014 the rural population had 37.7 hospital beds per 10,000 people, while the urban population had 103.8. Similarly, outpatient capacity in rural areas is one-third of that in urban areas. Respondents from rural areas are twice as likely as those from urban areas to say that they did not visit a doctor because it was difficult to reach a medical facility.¹⁰¹

Health Policy Priorities

273. Reducing high mortality rates in Russia, in particular among working-age adults, who are most at risk from cardiovascular diseases and cancer, would have a major impact on economic and social welfare. Perhaps the greatest improvement would come with increasing reliance on primary health care and emphasizing primary care disease detection, prevention, and management (for example, by improving access to out-patient drugs for high blood pressure and cholesterol). Continuing efforts to encourage healthier behavior through health promotion efforts and higher tobacco and alcohol taxes would also contribute. At the same time, better coordination between professionals and organizations working in primary, secondary, and tertiary care could improve outcomes for specific types of patients.

274. Although health spending is low, within the resource envelope there is an opportunity to make health care more efficient and raise quality. Development of a transparent benefit package that would take into account public demand for health care, the resource envelope, and technical assessments of effectiveness would make health care more efficient. The introduction of modern, evidence-based clinical protocols and quality assurance systems for providers could improve the quality of care. Excessive hospital infrastructure should be reduced by closing hospitals and drafting master plans for optimizing the health care delivery network in every region. The introduction of patient-based provider payments could improve the efficiency of health financing. Finally, the use of information technology could both improve services and save money. For example, electronic health records could make it easier to coordinate care,

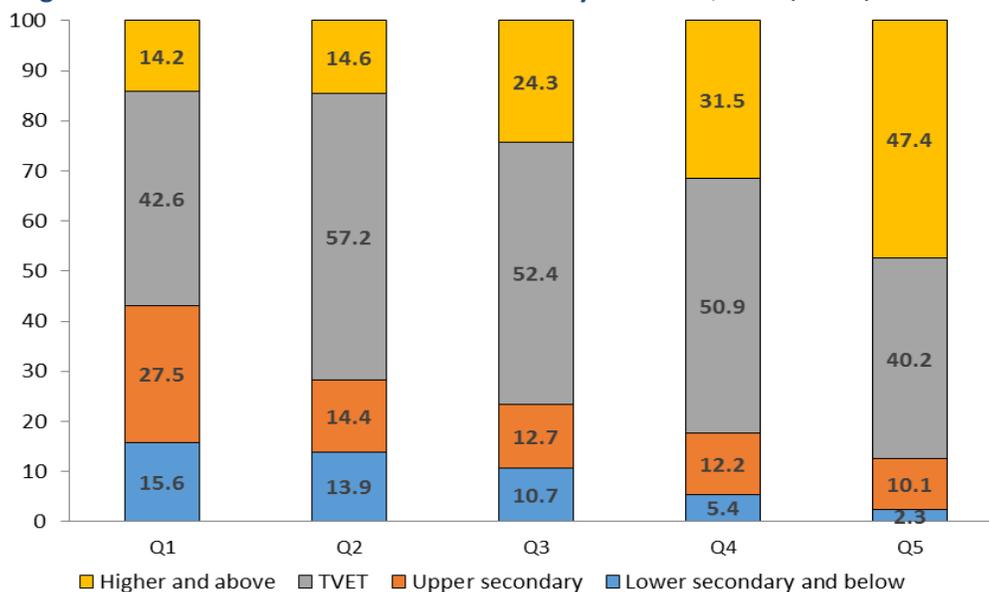
¹⁰¹ Source: Rosstat.

and standardized cost-accounting systems could identify inefficiencies and improve resource management.

The Quality of Education Outcomes Falls after Primary School

275. The Russian workforce has considerable educational attainment—though large differences exist between population groups. More than half (54.3 percent) of 25–64-year-olds have some tertiary education (short-cycle tertiary, degree, or equivalent), compared to an average of 35.9 percent in OECD countries. Educational attainment is highly associated with income: The share of the population with college education and above ranges from 14.2 percent for the bottom income quintile to 47.4 percent for the top (Figure 3.11); this contributes to inequality and limits the potential for upward mobility from early on. The quality of education is, however, unequal across socioeconomic groups: schools with lower results in the Program for Institutional Assessment (PISA) evaluations and a poorer learning environment have more students of low socioeconomic status (e.g., large families, families with unemployed parents, or families with Russian as a second language).

Figure 3.11. Russian Educational Attainment by Income Quintile, 2014, Percent



Source: RLMS-HSE 2014.

276. Despite relatively high levels of education, the quality of education and skills is insufficient and decreases after the primary level. While performance outcomes are high at the primary level, students lose their edge against their OECD peers in secondary and post-secondary education (Nellemann, Podolskiy, and Levin 2015). While Russian primary school students are among the best readers and demonstrate a high level of math and science literacy according to the results of Progress in International Reading Literacy Study (PIRLS) and Trends in International Mathematics and Science Study (TIMSS), Russia’s achievements on PISA in reading, math and science for 15-year-olds are modest, most notably in the area of knowledge adaptation and problem-solving skills. The skills gap grows even wider as Russian students enter the labor market and grow older (Vasiliev et al. 2013; Nellemann et al. 2015).

277. The national government defines the curriculum framework, the conditions for its delivery, and the expected learning outcomes through national standards of education. The Ministry of Education and Science is responsible for formulating the national standards for all levels of education. There are official requirements for the minimum education, curriculum, and skills students must attain in every subject by

every grade; these national standards need to be developed to provide more adequate skills for the labor market. Further concentration on the development of soft (nongenerative) skills is important and is included in the new National Educational Standards for primary and secondary education. In addition, assessment tools for soft skills are now being developed and piloted. The work on national standards is a big step toward improving educational quality and increasing teacher autonomy and school accountability.

278. Despite increasing pay, performance incentives for teachers in Russian schools could be strengthened. The nominal value of teacher salaries has been on an upward trend since 2000. In 2012, a Presidential Decree was issued stipulating that teachers are to be paid no less than the overall average salary in their regions. In 2014, the national average for teacher salaries was equal to 97.6 percent of the national average salary and ranges in the regions from 93.1 to 111.3 percent. However, there is inadequate recognition of excellence or incentives for performance or training. Teachers' performance can influence their promotions and compensation, and teachers can be dismissed for absenteeism, misconduct, and child abuse but not for poor performance. In addition, while teachers need substantial time for other tasks outside of class time, official teacher duties do not include any of the most common tasks related to instructional improvement (Vasiliev and Rogers 2014). A teacher's salary is determined mostly by length of work history, contract status, and workload. Linking teacher remuneration to performance and learning outcomes is a challenge that is being given attention at national and regional levels. Mechanisms to tie salaries to performance are being piloted in several regions.

279. The current and future Russian workforce lacks the skills and competencies demanded by employers. According to the results of the World Bank BEEPS (2011–12), employers identify difficulties in finding workers with the right skills as one of the main constraints to their businesses. Chapter 2 discusses issues of skills mismatch in more detail. The OECD Program for the International Assessment of Adult Competencies (PIAAC) study,¹⁰² which assesses the professional skills and competencies of the working-age population in OECD countries, finds that blue-collar workers have particularly limited basic competencies (reading, math, problem-solving) due not only to less education but also to lack of opportunities to learn during their work life through tasks that develop those skills.

280. Skills gaps increase with age because adult education and on-the-job learning are limited (figures 3.12 and 3.13). Age and adult competencies have a complex relationship in Russia. Basic competencies do not vary much throughout the lifecycle, although they present some possible cohort effects because they peak in middle age (possibly linked to the 1980s focus on generic problem-solving abilities) and are at their lowest for those currently in their early 30s (who were most affected by the deterioration in education during the transition). However, on-the-job learning as well as ICT and other skills particularly ebb for older age groups, significantly eroding the skill base of older workers. Russia lags significantly behind European peers in adult participation in both formal and nonformal education; it also lacks a comprehensive framework for adult education. In 2013, only 27 percent of Russian adults were engaged in some form of adult learning. This is less than half the figure for the Nordic countries and significantly lower than East European peers like Slovakia, the Czech Republic, and the Baltic States, which are confronted with similar challenges of low productivity and an aging labor force.

¹⁰² The PIAAC is a program that assesses the professional skills and competencies of the working-age population (aged 16–65) in OECD countries, with about 5,000 people interviewed in each country. The survey for Russia is not fully representative as it excludes the population of the Moscow municipal region.

Figure 3.12. Basic Cognitive Skills, Russia, by Age Group

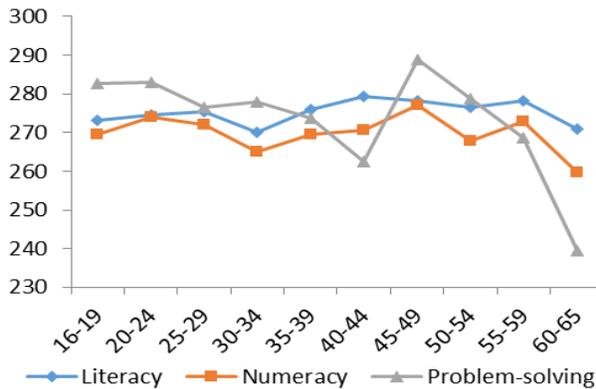
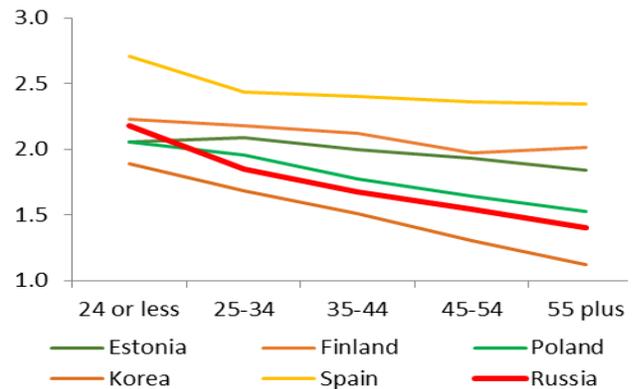


Figure 3.13. Index of Learning at Work, by Age, 2012, Russia and Comparator Countries

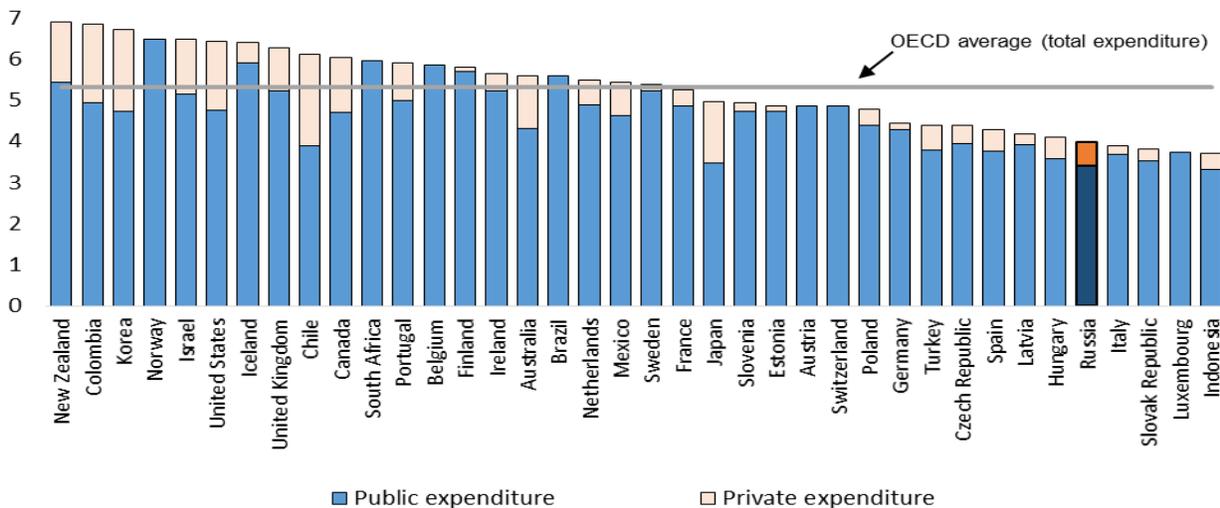


Source: OECD PIAAC.

Investment in Education Is Low

281. Investment in education across the lifecycle is crucial for productivity, but Russia invests less in education, 4 percent of GDP, than the OECD average of 5.3 percent (Figure 3.14). Russia allocates 10.4 percent of the total government budget to education—a small share compared to the OECD average (11.6 percent) and to shares in countries like Brazil (17.2 percent) and Mexico (18.4 percent). Despite a substantial increase in real spending in 2005–12, Russia spends less on education per student¹⁰³ than would be expected given its GDP per capita (OECD 2015). Education financing in Russia is oriented to general education, while private funding is mostly focused on tertiary education, where it accounts for almost a third of overall education financing, compared to 30.3 percent in OECD countries. This is in contrast with low private spending on primary, secondary, and postsecondary nontertiary education (3.3 percent, compared to 9.4 percent in OECD countries).

Figure 3.14. Spending, Primary through Tertiary Education, 2012, Percent of GDP



Source: Education at a Glance 2015: OECD Indicators, OECD.

Note: The figure shows total spending on education from primary to tertiary level.

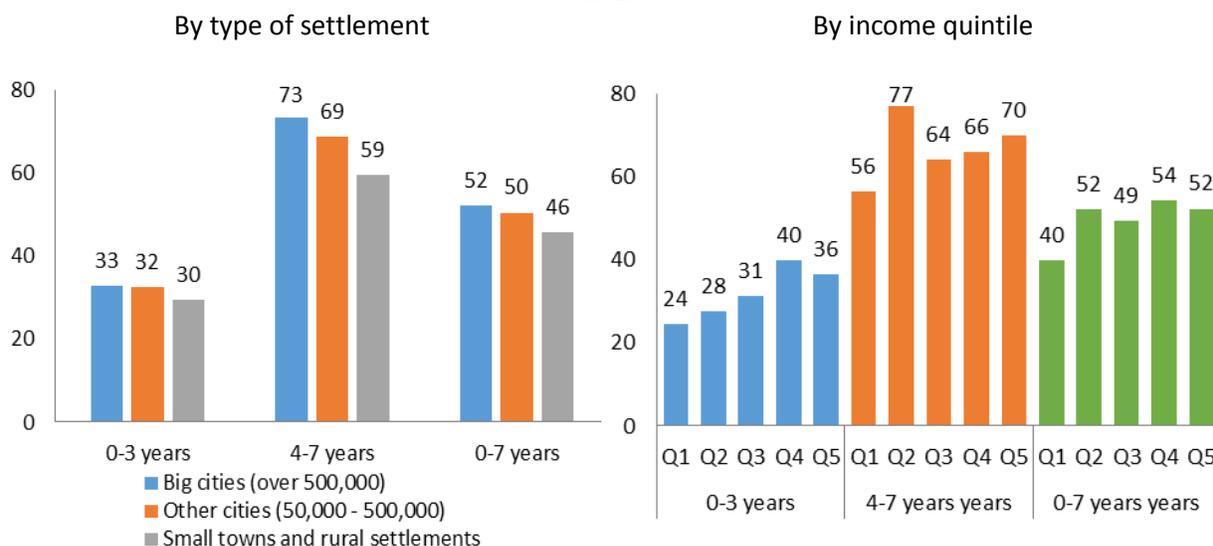
¹⁰³ In U.S. dollar purchasing power parity.

282. The government initiated a new infrastructure program in 2015 to eliminate double shifts in schools, whereby one group of students is taught earlier in the day and a second group later. This new national program aims to expand the overall capacity of the primary and secondary school network over 2016–25 with an investment of US\$50 billion to meet student demand and the new requirements of education programs. It will be important that planning, construction, and supervision for this investment are supported by interagency collaboration, research, and the use of efficient construction and technology standards (including taking into account energy efficiency). Policies related to teacher workload and teaching standards also will need to be adjusted once double shifts are eliminated.

Inequality in Access to Quality Education Is Growing

Given the centrality of early childhood development (ECD) for the acquisition of noncognitive skills, it is worrying that enrollment in ECD and preprimary education in Russia is low and services are of poor quality. Preschool coverage is minimal for children up to age three and additional places needed in preschool establishments increased from 1.2 million in 2006 to 2.8 million in 2014.¹⁰⁴ All Russian regions have significant shortages of kindergarten places for children aged 4 to 7. There is a serious risk of declining quality in preschool institutions due to overcrowding. Russian regions are making efforts to increase net enrollment, but the problem persists. Budget constraints are likely to slow the expansion of public services and private provision is low despite the demographic pressures on demand.

Figure 3.15. Children Attending Preschool, by Age Group, Type of Settlement, and Income Quintile, 2014



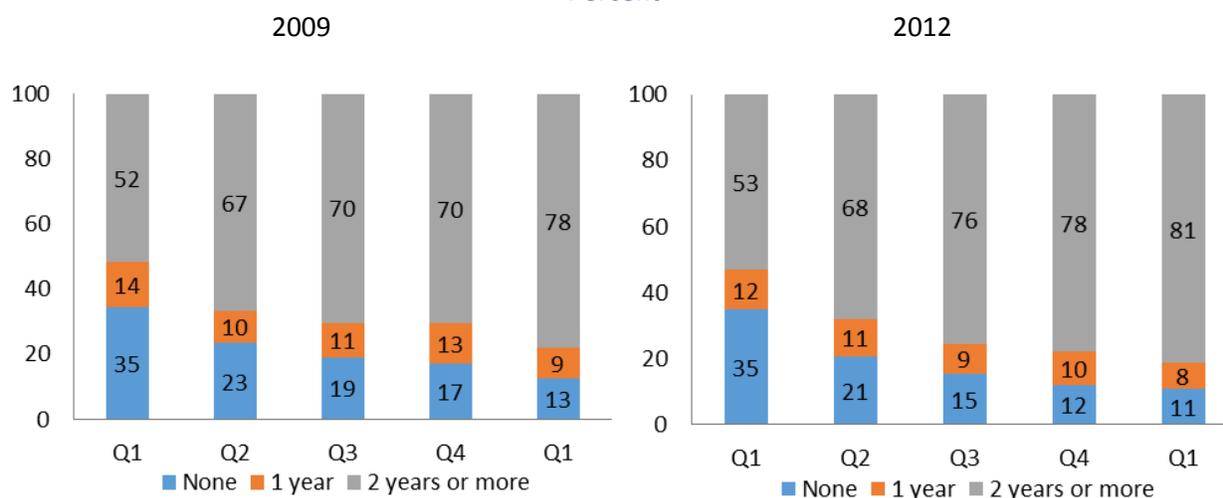
Source: RLMS-HSE 2014.

283. In addition, the provision of preprimary schooling is very uneven across the country and skewed to the wealthier segments of the population (Figure 3.15), potentially hindering economic mobility across generations. The share of 15-year-olds with at least two years of preprimary education increased by up to 8 percentage points for children of high socioeconomic status between the 2009 and 2012 PISA rounds, but the change in the share of children from the bottom 40 percent of the population was negligible (Figure 3.16). Public spending on preprimary education is neither efficient nor equitable: the

¹⁰⁴ Source: Federal Service for State Statistics.

current beneficiaries are likely to be wealthy enough to contribute at least partially to the financing,¹⁰⁵ which could free up resources that could be used to increase coverage in deprived rural areas. ECD interventions have larger spillover effects on poor families because they are associated with improvements in a variety of welfare and other outcomes (school performance, likelihood of committing crimes, health outcomes, and receipt of welfare payments¹⁰⁶).

Figure 3.16. Participation in PISA by Income Quintile and Preprimary Education, 2009 and 2012, Percent



Source: OECD 2014.

284. Regional inequalities in funding for primary and secondary education pose a threat to access. Decentralization in Russia has led to rising inequality in the availability of funds for local education authorities. Rural regions are especially likely to suffer because they are often poorer and have little access to high-quality education. Regional variations are exacerbated by the fact that higher-income regions tend to spend more on education from both public and private resources (World Bank 2012).

285. The government's policy of supporting the best-performing schools has also widened the gap between poor- and well-performing schools. The gap concerns inputs and financial and cadre resources provided to schools and outcomes as measured by test results. Poor-performing schools, which tend to have students from less-advantaged socioeconomic circumstances, get fewer resources as the government channels more money to high-performing schools (see, for example, the case of Moscow outlined in Box 3.2). This means that the more disadvantaged schools enter a vicious circle of ever-worsening outcomes and ever-fewer resources.

¹⁰⁵ Russian families with the highest level of incomes are able to contribute 10 times more than the most deprived population (World Bank 2014).

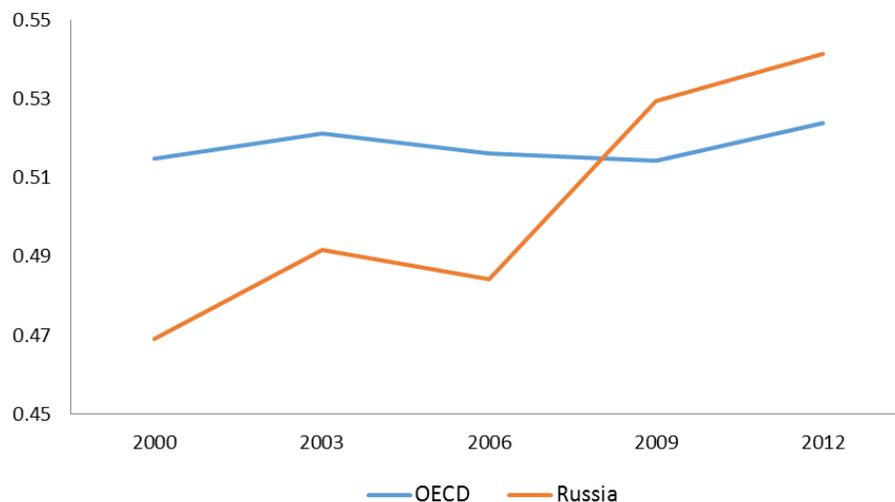
¹⁰⁶ See, for example, Barnett 2006, 2008; Barnett and Belfield 2006; Cunha et al. 2006; Dahl and Lochner 2008; Heckman 2007; Lynch 2004; and Schweinhart et al. 2005.

Box 3.2. An Example of Government Policy to Support the Best-Performing Schools in Moscow

In recent years, schools in Russia have been ranked in terms of performance. For example, in Moscow, there is a popular list called the “Top 300” that ranks the best-performing schools in the city. School performance is measured based on the results of the Matura Exam (Unified State Examination) at Grade 11, the Final State Examination at Grade 9, and interschool competitions (school Olympiads). The first 170 schools on the list receive financial grants from the city mayor. Schools have discretion as to how they spend the grants they receive, for example to purchase equipment or on school maintenance and repairs.

286. Social stratification in Russian schools, which has increased significantly in the last decade, is among the highest for European countries. In 2000, Russia’s score on the Index of School Social Segregation¹⁰⁷ was similar to good performers like Canada or Denmark. Since then it has deteriorated faster than in any other high-income country: today, schools in Russia are more socially segregated than the OECD average, similar to low-performing OECD countries like France, Greece, or the U.S., and closer to Latin American countries (Figure 3.17). A similar trend is evident in class repetition dynamics: in 2012, students of low socioeconomic status were 2.3 times more likely than others to repeat, compared to only 1.3 times in 2000. The 2012 OECD average was 1.6.

Figure 3.17. Index of Social Segregation of Schools (PISA)



Source: OECD PISA data.

287. Access to higher education, as measured by tertiary education enrollment as a percentage of the student-age population, continues to rise, reaching 78 percent.¹⁰⁸ Higher participation in tertiary education is promoted by a shrinking of the age cohort studying in higher education institutions due to demographic developments—meaning that there are more tertiary education places available for a

¹⁰⁷ The Index of School Social Segregation is defined as the correlation between the socioeconomic status of a student participating in PISA and the average socioeconomic status of all students in the student’s school. In a world without social segregation (an index equal to zero), families from different socioeconomic backgrounds would randomly settle across the country and students from different backgrounds would study together, making schools more diverse. However, households tend to locate in neighborhoods with similar households, and students tend to attend school with peers who have similar socioeconomic status as a result of geographic inequalities. Although causal relations cannot be established, countries with high levels of PISA performance tend to be less socially segregated.

¹⁰⁸ Source: Data for 2013 from World Bank’s *World Development Indicators*.

smaller student-age population. Given the shrinking of younger age cohorts, according to the Federal State Statistical Service, the number of students in higher education fell from 7.5 million in 2008 to 4.8 million in 2015. In 2009/2010, about half of the graduates of upper-secondary schools were given state-financed places in universities and other institutions of higher education. This may not represent the most efficient use of public funds.

Policy Priorities for Education across the Lifecycle

288. Increased spending on education is essential to improve skills and increase the productivity of the labor force. Minimal funding of ECD and tertiary education has reduced the quality of education outcomes at these levels. A lack of investment has also resulted in school infrastructure needs: about 13 percent of schools in 2014 were in need of capital repair.¹⁰⁹ Although most resources are devoted to salaries (about 81 percent of public spending on schools is for personnel), teachers are undertrained and poorly motivated to perform. Increased public spending will also be necessary to reverse the deterioration in equality in public education. Fiscal decentralization has meant increased funding per student in richer regions while less wealthy regions have suffered from chronic shortages. Increasing support to poorer regions and rethinking resource allocation across regions and schools is essential to decrease (or at least avoid increasing) inequality.

289. Providing lifelong learning to help workers refine their competencies and acquire skills in high demand is essential to build an innovative economy in an aging society. The education system needs to focus more on noncognitive and higher-order cognitive skills. This requires addressing problems that affect the quality of education, especially—but not only—post-secondary (vocational and tertiary), and to give priority to teaching skills that are in demand by firms. Lifelong learning will be important to enhance the productivity of older workers, given the shrinking labor force. Priorities include: (1) establishing and refining the legal framework for adult education; (2) designing a structure for adult education; (3) improving the methodology of service provision; (4) training staff; (5) promoting demand through awareness campaigns and financial incentives; (6) organizing public-private partnerships and giving the private sector a larger role; and (7) defining professional standards and competencies (Nelleman et al. 2015).

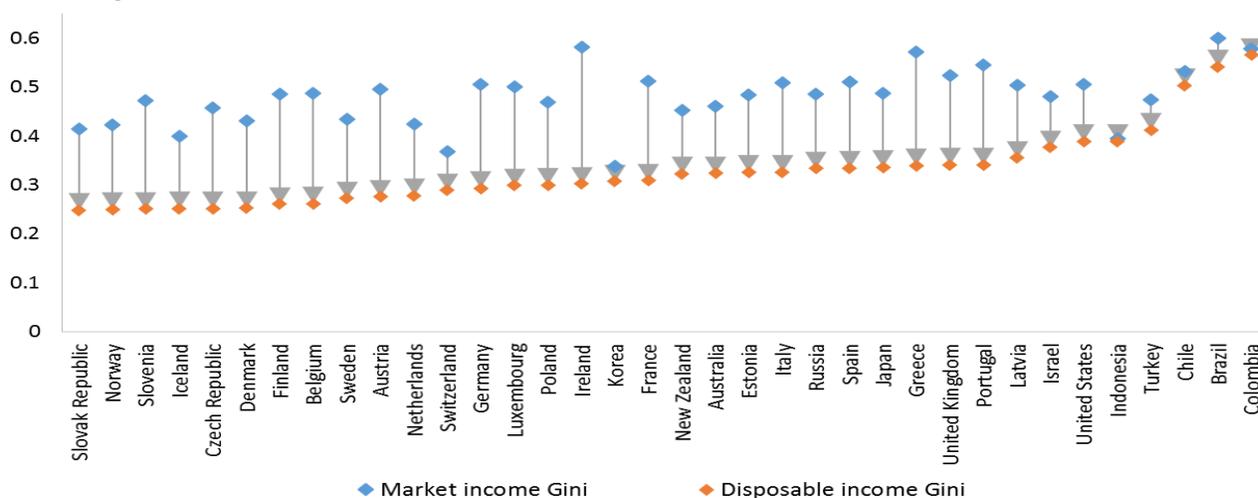
Enhancing the Impact of Social Protection Spending for Shared Prosperity

Using Public Spending and Taxes to Reduce Inequality

290. Russia's fiscal policy is achieving a moderate reduction in income inequality (Sinnott, Matytsin and Popova 2016). It has an impact similar to the fiscal policies of Japan and Estonia and a larger impact than those of Brazil, Chile, Colombia, Turkey, and the U.S. (Figure 3.18). Inequality of market incomes as measured by the Gini coefficient is 0.485, which falls to 0.30 after the impact on incomes of taxes, transfers, and in-kind services in education and health is taken into account—a decrease of 0.18, 38 percent (Table 3.2). Most of the reduction comes through direct taxes and transfers, mainly pensions, which reduce the Gini by 0.15 percentage points, 31 percent. Indirect taxes, which are regressive in Russia, increase inequality slightly. In-kind transfers, i.e., education and health services, are—as is usually the case—progressive and in Russia reduce the Gini by 3.7 percentage points.

¹⁰⁹ Source: Rosstat.

Figure 3.18. Gini Coefficient Before and After Taxes and Transfers, Selected Countries



Source: Gini before and after taxes and transfers are from OECD for all OECD countries and from the Commitment to Equity country papers for the remaining countries. Russia's data are for 2014 and taken from Sinnott, Matytsin and Popova (2016). Government spending as a share of GDP is from the WDI.

Notes: The OECD assumes that pensions are a government transfer and social insurance contributions are a tax. In-kind spending on education and health is not included in the calculations for OECD countries.

Table 3.2. Russia: Fiscal Policy and Inequality, 2014

	Market Income	Disposable Income (+ net direct taxes and transfers)	Consumable Income (+ net indirect taxes)	Final Income (+ transfers in-kind)
<i>Contributory pensions as government transfers</i>				
Gini index	0.485	0.334	0.337	0.300
Absolute change from market income	--	-0.15	-0.15	-0.18
Percent change from market income	--	-31.2	-30.5	-38.1
<i>Sensitivity analysis: Contributory pensions included in market income</i>				
Gini index	0.358	0.334	0.337	0.300
Absolute change from market income	--	-0.02	-0.02	-0.06
Percent change from market income	--	-6.8	-5.8	-16.1

Source: Sinnott, Matytsin and Popova (2016) based on RLMS-HSE-2014 data.

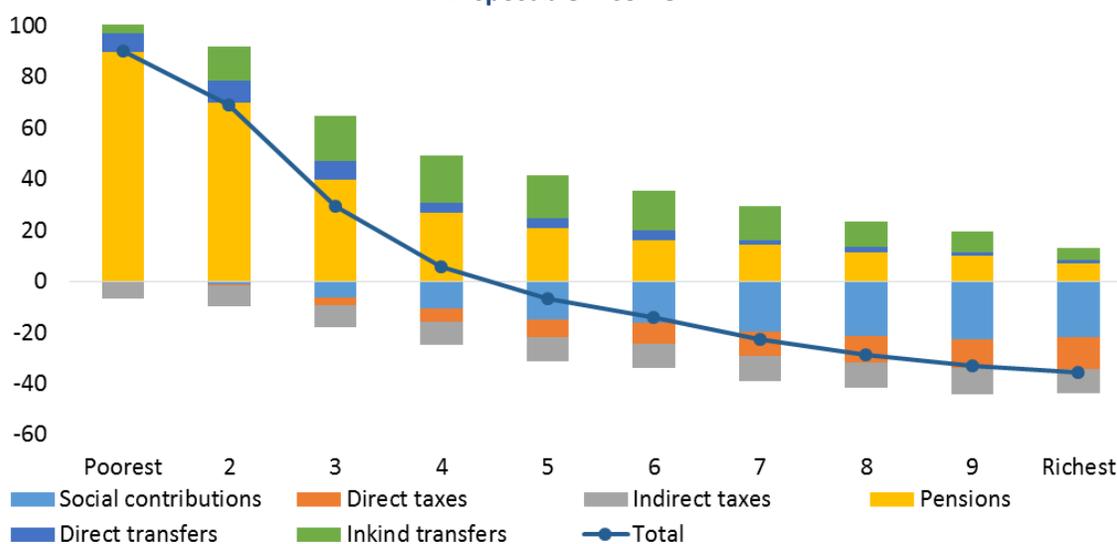
Notes: There is a large difference in the redistributive impact of net direct taxes (moving from "market" to "disposable" income) depending on whether pensions are considered deferred income and social insurance contributions as mandatory savings or a government transfer and social insurance contributions as a tax.

291. There is some debate about whether to consider contributory pensions as a transfer and social insurance contributions as a tax or to treat pensions as deferred income and social insurance contributions as mandatory saving. If pensions are not classified as a transfer, the redistributive impact of Russia's fiscal system almost disappears. Because the Pension Fund has had a continuous and growing deficit and a large part of contributory pensions is financed from general revenues, there seems to be

little distinction between contributory and noncontributory pensions. The Pension Fund deficit reached almost 3 percent of GDP in 2015; together with transfers for special and merit pensions, this means that the central budget financed half of the Pension Fund’s expenditures. For purposes of this analysis, pensions are therefore considered to be government transfers and social insurance contributions as a tax.

292. While pensions benefitted from increased public spending during the boom and helped to reduce poverty, Russia could have achieved more redistribution by focusing spending rises on programs that benefit the less rich (Figure 3.19). In-kind spending, particularly on health, gained much less from increased oil revenues than did other spending items. Given Russia’s poor health outcomes and high health inequalities, this is of concern. Health programs to help prevent risky behaviors are both relatively cost-effective and well-targeted to low-income groups, which are more likely to engage in unsafe habits. Means-tested social protection programs have a limited role in Russia—public pensions dominate social protection spending. There is wide variance in the incidence of social protection programs and a low share of means-tested programs social assistance spending. Moreover, state social assistance does not seem to be well targeted. There would then seem to be room to redirect current social protection spending to more effectively reduce poverty and inequality.

Figure 3.19. Distributional Impact of the Tax and Benefit System, Pre-Fiscal Deciles, 2014, Percent of Disposable Income



Source: World Bank calculations based on RLMS-HSE 2014 data.

293. Here the analysis has concentrated on vertical equity, but there is also evidence of major differences in how fiscal policy affects different groups. Couples with one child and adults with no children subsidize other groups. Larger families benefit more from the fiscal system. And ultimately the system does protect those of pension age from poverty: Older people are the greatest beneficiaries of Russian fiscal policy.

The Social Protection System

294. Russia has an extensive system of social protection programs dominated by pensions,¹¹⁰ followed by social assistance benefits. Active labor market programs (ALMP) are not particularly well-developed and most are delivered in the form of social assistance programs.¹¹¹ The number of programs is staggering: there are more than 150 federally-mandated social assistance programs and probably more than 500 regional programs.

295. Social protection, particularly pensions, absorbs significant resources. Social protection accounted for 13.2 percent of GDP in 2013 and 12.3 percent in 2014 (

296. Table 3-3). About three-quarters of this spending finances social insurance programs, such as old-age, disability and survivors' pensions, and other programs that provide benefits to contributors in case of sickness, maternity, or unemployment. Noncontributory social assistance programs in cash and in-kind channel the remaining 25 percent.

Table 3-3. Russian Federation Consolidated Budget: Social Protection Spending, 2006–15, Percent of GDP

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Social protection spending	8.8	8.6	9.1	12.2	13.3	12.2	12.4	13.2	12.3	12.4
Pensions	5.5	5.2	5.6	7.5	8.8	8.2	8.4	9.2	..	..
Non-pensions social insurance	0.7	0.8	0.8	1.1	1.0	0.8	0.8	0.8	..	..
Social assistance	2.0	1.9	1.8	2.7	2.8	2.7	2.7	2.7	..	..
<i>Of which: means-tested social assistance</i>	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>0.5</i>	<i>0.5</i>	<i>0.4</i>	<i>0.4</i>	<i>0.4</i>	..	..
Social services	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	..	..
Other social protection	0.3	0.4	0.6	0.5	0.3	0.2	0.1	0.2	..	..

Source: Ministry of Finance, Rosstat, IMF, and World Bank. Data for social services are from Zubarevich and Gorina (2015).

Note: .. = Not available for a specified reference period.

297. Coverage of social protection programs extends over the entire income distribution and compares well internationally. Three-quarters of the population report benefitting from some form of social protection. Coverage of the bottom 20 percent is 90 percent, one of the highest coverage rates in the world. Looking at individual programs, 47.5 percent of Russians report benefitting from pensions¹¹² and 61.1 percent from social assistance programs. The coverage of the bottom quintile by pensions is somewhat higher (56.1 percent) and is even higher for social assistance programs (76.2 percent). Richer deciles also report high coverage: 47 percent for the ninth decile and 59 percent for the tenth. However,

¹¹⁰ The pension system in Russia comprises old-age and disability and survivors' pensions, which are both insurance, as well as social pensions for those who do not qualify for the insurance pension.

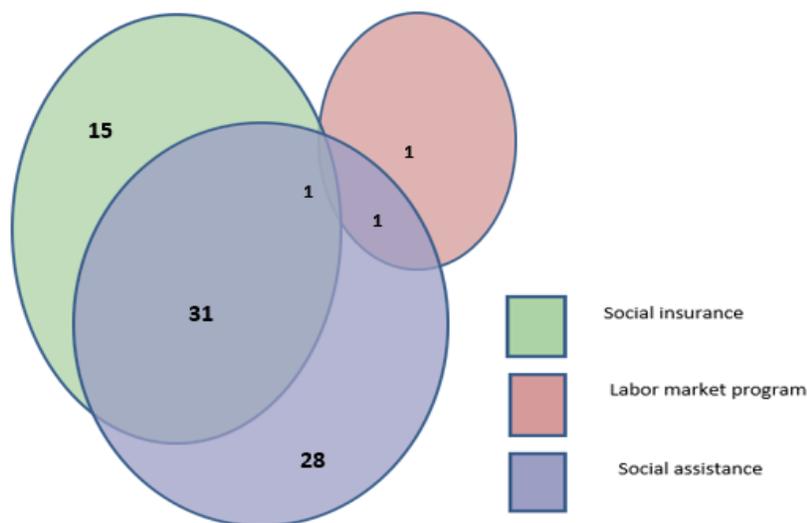
¹¹¹ For example, social assistance programs based on the "social contract," whose objective is to strengthen the productive capacity of low-income individuals engaged in activities such as farming or low-paid self-employment, are essentially interventions in the labor market.

¹¹² This high coverage rate is due to two factors: almost full employment as part of the Soviet Union and the introduction of the social pension in the early 1990s. The social pension (80 percent of the basic labor pension) is for individuals who do not have the necessary length of service to qualify for the insurance (labor) pension). It is available at age 65 for men and 60 for women.

almost 45 percent of the bottom 20 percent reported no income from pensions, and almost 25 percent no reported income from social assistance programs.

298. Pensions and social assistance programs overlap considerably (Figure 3.20). Almost a third of the population reported receiving transfers from both pensions and social assistance. While some overlap should be expected, particularly at the bottom of the distribution, the magnitude of the overlap suggests that in many cases social assistance is used to compensate for low pension benefits.

Figure 3.20. Coverage of Social Protection Programs, 2014, Percent



Not receiving benefits: 25 percent (among the poor 10 percent)

Source: Rosstat survey 2014.

299. The recent fiscal crisis has illuminated the weaknesses of the current social protection system and reopened the debate on how to protect the population efficiently and effectively, especially those with low incomes, against financial shocks over the lifecycle. For pensions, the main questions concern pension system adequacy, which is relatively low, and fiscal sustainability, which is precarious. For social assistance, the main questions relate to reorienting programs to the low-income population, consolidating programs, simplifying the system, and making it more transparent and easier to understand and operate. Resolving these issues would lead to a more efficient and effective social assistance system that is flexible, protects those in need, and is cost-effective.

300. For the last 25 years this debate has surfaced every time the fiscal situation tightens. However, the political economy of social protection reform is complex, and the system has proven to be resistant to change. After each economic recovery and improvement in the fiscal situation, the need to restructure loses urgency. The fact that social protection is governed by an enormous body of federal and regional laws and that changes usually require decisions by legislative bodies has made reform difficult, time-consuming, and not always effective in achieving the intended outcomes.

Pensions Have the Largest Impact on Reducing Poverty and Inequality

301. Social protection as a whole has a considerable effect on poverty and inequality. While the impact of social protection on the poverty gap differs somewhat depending on the poverty line used, it is always significant (Table 3-4). Without social protection transfers the incidence of poverty would more

than double and inequality as measured by the Gini index would go up almost 30 percent. This situation is comparable to other countries that spend similar resources on social protection.

302. Pensions have more impact than social assistance on poverty (Table 3.4). Pensions are a substantial transfer (9.2 percent of GDP) and the elasticity of poverty with respect to pensions is high: for every 1 percentage point of GDP spent on pensions, poverty declines by about 1.6 percentage points. The poverty impact of pensions is amplified by social assistance for those whose insurance-based pension is below the minimum regional threshold. About one-quarter of spending on social assistance (about 0.7 percent of GDP) is allocated to transfers to pensioners, of which about one-third (0.22 percent of GDP) is in the form of federal and regional additions to pensions that are below the regional minimum standard of living.¹¹³ Social assistance has much less impact on poverty and inequality than pensions. Without social assistance, the incidence of poverty would increase by about 15 percent (the poverty gap would increase by 35 percent¹¹⁴) and the Gini index would increase by about 5 percent. This is because social assistance is much smaller and the elasticity of poverty with respect to it (1.33) is lower than for pensions. The results should be interpreted with caution, however, because household survey respondents would not be able to differentiate pensions from social assistance top-ups and additions to pensions, since they are delivered together as a single payment. The impact is similar to the EU-27¹¹⁵ average and other countries with similar social protection/social assistance spending (World Bank 2015).

Table 3-4. Impact of Poverty and Inequality, Social Protection and its Components, 2014¹¹⁶

	Impact on poverty gap with relative PL*	Impact on poverty gap with official PL**	Impact on inequality***
All social protection	-68%	-79%	10.5
All social insurance	-62%	-73%	8.1
All labor market programs	-1%	-2%	0.1
All social assistance	-25%	-35%	1.9

Source: Statistical Survey of Income and Participation in Social Programs, Rosstat 2014.

Notes: * PL refers to the poverty line. Without social protection transfers, poverty would increase to 38 percent and the poverty gap to 21.7 percent of all incomes. ** Inequality is measured by the Gini index, which would increase from 0.373 to 0.478 if there were no social protection transfers. *** A positive number indicates a reduction in inequality. According to the Commitment to Equity (CEQ) analysis (Sinnott, Matytsin and Popova 2016) carried out using RLMS-HSE data for 2014, the impact of pensions on the poverty headcount is 50 percent, which is almost exactly equal to the reduction in the poverty headcount estimated using Rosstat 2014 data. In the CEQ analysis inequality falls by 15 percentage points; Rosstat data suggest a similar order of impact but somewhat smaller.

¹¹³ Although these transfers to pensioners flow through the social assistance system, because they are essentially an addition to a pension, ideally they should be recognized as such and administered through the pension system, with clear, uniform rules across the country. Alternatively, this benefit could become a means-tested household transfer, in which case it would be a proper social assistance program.

¹¹⁴ It should be noted that half of this impact is generated by the maternity capital transfer, so removing it from the current social assistance transfers reduces the impact of social assistance by half.

¹¹⁵ EU-27 Member States are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

¹¹⁶ The welfare indicator does not include imputed housing rents for owner-occupied dwellings. Social assistance includes maternity capital, a one-off transfer to a household for a newborn, which is deposited in a savings account with very limited options for financing current household consumption. In this sense, it should be treated in the same way as other savings when estimating household income and consumption.

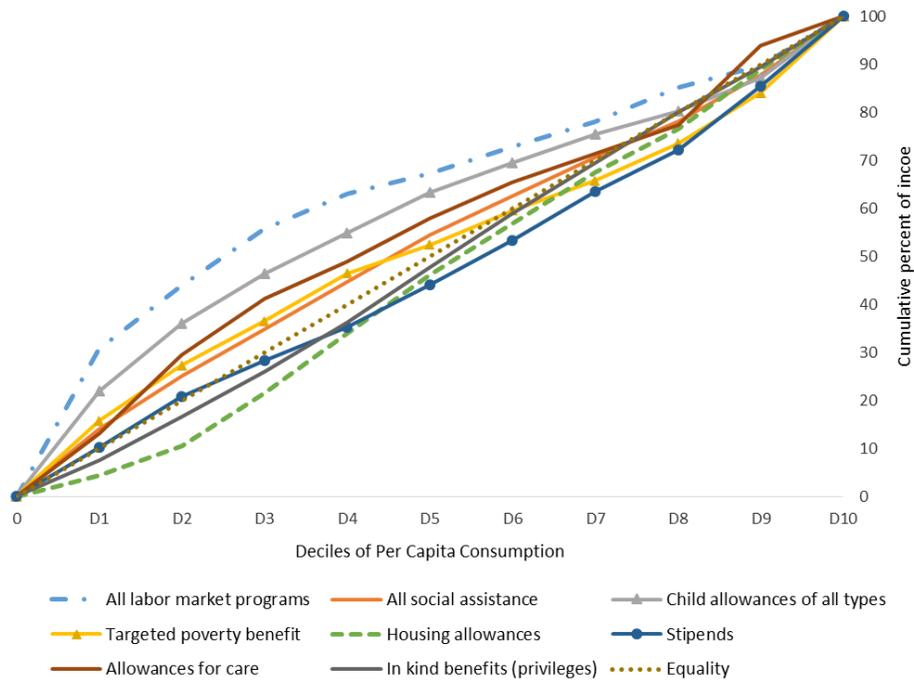
Social Assistance Spending Can Be Made More Efficient and More Effective

303. Only a minimal share of social assistance programs goes to the poor. Just one-quarter of all beneficiaries belonged to the bottom 20 percent, and they received only one quarter of all resources allocated to social assistance. This is fairly low compared to countries with better targeting (50 percent or more of all benefits go to the bottom 20 percent, and 75-80 percent to the bottom 40 percent of the income distribution). Household, family-based, and means-tested programs are scarce and receive only 15 percent of all spending on social assistance, 0.4 percent of GDP.¹¹⁷ Social assistance programs targeted at low-income households covered more of the poor—40 percent of the beneficiaries were from the bottom 20 percent of the population. However, they received only about 27 percent of the resources allocated to this type of program, while recipients in the bottom 40 received about 47 percent. The limited resources for targeted programs contradict the principal rationale for social assistance: to help the poor, the vulnerable, and the marginalized. A better balance between individuals and families in social assistance programming and a tighter focus on need rather than merits would make social assistance more effective.

304. Coverage of social assistance and its components at the national level is good, but although mildly progressive benefit incidence could be much improved (Figure 3.21). On average, social assistance covers 60 percent of the population and is much higher in the two bottom deciles (80 percent for the bottom 10 percent and 75 percent for the bottom 20 percent). But richer deciles also report relatively high coverage. At 62 percent only child benefits have coverage above 50 percent. Coverage of the bottom decile by income-tested programs is only 20 percent, compared to 12 percent for the top 20 percent. Although child allowances are the best-targeted programs, even there only 36 percent of resources reach the poorest quintile and only 53 percent reach the bottom 40 percent of the population. Resources are spread over many programs, often contributing little to the income of the beneficiaries: most programs constitute just 2–3 percent of recipient incomes; at 8 percent child-related benefits are an outlier. This is far below the better-performing program benchmark of at least 15 percent of the income of the poorest.

¹¹⁷ The three main types of means-tested programs in Russia are child allowances (received by 30 percent of families with children), housing allowances (received by less than 9 percent of families), and the poverty benefit (the minimum guaranteed income allowance, received by about 8 percent of the population). These means-tested programs are small, provide little assistance, are usually not consistent with each other (they use different definitions of poverty and eligibility criteria), and though federally authorized are largely managed and determined by the regions.

Figure 3.21. Concentration Curves for the Main Types of Social Assistance



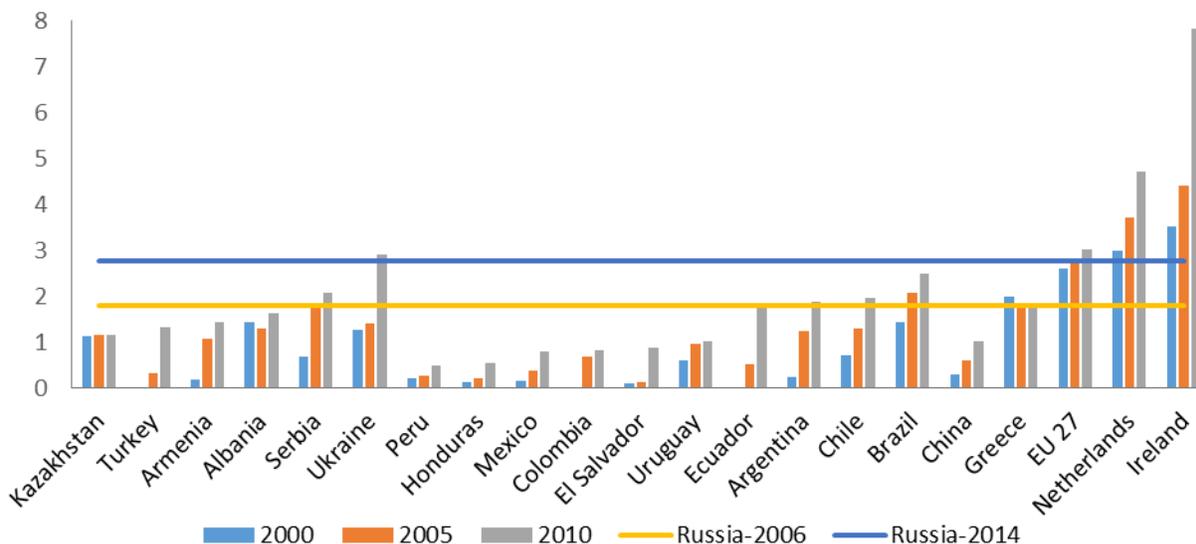
Source: Statistical Survey of Income and Participation in Social Programs, Rosstat 2014.

Note: These are the main categories of transfers based on Rosstat classification.

305. The Russian social assistance system is incredibly complex, with numerous benefits and many groups of beneficiaries. Evolving for almost a century, the Russian social assistance system today has been shaped by myriad factors, such as changing population needs, political economy considerations, vested interests, available resources, prevailing technical wisdom, and changes in technology. The programs range from merit-based awards to deserving individuals, such as war veterans and heroes of labor, to assistance for people with disabilities, services at home for the frail elderly, and housing subsidies. The rationale for treating as social assistance such benefits as merit allowances or reproductive policy measures is not clear.

306. Significant resources are invested in social assistance programs. Russia spends 2.7 percent of GDP on noncontributory social safety nets (social assistance), up from 2 percent in 2006. While this is above the global average of 1.6 percent (World Bank 2015), Russia is spending more as a share of GDP than some countries with higher fiscal capacity. Russian spending on social assistance is on a par with Brazil, below South Africa, close to the EU average (Figure 3.22), and above most former socialist economies and Portugal. The federal budget is the main source of financing for social assistance, but the share of the regions has been increasing and now represents one-quarter of spending on social assistance on a consolidated basis.

Figure 3.22. Spending on Noncontributory Social Assistance Programs, Benchmark Countries, Percent of GDP



Source: World Bank Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE).

307. About two-thirds of social assistance spending is linked to a complex system of categorical payments and “privileges” that was partly reformed (monetized) in the mid-2000s. Various types of compensation for previous privileges and other special categorical payments (such as supplements for those whose pension falls below the subsistence minimum) constitute Unified Monetary Payments, which amount to about 0.9 percent of GDP. In-kind privileges (there are about 600 categories of recipients and types of measures) account for about another 1.0 percent of GDP. Various non-means-tested family benefits directed to children and mothers account for 0.4 percent of GDP, and social care services equal another 0.3 percent. As already noted, despite the proliferation of programs, only 15 percent of resources (0.4 percent of GDP) is allocated to programs that require any household income- or means-testing. Of all the social assistance programs, privileges have been found to be the least directed to Russians with low incomes.

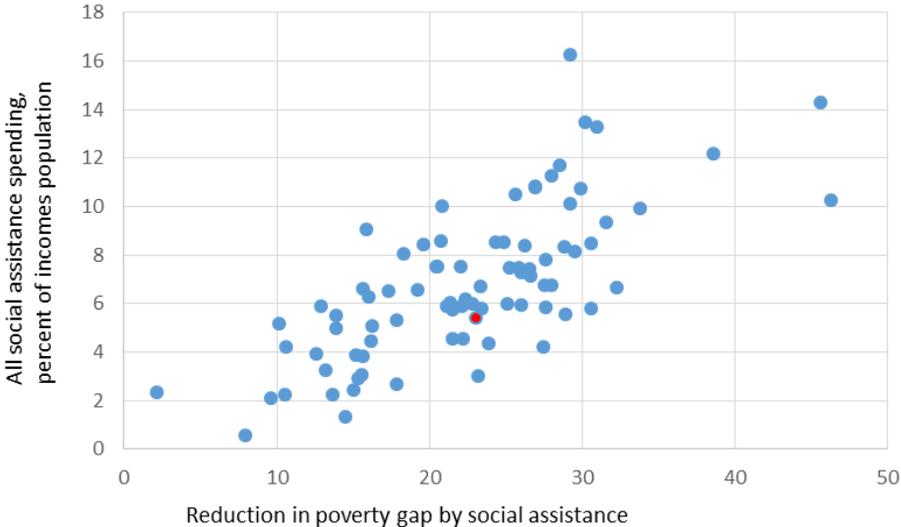
308. Some progress is being made in social assistance reform. For example, the monetization of many forms of in-kind support continues; it is one of the main ways to increase the efficiency of public spending by regions. The share of cash in total social assistance went up from 55 percent in 2008 to 72 percent in 2013. Many regions are using modern technology to improve social assistance operations and delivery, and others have replaced normative and coefficient-based subsidies to utilities with compensation based on actual use, resulting in significant savings.

309. Except for cash-for-work programs, most social assistance programs are not flexible enough to respond quickly to crisis situations. Most are not indexed regularly; adjustments are ad hoc and depend on what resources are available. There are large regional disparities in program design and benefit levels, which are highly decentralized; changes are often done piecemeal and in stop-and-go fashion. For instance, unemployment assistance, which in Russia is a social assistance program, is not designed to be scaled up as needed. Although very well-targeted to the poor, its coverage is tiny (unemployment is low); when there is a need to spend more, the budget may not be adequate to cover newly unemployed workers.

310. Because social assistance in Russia is highly decentralized, each region is an agent of social protection policy. Since the 1990s, one of the main features of social protection policy reform has been the devolution of policies and program development, regulation, and implementation. The balance between federal and regional responsibilities has, however, been tenuous: many federally-mandated benefits are paid for directly by the federal budget, and many spending responsibilities have implicitly been shifted to the regions. Decentralization has also complicated reporting, monitoring, and evaluation of programs; there is no comprehensive information on which groups benefit from which programs and no data on overlaps or program cost. Multiplying entitlements and pressures to index all federally-mandated programs have put a strain on social assistance resources. On the positive side, regions enjoy considerable autonomy in carrying out their social assistance policies, including setting the poverty lines, defining rules for federally-mandated programs, and establishing their own programs. Furthermore, many regions have moved ahead to improve the operation of the systems underpinning delivery of social assistance, spearheading the use of information technology and experimenting with program design.

311. The efficiency with which regions utilize the social assistance budget to achieve policy objectives differs substantially. Using a regional ranking of efficiency based on Data Envelopment Analysis to compare the size of social assistance transfers in Russian regions and their poverty alleviation effects reveals significant regional differences in performance. Social assistance transfers to the population varies from 1 percent of household income to as much as 16 percent, and the poverty alleviation effect ranges from well below 10 percent to just below 50 percent, a level on a par with the best-performing systems. With the same amount of spending (horizontally) very different poverty alleviation effects are achieved: regions providing 6 percent of household income as noncontributory transfers can reduce poverty by as little as 10 percent or as much as 33 percent (Figure 3.23).

Figure 3.23. Social Assistance Transfers in Russian Regions and their Poverty Alleviation Effects, Percent



Source: Statistical Survey of Income and Participation in Social Programs, Rosstat 2014.

312. There is thus significant potential to make social assistance spending more efficient if regions share knowledge and experience. Regions employing different strategies to both increase the efficiency of spending (move to the right on figure 3.23), and reduce their cost or optimize the composition of spending (move vertically down). For example, Samara, a region that spends relatively little, decided to use modern communication technology to help beneficiaries navigate the maze of programs by providing an on-line consolidated resource on legal entitlements, making it easily available as a web service or in service kiosks. Volgograd, a relatively high-spending region, prioritized the reduction of administrative cost by cutting staff by over 1,500 in two years, and by changing the methods for calculating various subsidies. It also moved to an “actual use” approach in financing some benefits, such as transportation subsidies, and froze indexation of some poorly-targeted benefits. The region introduced a “social code” that made means-testing necessary for programs that used to be purely categorical (family allowances and housing subsidies). It has also increased coverage of the poor through active outreach to over 90 percent.

313. Policies that would improve the efficiency and equitable distribution of social assistance are well-known and have been debated in Russia for at least two decades. At the conceptual level, the objectives, functions, principles, and broad target population for social assistance (say, the bottom 40 percent of the population) should be clarified. Programs that do not achieve important social assistance objectives, such as benefits awarded to individuals related to their particular status or merits, should be separated from social assistance. Consolidating social assistance benefits into an allowance that would vary by eligibility for different programs would increase transparency and ease of administration. Benefits should be reoriented to low-income families through some form of means testing and to families facing social exclusion and marginalization. First steps could include targeting programs more accurately, introducing household-based targeting for pension top-ups and additions, and better targeting housing and utilities subsidies. Improving horizontal and vertical equity across Russia will require setting uniform national standards for some social assistance parameters. Targeting one-third of social assistance spending to the lowest 20–30 percent of the population and increasing targeting accuracy to 50–60 percent could decrease poverty by 20–30 percent, which would significantly alleviate the impact of the economic crisis.

Future Pension Coverage, Adequacy, and Sustainability Is a Concern

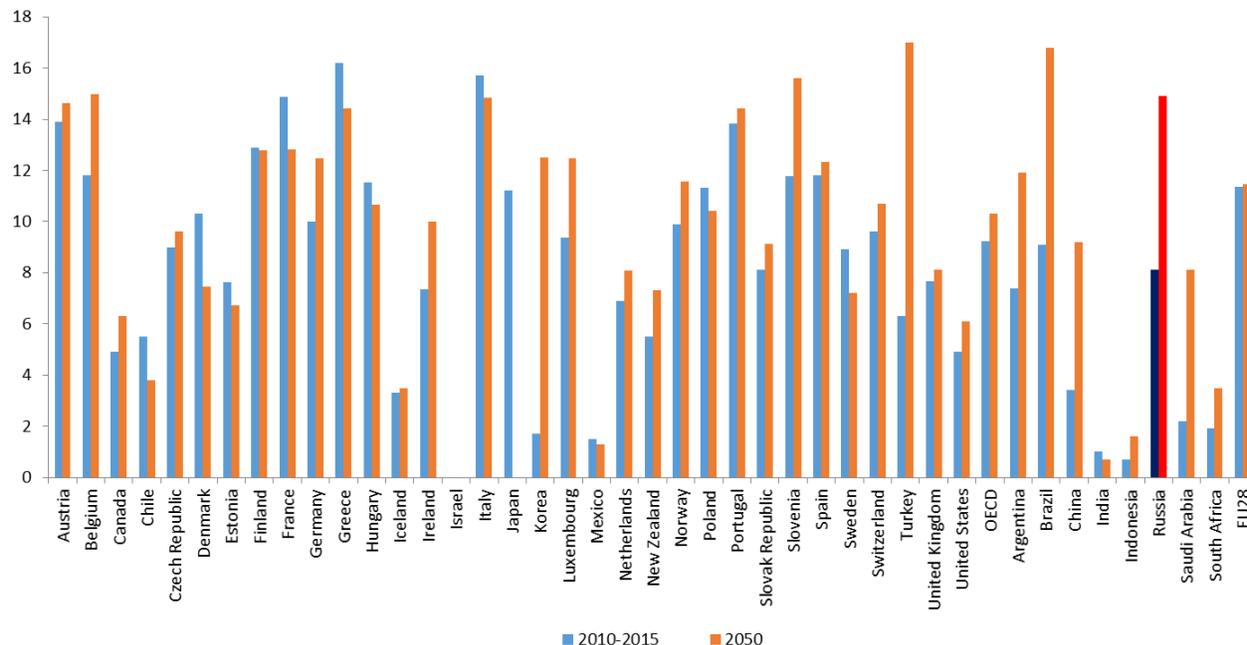
314. Pensions are not really adequate. Pension payments as a share of earnings when working (the pension replacement rate) fell from 35.7 percent in 2010 to 32.9 percent in 2013. Although the theoretical replacement rates for a full service period (40 years of service before the recent termination of the mandatory savings pillar of the pension system) exceeded the OECD and EU average at all income levels, a significant number of Russian workers retire before reaching a full-service period. Given that in Russia pensioners are not penalized for continuing to work after retirement and many do (often in the same job), retiring at the statutory age or earlier is a convenient way to supplement wage income. About 25 percent of women and 40 percent of men in Russia are active in the labor market beyond 60 (Levin 2014).

315. Despite the low actual replacement rates, pension spending in Russia is high and close to the OECD average (Figure 3.24). Growth in pension spending since 2008 has been fueled by ad hoc adjustments of basic and merit pensions and indexation of insurance pensions above the inflation rate. Without further reforms, aging Russia will by 2050 spend 3–4 percentage points of GDP more on pensions than the average for EU and OECD countries.

316. Meanwhile, the Pension Fund has been running a large and continuously growing deficit that reached almost 3 percent of GDP in 2015. Together with deficit financing, transfers for special and merit pensions from the central budget equal one half of Pension Fund expenditures. The high deficit is also a

consequence of collecting too little revenue due to contribution subsidies, reduced rates for farmers and the self-employed, and widespread avoidance of contributions.

Figure 3.24. Pension Spending in GDP, 2014 or Recent Year



Source: European Commission: 2015 Aging Report, Australia: Commonwealth of Australia (2015), 2015 Intergeneration Report: Australia in 2055, Japan: Working Group on Public Pensions, Social Security Council (2013), Ministry of Health Labour and Welfare, Japan, Standard & Poor's (2013).

317. The fiscal position of the pension system is aggravated by a relatively low statutory retirement age. In combination with generous early retirement provisions, this results in a low *actual* retirement age and a number of pensioners that significantly exceeds the number of people of retirement age (Eich, Guts, and Soo 2012). Despite rising life expectancy at the current statutory retirement age,¹¹⁸ Russia has kept the statutory pension age at 55 for women and 60 for men—much lower than in other European countries (Figure 3.25). Earlier retirement isn in fact available to an extensive list of specific occupations and social groups¹¹⁹ as long as they meet the required length of service.

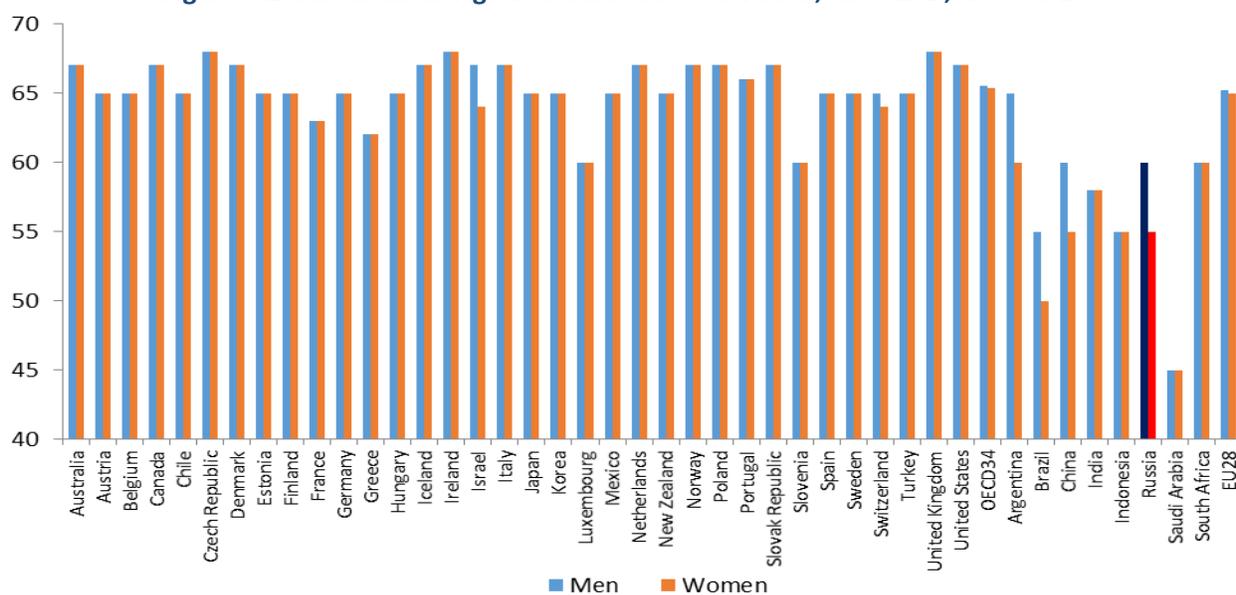
318. Growing informality threatens both the coverage and the sustainability of the pension system over the long term. Due to the rise in informality, coverage of the insurance pension system is likely to fall from the high rates achieved in the Soviet Union. As a consequence, an increasing number of workers may not be able to meet the requirements for a full old-age pension and would have to rely on the budget-funded social pension, which is set at 80 percent of the base labor pension. Pressure for social assistance transfers to those retirees whose pensions are below the subsistence minimum threshold might also

¹¹⁸ One of the arguments against increasing the retirement age is the low life expectancy at birth for males. However, what matters for retirement age is life expectancy at the age of retirement, which in Russia in 2010 was 14.3 years for a 60-year old man (2.7 years below the OECD average) and 23.9 years for a 55-year old woman (2.6 years above the OECD average). Moreover, many people who retire in Russia continue working, often on the same job, well into their early 70s. See Levin 2014.

¹¹⁹ Such as workers in the Far North, workers in hard and hazardous conditions, sportsmen, school teachers, and health care workers.

increase. In short, rising informality will raise the risk of pensioner poverty in old age. Informality also reduces pension contributions and thus makes the financial situation of the Pension Fund even more precarious.

Figure 3.25. Retirement Age in the Russian Federation, the OECD, and the EU



Source: OECD.

319. Recent pension reforms (2013–15) significantly changed the pension system rules. The minimum contribution period was raised from 5 years to 15. Instead of the Notional Defined Contribution (NDC) formula, a points-based formula was introduced for the insurance-based pension.¹²⁰ Eligibility for an insurance pension is acquired with at least 30 points; those with less than 30 are eligible only for a social pension. The point value is indexed annually to the CPI but may be adjusted in proportion to Pension Fund revenues, which makes pension indexation similar to fiscally-challenging wage indexation. To reduce the PAYG deficit, in 2014 and 2015 the contribution to the second pillar was frozen, and in 2016 it was replaced by a voluntary opt-in system for both current and future contributors. A small fraction of contributors opting in, as is expected, would reduce the PAYG deficit in the short run, but the absence of the second pillar annuity would continue to reduce benefit adequacy and substantially increase the risk of poverty in old age.

320. In the meantime, a gradual increase in the retirement age would ease the pressure on pension system finances. A higher pension age, with pensions for men and women equalized at the higher level, and eliminating early retirement provisions would improve fiscal sustainability and make the system consistent with the practice elsewhere in the world.

¹²⁰ Individual pension points represent individual earnings in terms of the average wage.

Conclusion

321. Slowing growth and changes in the labor market have reduced the role of wages in enhancing incomes. Before the financial crisis, rising real wages and declining wage inequality boosted the incomes of the general population and especially the bottom 40 percent. More recently, however, demand that was growing more slowly or declining has been reflected in a fall in real wages. Jobs have shifted to more vulnerable informal activities, which may have contributed to the erosion in both productivity growth and trust in public institutions. Meanwhile, the public sector has become the main driver of the incomes of the bottom 40 percent through the pension system, other transfers, and public wages.

322. Russia is confronted by three interrelated challenges in deepening human capital gains and expanding access to services: (1) Russia's aging and shrinking workforce could impair productivity growth and threatens to overwhelm fiscal capacity by increasing pressures on the social protection system. (2) The deterioration in inequality threatens to undermine the social fabric, given that gender, parental income or education, ethnicity, and geography can have a major role in determining financial success and social inclusion. (3) Finally, not enough resources are devoted to health and education, these services are not allocated efficiently or equitably, and their quality is uneven.

323. Addressing these challenges will require higher productivity and wider labor force participation. Although labor force participation rates are high in Russia, there is still considerable potential for bringing more women into the labor force and extending working lives. People should be encouraged to work later in life by gradually raising the retirement age, unifying the retirement age for men and women, and reducing pension eligibility for retirees who continue working. Longer working lives would improve the sustainability of the pension system and make the elderly less vulnerable to poverty.

324. Building up the health system would help to extend working lives and improve productivity and welfare, particularly for older workers. Reducing the incidence of cancer and cardiovascular disease—the primary reasons for premature death in Russia—would increase the number of older-age workers and improve their productivity. But that is only one element of a broader program to strengthen preventive health services and improve the efficiency and equity of the Russian health system. To accomplish this, it will be necessary to increase insurance coverage for outpatient drugs and services, reduce the emphasis on high-cost hospital and specialist care, give more emphasis to primary care management of chronic diseases, and reduce the vast gaps in services between regions and between rural and urban areas.

325. Reform of the education system could substantially boost economic growth and equity. Russia spends less on education per student than countries at a similar income level. While educational attainment is high, the educational system fails to produce graduates with the skills that are in demand in the labor market, particularly socioemotional skills, such as the ability to work with people, and higher-order cognitive skills, such as the ability to solve problems. There is little adult education and on-the-job training, so that skills (particularly those that are ICT-related) decrease sharply for older age groups. Russia significantly trails European peers in adult participation in both formal and nonformal education, and has no comprehensive framework for adult education.

326. Action is necessary to improve the distribution of Russian educational services. Inequitable access to education has been in part driven by decentralization, given the shortage of funds in poorer regions, and the government's policy of supporting the best-performing (often the richest) schools. In part this can be addressed through reallocation of funding. In addition, provision of preprimary schooling is very uneven across the country, and a large share of it is devoted to wealthier households. Dedicating more resources to early childhood development and preprimary programs and increasing access to the

poor and cost recovery from wealthier households would help stimulate economic mobility and heighten the impact of these programs, which tend to have considerable spillover effects on poor families.

327. Russia has an extensive social protection system with wide coverage of all population groups. In 2013 about 10 percent of GDP was devoted to social insurance (mostly pensions), compared to less than 3 percent to social assistance. The impact of pensions on poverty and inequality is much greater than that of social assistance, both because pensions are larger and because a dollar of pension spending has a greater impact on poverty and inequality than does a dollar of social assistance. Only a limited share of social assistance spending goes to the poor because most programs are not means-tested. Indeed, a substantial share of social assistance is allocated based on personal or household characteristics not related to income, such as subsidies for maternity and the number of children and for military service or disability. The impact of social assistance on poverty differs considerably by region because decentralization has given regions considerable autonomy in social assistance policies. Decentralization has improved flexibility, and a number of regions are improving their management of programs (for example, through the use of ICT). However, decentralization has also strained regional budgets by shifting expenditures from the federal budget; this has contributed to extremely large differences between regions in how social assistance affects poverty.

328. There is considerable potential to improve the efficiency and poverty impact of social assistance. Regional programs could be made more efficient by sharing the experiences of successful regions, although improving horizontal and vertical equity across Russia will require setting uniform standards for certain social assistance parameters across regions. Programs that do not have serious social assistance objectives, such as benefits awarded for the particular status or merits of individuals, could be eliminated or shifted to other budget lines. Continuing to monetize in-kind social assistance contributions could reduce waste and improve administrative efficiency. Perhaps most important, a large share of benefits should be reoriented to low-income families through some form of means-testing and to families facing social exclusion and marginalization. First steps in this direction could be to target programs more accurately, introduce household-based targeting for pension top-ups and additions, and better target housing and utilities subsidies.

Chapter 4. *Requisites: Fiscal Sustainability, Good Governance, and Better Natural Resource Management*

Introduction

329. The analytical framework of this diagnostic considers, in addition to the two pathways discussed in the previous chapters, three requisites for sustainable development: fiscal sustainability, good governance, and better natural resource management. The two pathways of increasing productivity and reducing vulnerability are complex and mutually reinforcing. Removing constraints on productivity growth will contribute to a more competitive economy with more diversified production, especially in the nonresource sector. Higher productivity will mean new and more productive jobs that generate higher incomes, ultimately increasing shared prosperity and reducing vulnerability.

330. Fiscal sustainability will be critical for sustainable, inclusive growth in Russia. Greater fiscal resources will be essential to finance the investment in infrastructure and human capital required to create equal opportunities for Russian workers, the social safety nets necessary to protect the most vulnerable, and the pension system necessary to guarantee long-term intergenerational equity in an aging society. These resources can in part be generated by a reform of spending policies to increase efficiency, focus expenditures on the highest priority areas, and strengthen public investment management. But greater resources also will require reforms to tax policy and administration to collect more revenues from nonoil and gas sources, particularly in light of moderating commodity prices. Revisions to the fiscal rule will be necessary to support fiscal sustainability at the federal level. Risks to the fiscal sustainability of subnational governments need to be addressed, given the lower-growth environment combined with unfunded mandates and contingent liabilities that already limit the capacity of subnational governments to invest.

331. Good governance will be a key facilitator of progress along the two pathways. For policies to create better conditions for productivity growth and a more diversified economy and to be effective in improving service delivery and social protection in a prosperous middle-class society, public institutions will need to be responsive to the needs of businesses and citizens and to advance the rule of law. A more transparent and flexible regulatory system would help ensure a level playing field, with ample incentives for competition and innovation. Despite the substantial changes in the role of the state in recent decades, the ownership of productive assets has become even more concentrated, reducing competition and impairing corporate governance. Russia's wealth inequality and unequal distribution of productive assets among the population increase the risk of wealth capture and adversely impact on competition and sustainability. Overcoming remaining inequities in service delivery and responding to the demands of a growing middle class will require greater accountability and more consistent policy.

332. Better environmental and natural resource management would help sustain economic growth and increase resilience. The degradation of Russia's abundant land and water resources increases the vulnerability of the economy to external shocks, potentially reducing productivity growth and welfare. Pollution and the degradation of natural resources disproportionately affect the poor, who tend to live in the most marginalized and exposed areas. Contaminated air, water, and soil are a long-standing and increasing threat to health, inhibiting workers' productivity. The inefficient use of natural resources increases production costs, impairs competitiveness, and reduces savings for future generations. Climate change presents additional risks that can offset many benefits achieved through economic growth. Higher energy efficiency, development of renewable energy sources and better management of forests would

bring significant environmental and economic gains, including increased productivity and competitiveness, as well as help mitigate and adapt to the impact of climate change. Better management of land and water would help alleviate disaster and climate change risks, and would especially benefit poor and natural-resource-dependent populations with more limited coping mechanisms.

Fiscal Sustainability

333. Successful fiscal adjustment and broader fiscal reforms are requisites for the two identified pathways to increasing shared prosperity in Russia. Without fiscal sustainability, it will be difficult to support productivity growth in a diversifying economy, and it will be challenging to reduce the remaining vulnerabilities of Russia's citizens, such as through better service delivery. Larger and better-managed public resources will be required to achieve the increased investment in physical and human capital essential to revive productivity growth and facilitate the diversification of the economy (pathway one). Correspondingly, deepening human capital gains will demand continuous dedication to social protection measures and, in the context of a growing middle class, also necessitate an improvement in the quality of public services (pathway two).

334. The boom period in the years leading to the global financial crisis and the swift recovery that followed created a sense that deeper fiscal reforms were not needed to support growth. Russia was able to restore growth and favorable social inclusion dynamics through fiscal and monetary expansion without making drastic changes to the existing fiscal policy framework, leaving underlying fiscal sustainability challenges largely unaddressed. However, given the uncertain prospects for oil and other commodity prices and Russia's continued dependence on hydrocarbons for both growth and fiscal balances, a refocusing of fiscal policy is urgent. In this respect, two core—and interrelated—fiscal challenges stand out, namely (1) the tradeoff between public investment and social commitments (as well as across different categories of social expenditures); and (2) the medium-to-long-term consequences of aging for fiscal balances and intergenerational equity.

Short to Medium-term Fiscal Challenges: Managing the Tradeoff between Public Investment and Social Entitlements

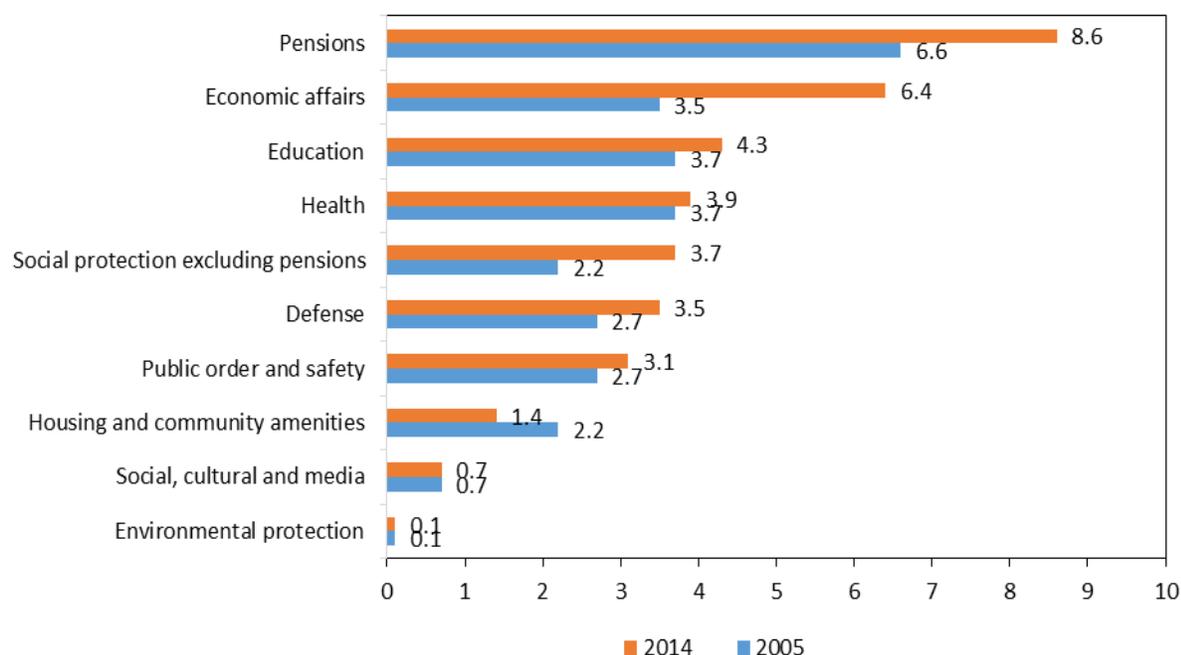
335. The significant tightening of the budget has exacerbated the tradeoffs that Russia faces between the short-term priority to support household incomes and the medium-term necessity to boost investment in human and physical capital. Since the mid-2000s, large increases in pensions and public wages have made government spending the major driver of the incomes of the bottom 40 percent of the population. However, these expenditures came at the expense of investment in public infrastructure and human capital.

336. Increasing government spending between 2005 and 2014 went disproportionately to fund social transfers, economic affairs, and public order and defense. Government spending rose from 31.6 percent of GDP in 2005 to 38.7 percent in 2014. While pensions and other social protection benefits rose by 3.6 percent of GDP and public sector wages increased (with a sharp rise in 2013),¹²¹ the rise in health and education spending was much smaller (Figure 4.1).

¹²¹ The economic classification of general government spending shows compensation of government employees falling from 7.3 percent of GDP in 2011 to 4.3 percent in 2012. This large decline is unexplained and inconsistent with the public sector wage policies adopted in those years. The IMF 2013 Article IV report states that in the Government Finance Statistics for Russia, there are "unexplained data breaks (for instance the reclassification of some wage expenses from the budgetary central government

337. While government spending was crucial in enabling social mobility and income growth for the bottom 40 percent, significant inefficiencies persisted in terms of targeting. Labor income was critical in driving incomes of the bottom 40 percent in the first half of the 2000s, but government transfers—mostly pensions—took on a greater role starting in the mid-2000s. Pensions dominated social protection spending and played a large role in raising the incomes of all, including the poor.¹²² Nevertheless, Russia could have achieved more redistribution by focusing spending increases on programs that benefit the vulnerable in society and further improving the incidence of social protection programs.¹²³

Figure 4.1. General Government Expenditure, Percent of GDP



Source: Ministry of Finance data.

338. The indexation of pensions and public wages below inflation, designed to improve the fiscal balance, are likely to reduce the incomes of the bottom 40 percent of the population and significantly increase poverty. The combined impact of new indexation policies in 2015 and 2016 is estimated to have reduced the income of the bottom 40 percent more rapidly than the income of the top 60 percent (the income loss reaches a high of 7 percent for the bottom 10 percent of income earners) and to have increased poverty by 3.3 percentage points. Therefore, a core challenge will be to preserve or expand programs that are directly targeted to the poor and vulnerable and contribute to building the human capital base needed to sustain economic growth.

339. A second challenge will be to free up fiscal resources to address Russia’s growing infrastructure gap while continuing to build human capital. A 2011 Public Expenditure Review estimated additional

accounts to the regional government accounts following 2011 reforms).” Therefore, it is necessary to be cautious in using government finance data by economic classification to examine changes in the public sector wage bill.

¹²² In fact, if pensions are excluded, the redistributive power of fiscal policy almost disappears, leaving a system with a regressive tax structure based on indirect taxes and a series of social programs with low vertical redistribution capacity (Lustig et al. 2015).

¹²³ There is wide variance in the incidence of social protection spending programs, with the most redistributive being housing subsidies, noncontributory pensions, and privileges. The least redistributive programs are elements of family support—notably the maternity allowance and the allowance for children younger than 1.5 years. Importantly, state social assistance does not appear to be well-targeted.

funding needs relative to the 2011–13 budget at 0.5 percent of GDP for supporting economic modernization and innovations, 1.1 percent for road maintenance, and 1.0 percent for capital expenditures to address the maintenance backlog and network expansion. These fiscal pressures, which would be daunting even in good times, have been compounded by the recent decline in oil revenues. At the subnational level, for instance, reduced transfers from the federal budget to regions appear to be driving deep cuts in investments in human and physical capital (Box 4.1). Going forward, a key question is whether such adjustments are sustainable and compatible with the need for Russia to continue to invest in its future.

340. Increases in nonoil revenues and improvements in the efficiency of spending, particularly on infrastructure, are essential to limit the need for counterproductive spending cuts. Nonoil revenues could be increased through increases in excise taxes, strengthening the value-added tax (VAT), reductions in subsidies, and changes to the income tax system (Table 4-1). More efficient spending could be achieved through better management of public investment. Box 4.2 illustrates public investment management challenges in the road sector and suggests ways to address them.

Table 4-1. Potential Elements of a Fiscal Consolidation Strategy

Revenue Base Expansion	Expenditure Consolidation
Further increases in excise taxes on tobacco, alcohol, and gasoline to bring them to the average levels of G-20 countries	Strengthening systems for monitoring the results of public programs
Steps to increase value-added tax (VAT) revenues by improving tax administration and minimizing VAT exemptions	Reducing or phasing out crisis-related subsidies supporting select sectors of the economy
Reductions in energy subsidies	Improving the targeting of social assistance programs
Increasing the corporate income tax (CIT) rate and removing exemptions	Taking steps to ensure the long-term sustainability of the pension system, beyond measures already taken to introduce higher contribution rates
Increasing the flat personal income tax (PIT) rate and making it more progressive	Supporting structural reforms in the education and health sectors to improve expenditure efficiency and make more space for needed capital investments

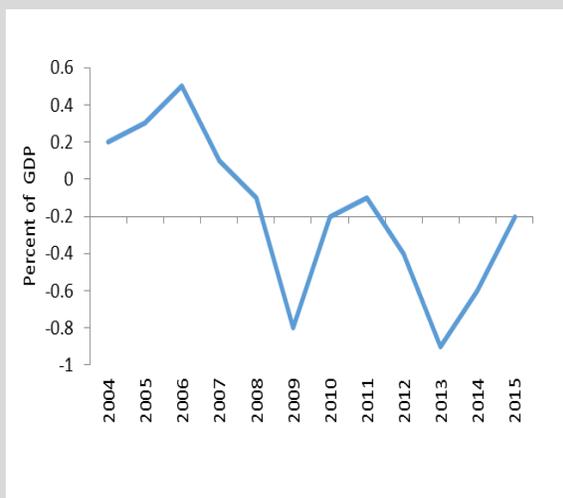
Box 4.1. Subnational Finances: Lessons from Two Crises

The challenges facing subnational governments are more complex during the present crisis than they were during the 2008 crisis. Given the extensive scope of subnational mandates to deliver core social services (education, health care, and social assistance) and promote infrastructure development (transport, housing, and communal services), as well as the significant share of spending (about a third of total government expenditures) executed at the subnational level, the fiscal health of subnational governments is critical.

The steep drop in federal and subnational tax revenues during the 2008 crisis was met by an increase in intergovernmental transfers, the extension of highly concessional loans to distressed jurisdictions, and revisions to revenue-sharing arrangements. The measures included increases in the share retained locally of corporate income taxes, from 73 to 90 percent, and of excise taxes on gasoline revenues, from 72 to 100 percent (World Bank 2015b). As a result, subnational governments were able to improve their aggregate fiscal deficit from 0.8 percent of GDP in 2009 to near balance in 2011 while maintaining core services and investments (figure B4.1).

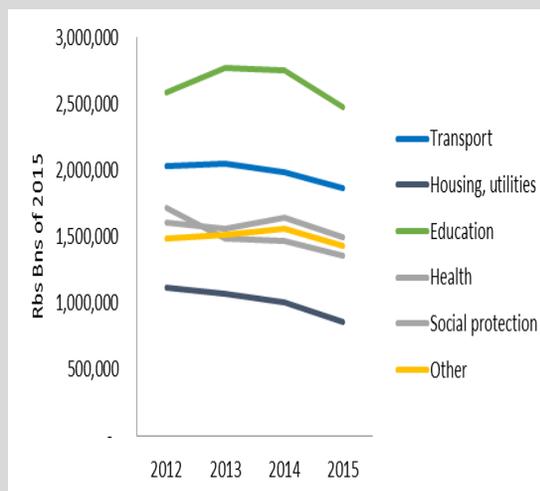
The fiscal position of subnational governments also improved over 2013–15, despite falling tax revenues and transfers with the weakening economy, due to sharp reductions in expenditures (World Bank 2016c). Total subnational government spending fell by 9 percent in real terms. The largest cuts were in education, where spending declined by 11 percent in real terms in spite of federally mandated increases in teachers’ salaries (with capital spending falling by 30 percent). Likewise, net of contributions to the Health Insurance Fund, subnational health care spending declined by 23 percent, with capital spending falling by 32 percent. Subnational governments also cut spending on infrastructure. For example, spending on the “national economy” (mainly roads) fell by 5 percent in real terms, with capital spending declining by 15 percent. Spending on housing and communal services fell by 16 percent, with capital spending declining by 24 percent (figure B4.1.2).

Figure B4.1.1. Subnational Fiscal Balance, Percent of GDP



Source: World Bank calculations.

Figure B4.1.2. Subnational Expenditures, in RUB Billion



Source: World Bank calculations.

Box 4.2. Public Investment Management Challenges: Example of the Road Sector

The Russian road network faces a number of public investment management challenges. Among these: (1) Road investment and maintenance programs are often identified without a strong technical and economic basis. (2) Outdated road design standards are common. (3) A lack of accountability of road sector institutions leads to waste. (4) Inadequate procurement methods hinder cost-efficiency. And (5) Institutional capacity is overloaded, which could be prevented by better prioritizing and sequencing projects.

While closing the financing gap will require additional public funds, significant efficiency gains could be achieved through public investment management reforms. The road agency should be more autonomous and operate at arm's length from the government. The road agency's structure should be streamlined with improved terms and conditions of employment for its staff. Better oversight arrangements could strengthen accountability and ensure more attention to the needs of road users. More specifically, there is a need to review the procurement methods for civil engineering works; introduce performance-based management contracts in the road sector; introduce improved asset-management techniques and ensure that the programming of road works is based on sound economic principles; create a more commercially oriented road agency; and improve strategic planning in the road sector. Sound decisions need reliable, relevant, and accessible information, such as data on budgets, traffic counts, road accidents, and pavement design.

Finally, improved asset management, a process of maintaining, upgrading, and operating physical assets cost-effectively, should lead to increased efficiency through (1) improved decision making that takes into account the costs and benefits of alternatives, (2) better justification for work programs and funding requirements, (3) recognition of the costs of operating road assets over the life cycle of the assets, and (4) increasing the cost-effectiveness of maintenance through proper planning of works. Essential data, such as traffic counts, should be collected continuously. Economic decision models, such as the Highway Design and Management model, are instrumental in assisting effective prioritization processes.

341. The contingent liabilities arising from large state ownership of banks and enterprises represent an important fiscal risk. While public ownership of banks is a key federal budget risk (see chapters 1 and 2), the fiscal difficulties of subnational governments could be exacerbated by implicit liabilities arising from their ownership of public enterprises, which fall into two broad groups. The first group consists of enterprises engaged in commercial, agricultural, and industrial activities, although the privatization process since the 1990s has led to a significant reduction in their number.¹²⁴ In principle, subnational governments could be held liable for its debts if one of its enterprises were to declare bankruptcy. The second group consists of enterprises engaged in providing public services, such as transport and utilities, which remained under public ownership.¹²⁵ These enterprises tend to be owned by municipal rather than regional governments and do not own assets but instead operate them on behalf of their subnational government owners. They finance their operations from a combination of internal cash generation (e.g., tariff revenue), subsidies from the subnational owners, and debt.

342. Comprehensive data on the amount of subnational guarantees to public enterprises is not available. However, recent surveys of international rating agencies suggest that contingent liabilities are high in some jurisdictions. But contingent liabilities often take subtle forms. Because some enterprises are engaged in the provision of key public services, subnational governments cannot allow them to go out of

¹²⁴ The government removed price controls on drugstores, agricultural and wholesale markets, hotels, sanatoriums, stadiums, theaters, baths, laundries, and hairdressers to enable them to operate on a commercial basis. Data from the Economic Policy Institute (Gaidar Institute) show that the total number of enterprises owned by *regional* governments decreased from 10,981 in 2001 to 4,502 in 2010. The level of debt owed by regional government enterprises also shrank from 30 percent of revenues in 1999 to 1 percent in 2011 and has remained at that level since then (World Bank 2015a).

¹²⁵ These include companies responsible for district heating, water supply and sewerage, electricity distribution, solid waste collection and disposal, road construction and maintenance, and the repair and maintenance of multifamily housing.

business. Typically, municipalities grant subsidies to municipal enterprises that have accumulated unpaid energy bills and wage arrears.

343. Low growth, combined with a series of unfunded mandates imposed by the federal government, has increased deficits at the regional level.¹²⁶ While aggregate debt levels are currently low, the stock is growing. In the short term, the rise in debt can be contained by rules that limit debt levels in the regions, but in the long term, growing deficits will create pressures for another round of federal relief. To prevent this, changes in the division of revenue and expenditure responsibilities may be required. The federal government is considering measures to increase the revenues of subnational governments by shifting the basis for valuing property for taxation purposes from book value to market value¹²⁷ and by introducing new local taxes on hotels, retail trade, catering, and public transportation. However, one lesson from previous crises is that regional governments need more flexibility, not necessarily a permanent revenue increase.

344. More autonomy would enable subnational governments to respond to external shocks—whether emanating from the global economy or the federal government—without resorting to debt. Allowing regional governments some discretion over the rate of the PIT is one approach to increasing autonomy.¹²⁸ Another, complementary, approach would be to give subnational governments some discretion over the levels of public sector salaries. In principle, subnational governments have been able to set the salaries of their own employees since 2005, but in practice regional governments have repeatedly been forced by presidential decrees to increase salaries. While the aggregate subnational deficit in 2015 was fairly modest (0.2 percent of GDP and 1.8 of revenues), there are signs of fiscal distress in some jurisdictions (Figure 4.2).¹²⁹

¹²⁶ For example, the government recently approved a program to build new schools, which would create 5.3 million new places for children. While the federal government will fund most of the capital investment, the regions will have to cover operating and maintenance costs as well as teacher salaries. It is estimated that this expansion would require 662,000 new teachers, which at the average teacher's salary would cost RUB200 billion. Maintenance, heating, and other infrastructure support would also add to the costs.

¹²⁷ In principle, this would greatly expand the base of the property tax (it is said that the tax on a two-bedroom apartment in Moscow is less than the cost of 10 liters of gasoline—before the plunge in oil prices). But attempts to raise significant amounts from the property tax have had mixed results in other countries. Among major OECD countries, only four (the United States, Canada, Japan, and France) generate more than 2 percent of GDP from local property taxes.

¹²⁸ With their high dependence on transfers and shared taxes, regional governments have very little control over the level of their revenues. Regions can adjust the rate of the CIT within a range of 13.5 to 18 percent but have no control of the PIT rate. Giving the regions some control over the PIT rate, within a fixed range, would permit them to increase the rate in response to temporary economic downturns and then lower it again during better times.

¹²⁹ In 2015 30 regions had modest deficits, in the range of up to 5 percent of revenues, and another 25 had deficits in the range of 5–10 percent of revenues. But 22 had deficits of over 10 percent of revenues. Only 9 had budget surpluses.

Figure 4.2. Indebtedness of Russia's Regions, 2015



Source: Ministry of Finance data.

345. Measures are also needed to change the reason for subnational government borrowing. Roughly half of subnational debt (44 percent) takes the form of short-term loans from commercial banks.¹³⁰ At present, subnational governments borrow to respond to short-term fiscal crises and to postpone painful adjustments. In this sense, they borrow too much. However, they do not typically borrow to fund investment in long-lived and high-rate-of-return assets. In this sense, they borrow too little. Increased borrowing for investment would require the government to take measures to enable the banking sector to lend profitably at longer maturities. While short-term debt is an appropriate tool for managing cash flow, longer-term debt is more appropriate for financing the construction of long-lived assets, particularly if they have some potential for generating revenue, either directly or by increasing economic growth, in future years.

346. Analysis of recent subnational fiscal trends show that on an aggregate level, subnational governments seem to be weathering the current slowdown in the economy fairly well, but there has been adverse impact on investments in human capital and infrastructure (World Bank 2016c). The overall balance of consolidated subnational governments as a percent of GDP reached its nadir in 2013 at 0.9 percent of GDP, just as the economy as a whole was beginning to slow. In 2014–15, the aggregate subnational balance improved, with the deficit declining from 0.6 percent of GDP in 2014 to just 0.2 percent in 2015. As a percent of revenues, the consolidated subnational debt declined from 8 percent to just 1.8 percent. However, this adjustment was not made possible by improvements on the revenue side. So far, the adjustment instead has occurred on the expenditure side: as a group, subnational governments managed to cut spending by 9 percent in real terms between 2013 and 2015—5 percentage points more than the cuts in revenues. In addition to significant cuts in social spending, subnational governments also made substantial reductions in spending on infrastructure. Spending on capital investment fell

¹³⁰These banks are not, strictly speaking, private. Commercial bank lending to finance subnational governments is dominated by two state-controlled banks, Sberbank and VTB.

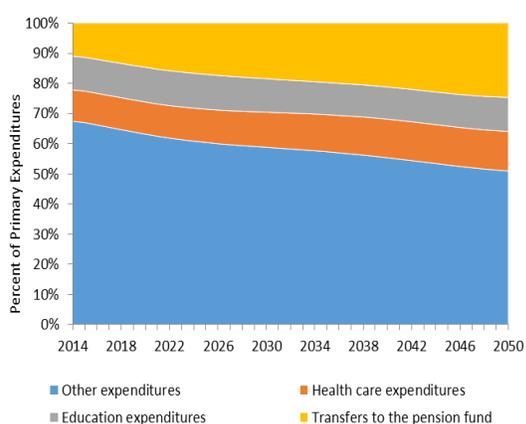
dramatically—30 percent in real terms. In total, cuts in spending in the infrastructure sectors accounted for 41 percent of the total reductions in spending (in real terms) between 2013 and 2015.

347. Medium-term fiscal sustainability at the federal level will hinge on adjustments to the current fiscal rule. As accumulated fiscal buffers are drained, the government is working on a new fiscal rule (see chapter 1). Besides introducing a lower-bound oil price, options to be considered include (1) increasing the pace of adjustment of the oil price benchmark to allow for more timely adjustment; and (2) gradually raising the amount of savings generated by the fiscal rule to preserve intergenerational equity. Other possibilities are changing the fiscal rule to include limits on spending growth so as to rebuild buffers during episodes of revenue windfalls, and/or adjusting nonoil revenues to the economic cycle and using potential GDP to calculate net financing.

Long-term Fiscal Challenges: Population Aging and Intergenerational Equity

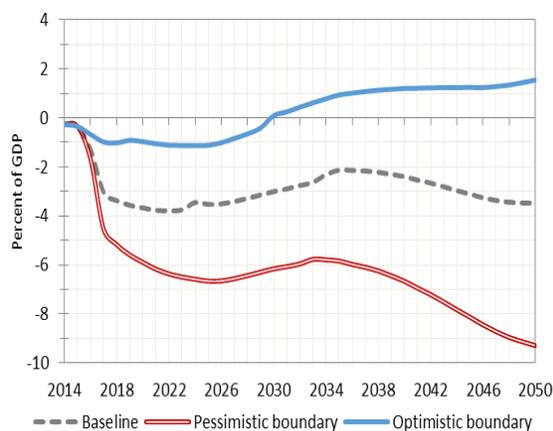
348. The twin challenges of population aging and low oil prices threaten the sustainability of fiscal policy in Russia. Key assumptions underlying a World Bank forecast of Russia’s fiscal position over the next 35 years include a rise in the dependency ratio; a fall in the share of natural resources revenues in total revenues (from one-third in 2014) due to little increase in natural resources production and continued low oil prices; and significant productivity growth in the nonoil sector of the economy (World Bank 2015c). The increased share of the nonoil sector in the economy and in revenues adds to fiscal pressures because higher private sector incomes are typically associated with rising demand for public services (by contrast, oil revenues accrue to the government, so the impact on private incomes, and the demand for public services, is less). The expected modest rise in revenues as a share of GDP is greatly exceeded by increases in age-related spending, such as health care expenditures and pension fund transfers (Figure 4.3). Financing the pension system’s increasing deficit is expected to drive the expansion in age-related public spending.¹³¹ All scenarios predict that by 2050 the pension fund’s deficit will double from about 4 percent of GDP to more than 8 percent (World Bank 2015a).¹³² Given these assumptions, the government’s primary balance would remain in deficit through 2030, even in the optimistic scenario (Figure 4.4), driving a substantial rise in the public debt-to-GDP ratio.

Figure 4.3. Primary Expenditure Decomposition, Baseline



Source: Rosstat and IMF data.

Figure 4.4. Fiscal Sustainability Indicator: Primary Balance



Source: Rosstat and IMF data.

¹³¹ Russia has recently reformed its pension system, and these projections may vary if the new system parameters are used.

¹³² Scenario analysis and stochastic projections have made it clear that the finding of deterioration in fiscal balances is robust.

349. Fiscal savings through the Reserve Fund and the National Welfare Fund will not be sufficient to cover the government's future financial needs. The Reserve Fund, in combination with the fiscal rule, is designed to protect the economy from moderate fluctuations in oil and gas prices. This fiscal buffer enabled the government to undertake a sizable countercyclical fiscal stimulus during the 2008 crisis and is limiting the necessary decline in expenditures during the current crisis. The National Welfare Fund was set up to back future pension liabilities, including statutory old-age pensions. However, in the long run the cumulative National Welfare Fund balances will not be adequate to cover age-related fiscal deficits. The deficit is projected to widen between now and 2050, but the National Welfare Fund assets remain at about 6 percent of GDP. Without major reforms to limit public liabilities or boost revenues, these savings are barely enough to finance a few years of deficits (World Bank 2016b). Simulations with alternative price trajectories show that a recovery from the current slump in oil and gas prices could lead to a substantial accumulation of savings in the wealth funds by the outer years of the projections. By that time the old age dependency ratio will be about 50 percent higher than it is now, and thus reform in the social security system will be more costly and more difficult politically.

350. Sustainable fiscal balances will require reforms to raise revenues. Managing the secular increase in fiscal pressures caused by an aging population will require significant structural reforms, especially of the pension system. Labor market policies designed to boost labor force participation, adjustments to the retirement age, changes in contribution rates, or a shift from public-funded to contribution-funded benefits could have a significant impact on systemic liabilities. However, some labor market policies that improve the long-term sustainability of the pension system could add to the short- and medium-term fiscal burden. Prompt action can help mitigate aging-driven deterioration in Russia's fiscal outlook.

351. Maintaining fiscal sustainability will require a new medium-term budget financing strategy as well as a renewed discussion on the borrowing limits captured in Russia's fiscal rule. There are plans for a new fiscal rule to be introduced in the federal budget in coming years. Revising the current fiscal rule (see chapter 1) could generate more savings to safeguard intergenerational equity.¹³³ The costs of pension reform could be financed through an increase in debt and a change in the fiscal rule to boost public savings. Currently, only residual revenue is transferred to the National Welfare Fund, and this happens only when oil prices increase and the Reserve Fund is at its ceiling. Thus continued low oil prices would mean no increase in the National Welfare Fund. Faced with similar challenges, a number of countries have successfully amended their fiscal rules and used their sovereign wealth funds to manage the impact of an aging population.

Good Governance

352. The quality of governance can facilitate or constrain Russia's progress along both identified pathways. This section examines Russia's governance system through three broad but related lenses. First, it reviews key cross-cutting dimensions of governance that are critical to Russia's development trajectory and that affect the credibility of the state and the social contract between the state and its citizens. The second section considers how governance is connected to the broad direction of the economy, including the ownership of assets and the ways in which the productive core of the economy—its companies—are owned, managed, and governed. The third section focuses on those dimensions of governance that affect Russia's ability to deepen human capital gains and improve access to services. All

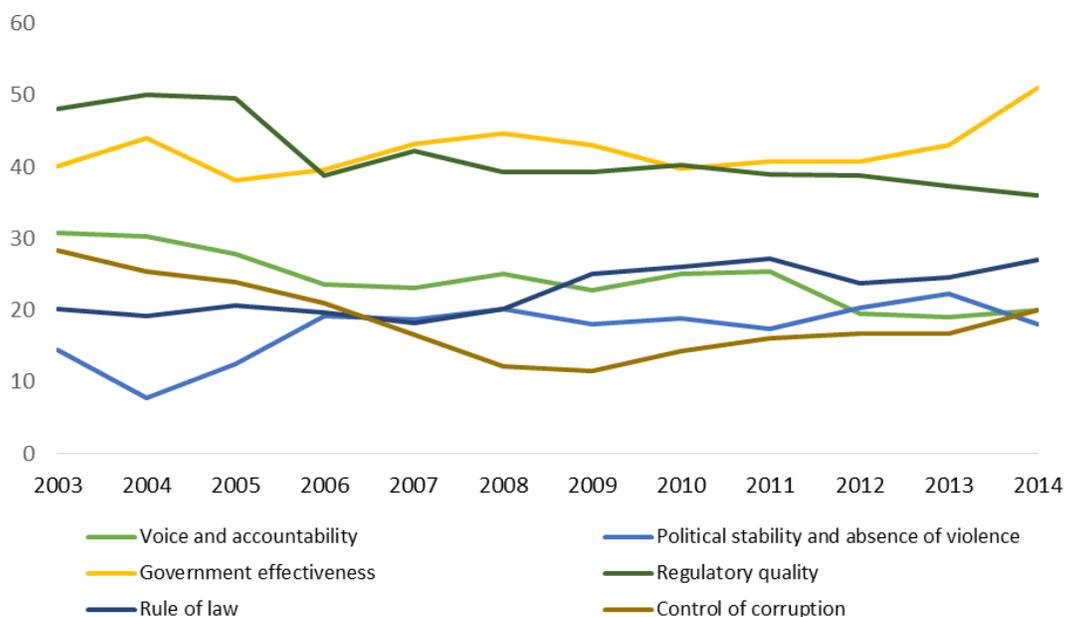
¹³³ Estimates of long-term fiscal benchmarks consistent with intergenerational equity point to a federal nonoil primary deficit in the range of 3–4.5 percent of GDP. Generating such a deficit could be achieved by changing the net financing of 1 percent of GDP allowed under the current fiscal rule, which increases the maximum level of spending and the deficit, to net savings of 1–2 percent of GDP (IMF 2015).

these elements are closely connected and in many ways mutually dependent. They also require a wider and more meaningful application of the term “governance” than is commonly the case.

353. The government has achieved some improvements in the quality of public sector governance and government effectiveness over the past two decades. Progress has often been incremental, but the government has carefully designed and implemented key public sector reforms, using performance targets and emphasizing monitoring and evaluation. Over time, the results have been significant along the dimensions of political stability, absence of violence, and the rule of law. Recently, the performance on the government effectiveness dimension appears to have improved significantly. However, Russia’s ranking has remained below the 50th percentile for most Worldwide Governance Indicators (Figure 4.5). Flaws in regulatory quality and in voice and accountability have persisted, despite some reduction in arbitrary decisions by officials (e.g., in tax administration) and less public tolerance for administrative corruption.

354. Russia’s governance challenges may mainly pertain to the legal and institutional economic framework. Prime Minister Dmitry Medvedev in his September 2015 article “A New Reality: Russia and Global Challenges,” points out that “it is extremely important to form a competitive jurisdiction in Russia, which requires an effective judicial system in place. This is a complex issue, since it involves institutional decisions and changes in the education system, and, most importantly, in customs and practices. Effective jurisdiction is a task that is no less complex than economic efficiency. They go hand in hand, because the former is a requisite for the latter.”¹³⁴

Figure 4.5. Russia’s Worldwide Governance Indicators, 2003-2014, Percentile Ranking



Source: World Bank.

¹³⁴ *Rossiyskaya Gazeta*, September 23, 2015 at <http://www.rg.ru/2015/09/23/statiya-site.html/>, last accessed on June 21, 2016. More recently, in April 2016, President Putin appointed Alexey Kudrin, former First Deputy Prime Minister and Minister of Finance, to the Presidential Economic Council to develop an institutional reform strategy for Russia; reform of the judiciary and law enforcement bodies is one of the five priority reform areas that Kudrin’s team is expected to focus on.

Cross-Cutting Governance Challenges: Corruption, Accountability, and Oversight

355. Effective control of corruption and strengthening institutions of accountability are important for Russia's ability to traverse both pathways. International surveys depict corruption in Russia as a major obstacle, especially for commercial activities. According to Transparency International, Russia's 2015 Corruption Perception Index stands at 29 (where 0 is very corrupt and 100 is completely clean) compared to the EU composite index of 64. Russia is ranked 89th out of 140 countries on Ethics and Corruption in the Global Competitiveness Index for 2015–16, where its score improved slightly, from 2.82 in 2013 to 3.00 in 2015.

356. Anti-corruption policy has become prominent in public discourse. The anti-corruption legislation that came into force in January 2009 obliges senior public officials, including SOE managers, to declare incomes and assets and contains provisions to prevent and address conflicts of interest. In 2014, civil servants were required to fill out a declaration of expensive acquisitions specifying the source of funds used. Public officials, including members of both chambers of parliament (the Federation Council and the State Duma) and of subnational legislatures, are required to submit annual declarations of income and assets.

357. The effectiveness of anti-corruption policy has been mixed. By some measures, things have improved: Transparency International's 2015 Corruption Perceptions Index ranks Russia 119th of 166 countries, up from its 2014 rank of 136th of 175 countries. In 2014, Russia adopted a National Anti-Corruption Plan for 2014–15. The plan was supposed to establish dedicated units and commissions to combat corruption at the regional level, strengthen control over implementation of large infrastructure projects, expand the circle of legal entities disclosing information on beneficiaries, educate citizens on anticorruption, and protect whistleblowers. However, implementation appears to be lagging: a 2015 report of the Group of States against Corruption (GRECO),¹³⁵ of which Russia is a member, indicates that the declaration process has been diluted. GRECO's latest (third) round of monitoring of national anti-corruption policies disclosed that by November 2014 Russia had fully implemented only 3 recommendations out of 21, compared to better progress in the past. Public officials and experts have also expressed concerns about the gaps between policy and implementation.¹³⁶

358. Combating illicit financial flows (IFFs)¹³⁷ is a key aspect of the implementation of Russia's anti-corruption policy. Cross-country information suggests a strong association between extractive industries and IFFs. This could be an anomaly due to problems with the trade statistics or a reflection of the elevated

¹³⁵ The Group of States against Corruption (GRECO) was established in 1999 by the Council of Europe to monitor states' compliance with the Council's anti-corruption standards. It has 49 members. The Sixteenth General Activity Report (2015) of GRECO states, on page 32, that "Under the system for financial accountability of public officials, the serious offence of false declaration was transformed into a minor offence in cases where a purely technical mistake has been made. Expenditure declarations (established in legislation in place since 2012) were combined with income, asset and liabilities declarations. The part on expenditure is to be filed only if expenditure exceeds income (including that of a spouse) over the previous three years." Source: [http://www.coe.int/t/dghl/monitoring/greco/documents/2016/Greco\(2016\)1_GAR_No.16_2015_EN.pdf](http://www.coe.int/t/dghl/monitoring/greco/documents/2016/Greco(2016)1_GAR_No.16_2015_EN.pdf).

¹³⁶ Mikhail Lashkov, Director of the Russian Federation National Anti-Corruption Council, in "Fight with Corruption as a Presumption of Privilege" at <http://www.korupcii.net/>.

¹³⁷ Sustainable Development Goal 16 is to "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels." Target 16.4 sets the expectation by 2030 to "significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime." Other targets to support Goal 16 address the rule of law; corruption and bribery; institutions and governance; and violence, terrorism, and crime. The Financing for Development commitment on IFFs is to "substantially reduce and eventually eliminate IFFs" by (1) combatting tax evasion and corruption through strengthened national regulation and increased international cooperation; (2) reducing opportunities for tax avoidance; and (3) enhancing disclosure practices and transparency in both source and destination countries, e.g., through transparency in financial transactions between governments and companies to relevant tax authorities.

risks of corruption and international fraud in this area. Building partnerships between private sector firms, government, and civil society will be essential to changing behaviors, incentives, and outcomes relating to IFFs.¹³⁸

359. As a member of the G20, Russia is committed to implementing higher standards for Exchange of Information on Request. It is one of the early adopters of Automatic Exchange of Information on tax matters, which it will start implementing as of 2017. Russia supports multilateral efforts to combat base erosion and profit-shifting and initiatives to improve tax policy in the oil and gas and the financial sectors, among others. It is also strengthening the law to identify beneficial ownership of shareholding in companies for tax purposes.

360. Russia's constitution and laws provide for accountability through checks-and-balances mechanisms. Box 4.3 summarizes the country's political and institutional arrangements. Formal institutions of accountability, which tend to operate efficiently in high-income OECD countries, are in place in Russia. The constitution provides for three co-equal branches of government: the executive, the legislative, and the judiciary. It also provides for a supreme audit institution that reports to parliament. Russia introduced a fourth chamber at the federal level, a "public" chamber, whose formal aim is to strengthen interactions between the executive and civil society. In addition, Russia introduced human rights and other ombudspersons at federal and oblast levels.

Box 4.3. Political and Administrative Snapshot

Constitutionally, Russia is a federal state, with a republican form of government.

Constitution: The current constitution came into force on December 25, 1993, after a national referendum. It replaced the Soviet-era constitution of 1978, which was amended in 1992 to reflect the dissolution of the Soviet Union.

Administrative structure: Russia has a complex structure of subnational governments:

- The country is divided into over 80 federal subjects, termed *oblasts* and *federal cities*. Territorial subdivisions also include *krais* (administrative territories), republics, autonomous *okrugs* (territorial divisions), and autonomous oblasts. The administrative units are grouped into eight federal districts, each headed by a presidential plenipotentiary appointed by, and representing, the President of the Russian Federation, who monitors the performance of the regions in each federal district.
- There are large cities (formerly known as cities of *oblast* subordination) and rural *raions* (districts); the latter contain a variety of forms of small towns and village governments, collectively known as second-tier municipalities. There are more than 2,000 first-tier municipalities comprising more than 500 cities and more than 1,800 *raions*; and there are more than 20,000 second-tier municipalities, comprising more than 1,600 townships and more than 18,000 rural communities.
- All municipalities, including rural settlements with small populations, are legally obligated to establish local governments, employ municipal office staff, formulate and execute budgets, and conduct an independent borrowing policy. The law assigns expenditure responsibilities to each tier of municipal government. The budget code specifies their revenue sources.

Electoral system: Russia has a two-chamber legislature. The State Duma (lower house) has 450 deputies; the Federation Council (upper house) has 170.^a

Main political parties: United Russia (ruling government party); Communist Party of the Russian Federation (CPRF); Liberal Democratic Party of Russia (LDPR); and the Just Russia party.

¹³⁸The *Panama Papers* disclosures may result in more light being shed on global and country-specific patterns of corruption and tax avoidance by firms and individuals.

The executive and upcoming elections: President Vladimir Putin began his third term as president in 2012, having served two earlier terms as president from 2000 to 2008. The next presidential elections are scheduled for 2018. The last election to the Duma took place in September 2016.

Legal system: Russia has a civil law system, with a bifurcated judiciary: a Constitutional Court and a Supreme Court. Courts of general jurisdiction, responsible for civil and criminal cases, have four tiers: the lowest, called the Justices of the Peace (instituted in 1998, with joint funding from the federal and regional budgets); district (*raion*) courts; regional (*oblast*) courts; and the Supreme Court. Russia also has a commercial court system, supervised by the Supreme Court.

^a The Constitutional Amendments of July 21, 2014 give the President the right to appoint an additional 17 members to represent the federal government.

361. Since the early nineties, Russia’s judicial reforms have focused on improving judicial governance, efficiency, transparency, and access. Key achievements of the early reforms included the introduction of judges’ immunity for judicial decisions; the creation of judicial self-governance bodies, such as the Council of Judges; the establishment of the Constitutional Court and commercial (*arbitrazh*) courts; the introduction and expansion of jury trials for criminal cases¹³⁹; and the adoption of adversarial procedures for criminal cases. By the early 2000s, new substantive and procedural codes had been adopted. Since then, reforms have tended to take a more technical approach aimed at improving incentives (e.g., higher judicial salaries); efficiency (e.g., through electronic applications and virtual hearings); transparency (e.g., a 2010 law mandates the publication of all judicial decisions on the Internet and the disclosure of performance statistics); and access (e.g., through electronic and mobile applications and virtual hearings).

362. However, formal institutions of accountability, such as the courts, are often perceived to be susceptible to executive influence. Public perception surveys conducted by one of Russia’s leading polling organizations, the Levada Center, show that 49 percent of respondents perceive the judiciary to be dependent upon the executive and special interest groups. Social accountability mechanisms (e.g., media, NGOs, business and professional associations, and religious organizations) are free to operate but there have been attempts to limit media pluralism and NGO activities. The 2015 Global Competitiveness Report ranks Russia 109th of 144 countries for the independence of the judiciary, although this was an improvement over the 2014 ranking of 119th of 144 countries.

Governance Challenges Affecting the Likelihood of Achieving Pathway One: Economic Structure, Regulation, and Services for Private Sector Development and Corporate Governance

363. Governance problems, related to the economic structure, regulatory policies, and provision of services to businesses, and corporate administration impair the potential for increasing productivity. The first set of governance risks relates to the ownership of assets, the composition of output, and the associated sources of growth, as well as the size of the public sector. A key risk is the high concentration of ownership in the private sector and the development of a connected sector involving individuals, businesses, activities, and networks closely associated with political power. In recent decades, the concentration of ownership of productive assets has increased, reducing competition and impairing corporate governance. Unequal distribution of productive assets among the population and wealth inequality increase the risk of wealth capture, which adversely impacts competition and sustainability.

¹³⁹ The average acquittal rate in jury trials is about 20 percent, compared to less than 0.5 percent for trials conducted by judges alone.

364. SOEs play a significant role in Russia’s economy, and the state has continued to consolidate its position there.¹⁴⁰ Waves of privatization in the 1990s gave way to bouts of renationalization and consolidation after 2000 (Box 4.4). There have been no major privatizations in the last decade or so, and state control of the economy increased from 38 percent in 2006¹⁴¹ to about 50 percent in 2014. In 2014, 10 of the top 15 companies (by sales and employment) in Russia were publicly owned or controlled and accounted for nearly 70 percent of revenues and over 85 percent of employment (

365. Table 4-2). About half of total banking system assets are held by state-controlled banks. Broadly, in the course of the last 15 years Russia has changed direction from being an economy that was mainly private to one now dominated by government and the public sector.

Box 4.4. Russia’s Waves of Privatization

During the 1990s, there were waves of privatization in Russia. At the time of the dissolution of the Soviet Union in 1991, most productive assets were under state ownership and control. During the ensuing period of transition, the Russian government engaged in a series of privatizations and divestiture schemes. At its peak, in 1993, the government privatized 42,924 state enterprises.^a Large private businesses accounted for a significant share of economic activity and employment during this period. By 2001–02, large firms accounted for 39 percent of industry sales and 20 percent of overall employment. In comparison, the total public sector share of industry sales was 24 percent and of industry employment 7 percent (Table B4.4.1).

Table B4.4.1. Sales, Employment, and Asset Shares by Ownership Type, Percent, 2001–02

Industry Sector (32 sub-sectors)	Large Firms	Total Government	Federal Government	Regional Government	Foreign Owners	Other Private Owners
Sales	38.8	24.5	19.6	4.8	5.3	31.5
Employment	20.2	7	4.4	2.6	1.2	71.6
Banking Assets	17.4	25.6	19.8	5.7	10.8	46.2

Source: World Bank 2005.

However, privatization did not generate the anticipated gains in socioeconomic growth and broad-based development. Russia witnessed a significant expansion in the share of economic activity by large business groups and the concomitant accumulation of wealth by a limited number of business owners: by 2004, the top 10 business group owners had a net wealth equivalent to 9.7 percent of annual GDP.^b

After 2000, government policy shifted toward re-nationalization and state control of strategic sectors. A series of executive orders starting in 2003 limited the scope of the private sector. For example, executive order no. 1009 established a list of enterprises and joint-stock companies deemed to be of strategic value and henceforth prohibited from being privatized. These entities were mostly in the natural resources, finance, defense, and technology sectors. The government also put in place special measures to be invoked in the case of a prospective bankruptcy in these strategic enterprises.

^a <http://www.ceicdata.com/en/blog/progress-privatization-russia#sthash.DE5hna4s.dpuf>

^b Calculated using the Forbes measure of individuals’ net worth in 2004.

¹⁴⁰ Russia has three main forms of SOEs: (1) joint stock companies, (2) unitary enterprises at the federal, regional, or municipal level; and (3) state corporations.

¹⁴¹ In 2006, fully state-owned and mixed-domestic public companies accounted for almost 20 percent of all manufacturing industry output. It is estimated that in 2007 the federal and regional governments accounted for about 40 percent of stock market capitalization. (World Bank 2011).

Table 4-2. Russia's 15 Largest Companies, Sales and Employment, 2014

	Name of Company	Ownership	Sales (billion RUB)	Employment (000s)	Rank by Employment
1	Gazprom	Public	5477	450	3
2	Lukoil	Private	4718	110	12
3	Rosneft	Public	3681	249	8
4	Sberbank	Public	2155	330	4
5	Russian Railways	Public	1796	1085	1
6	VTB	Public	989	101	13
7	Rostec	Public	965	900	2
8	Surgutneftgaz	Private	875	118	9
9	Magnit	Private	764	258	6
10	Rossetti	Public	760	218	9
11	Inter RAO	Public	741	48	25
12	Transneft	Public	695	106	13
13	X5 Retail Group	Private	634	117	11
14	Rosatom	Public	618	255	7
15	Megapolis	Private	507	15	88

Source: RBC Information Systems Database for Top 500 Russian Companies: www.rbc.ru/rbc500.

Note: Employment numbers for *Rostec* and *Transneft* are taken from Wikipedia and relate to 2008.

366. The proliferation of the state sector and state control offer opportunities for political patronage and rent-seeking. This may be reflected not only in the selection of management and the balance of control between management and boards but also in facilitating private revenue flows off public assets. Major assets—particularly in natural resources¹⁴²—are owned by the state and face little or no competitive challenge and limited effective oversight. Despite the limited role of the private sector, several individuals and companies have built a significant market presence. In 2014–15 the top 10 business individuals had a net worth equivalent to nearly 7 percent of Russia's annual GDP. At the same time, the wealth of fewer than 90 individuals was equivalent to about 18 percent of national income, compared to 13.4 percent in 2004. This significant market presence appears to be linked, at least in part, to access to connections and contracts with government agencies and/or natural resource SOEs.

367. These governance features have deterred private sector entry, entrepreneurship, investment, and innovation by distorting competition (EBRD 2013, World Bank 2014). While some important and well-managed private companies have emerged in a range of sectors where legislative and other constraints had not been imposed, the space in which they operate has receded over the past decade. The economic model that took shape after the mid-2000s largely discounted the idea that small- and medium-sized firms would be the main drivers of growth. Rather, the future was seen to lie with a mix of publicly owned companies and assets and of larger private companies. It is unclear how this economic

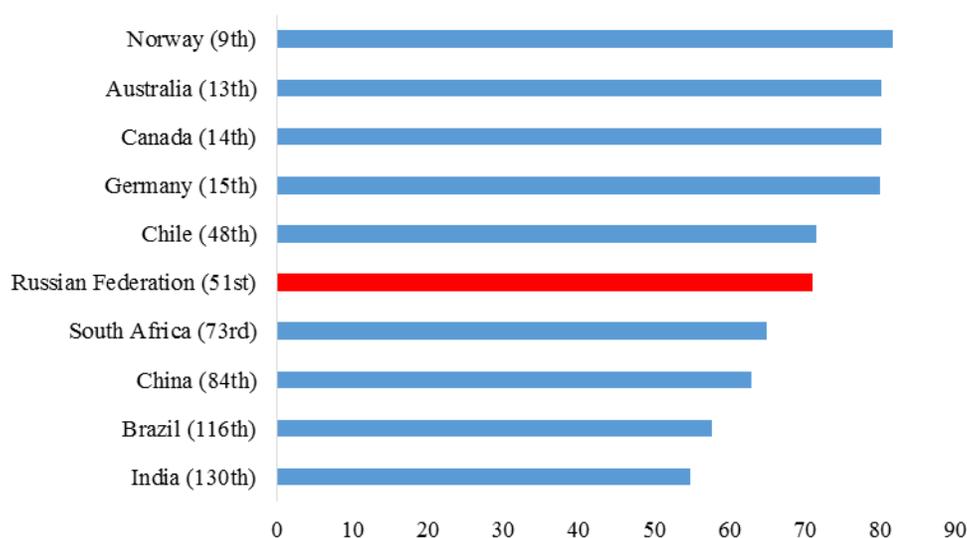
¹⁴²In the oil sector, considered to be a strategic sector, the share of state companies in production rose from 15 percent in 2004 to 55 percent in 2013 (Bertelsmann Stiftung 2014).

model will be able to provide economic incentives and new sources of growth when the economy can no longer rely on ample natural resource revenues.

368. Governance risks remain in regulatory policy and service provision to foster private sector development, despite evidence that several services provided to firms appear to have improved. Over the past decade Russia has implemented broad reforms to simplify its regulatory policies and improve the business environment. In 2001–12, the government created a deregulation initiative under which it introduced business-friendly legislation in the areas of licensing, inspection, and registration. The aim was to stimulate new-firm entry and facilitate the operations of existing firms and the exit of bankrupt companies. To further improve regulatory quality, in 2012 the government made all new federal regulation subject to a regulatory impact assessment. However, Russia could do better and move closer to the best-practice frontier, especially when compared to other commodity-exporting countries (Figure 4.6). Similarly, on the Worldwide Governance Indicators, the country’s score on Regulatory Quality has declined over the years to almost half the ECA average. Evidence suggests that private sector entry, entrepreneurship, investment, and innovation continue to pose a challenge.

369. An area where Russia has made great progress was in improving the performance of commercial courts. The 2016 Doing Business report ranks Russia 5th among 189 economies on ease of enforcing contracts (compared to 7th place for China and 9th place for Kazakhstan). Key to these ratings are the performance of commercial courts and public bailiffs, who enforce judicial decisions.

Figure 4.6. Doing Business Rankings and Distance-to-Frontier Scores, 2016



Source: World Bank 2016d.

370. Commercial courts play a key role in protecting property rights and strengthening investor confidence. Russia created a separate system of commercial courts in 1991 to assure expert adjudication of new categories of disputes involving businesses, other legal entities, and individual entrepreneurs. Since August 2014, Russia’s *arbitrazh* (commercial) courts have been subordinated to the Supreme Court; previously they were supervised by a Supreme *Arbitrazh* Court.¹⁴³ Russia’s commercial courts handle all

¹⁴³ There are three levels of arbitrazh courts: first-instance courts, courts of appeal, and circuit courts. Circuit arbitrazh courts engage in “cassation” review. Decisions of the circuit courts are subject to review by the Supreme Court’s Economic and

commercial and administrative disputes to which businesses (legal entities or individual entrepreneurs) are parties and are guided by independent sources of procedural law in the administration of justice. They are resolving a growing number of disputes, which has been made possible by a continuous modernization of business processes and the introduction of e-applications.¹⁴⁴ The European Court of Human Rights, in its jurisprudence, recognizes Russia's commercial court system as an efficient instrument to protect litigants' rights, with an adequate appeals structure.

371. However, the enforcement of judicial decisions is hindered by a rapidly growing caseload. Russia's Federal Bailiff Service (FBS)¹⁴⁵ is responsible for executing judicial decisions as well as acts of executive agencies and public officials. However, the number of enforceable decisions is rapidly increasing. The daily caseload per bailiff in 2015 was about 7.2 decisions per day—five times higher than established norms and up from 5.2 in 2012.¹⁴⁶ Only about 40 percent of all decisions are executed on time.¹⁴⁷ While there has been substantial improvement in some aspects of judicial enforcement, the rapid growth in the number of enforceable cases poses a significant challenge for Russia's justice system. In 2015, only 55.2 percent of writs of execution issued by courts of general jurisdiction and 51.9 percent of those issued by *arbitrazh* courts were actually enforced.¹⁴⁸ The FBS is aware of the challenge and plans to reduce the time taken for enforcement by improving efficiency through further streamlining and automating business processes, improved online services for debt collection, mobile applications, the expanded use of electronic signatures, and public outreach for increased use of electronic enforcement services.

372. Over the past decade, Russia has improved its overall business climate and recorded advances in revenue collection and trade facilitation indicators. During this period, institutional reforms to revenue collection have facilitated trade and private sector growth and helped improve the delivery of revenue-related services to firms and individuals (Box 4.5).

Administrative Divisions. There are 85 *arbitrazh* courts of the subjects of the Russian Federation, 20 *arbitrazh* courts of appeal (each with jurisdiction over an average of four *arbitrazh* courts of subjects), and 10 circuit *arbitrazh* courts (each with jurisdiction over two *arbitrazh* courts of appeal on average).

¹⁴⁴ With 4,319 judges and 11,856 other staff (as of 2016, per Federal Law No. 359-FZ of December 14, 2015 "On the Federal Budget for the Year 2016"), Russia's commercial courts annually resolve, on average, 1.5 million cases at the trial level, 350,000 appeals, and 100,000 cassation reviews. (Judicial Department statistics, <http://www.cdep.ru/index.php?id=79&item=3423>). During the last 10 years *arbitrazh* courts have been significantly modernized: access has improved (e.g., through electronic case filing and by information kiosks installed in every *arbitrazh* court that enable litigants to readily access information on their cases) and transparency strengthened (e.g., each court website contains information on the court docket accessible to all parties and all judicial decisions become publicly available on the electronic portal).

¹⁴⁵ It comprises the Central Apparatus, 85 regional branches, and about 2,500 territorial bodies, with 76,800 staff.

¹⁴⁶ The total FBS caseload has risen from 50.9 million enforceable decisions in 2012 to 60.7 million in 2014 and 69.9 million in 2015.

¹⁴⁷ Public Declaration of the FBS Goals and Objectives for 2016, http://fssprus.ru/files/fssp/db/files/201603/declaraziya_2016_201632939.pdf.

¹⁴⁸ FBS statistics, <http://fssprus.ru/statistics/>.

Box 4.5. Tax and Customs Administration Reform Achievements

Tax administration. The Federal Tax Service (FTS)^a administers taxes for all three levels of government in the Russian Federation. Its mission is to ensure transparency and ease of doing business and to respect taxpayers' rights and interests through efficient supervision and high service quality. In recent years it has made significant strides, made possible by a focused reduction of administrative burdens, greater client orientation, and expansion of e-services:

- *Collections are rising:* FTS collected RUB13.8 billion in tax revenue in 2015, up from RUB10.9 billion in 2012
- *Administrative efficiency is improving:* The number of field audits fell from 56,000 in 2012 to 31,000 in 2015 while tax adjustment per field audit increased from RUB5.6 million to RUB8.9 million during the same period.
- *Institutional capacity is increasing:* Clients comprise 145 million individuals, 4.8 million legal entities, and 3.7 million self-employed persons. The FTS annually handles 120 million tax returns, 15 billion VAT invoices, 250 million third-party transactions, and 160 million units of property data. And it annually sends out 37.5 million tax payment requests, 4 million registrations, 34 million e-government responses, and 82 million property tax invoices.
- *Technology is being harnessed to improve efficiency and transparency:* Online cash registers were piloted in 2015 and by July 2016 all cash registers will be online; e-registration of cash registers, mobile applications for cash receipt checks, and automated workstations were introduced; a tagging system was introduced on a voluntary basis in April 2016 to be made mandatory in June 2016; and VAT compliance monitoring has been automated, reducing fraudulent VAT refund attempts six-fold.

Customs. Modernization of the Federal Customs Service was underpinned by two objectives: (1) promoting international good practices for processing trade flows by customs, thereby improving the business climate and raising foreign and domestic investment; and (2) increasing taxpayer compliance with the customs code. In each case, the improvements were underpinned by high-level political support, complemented by sustained technical support within a long-term strategic vision and the recognition that addressing institutional constraints lay at the heart of performance improvements. Key achievements in 2003–13 include

- *Reduced physical inspections and customs clearance times:* Using risk-based approaches, the number of import declarations selected for physical inspection was reduced from 30 to less than 5 percent and nonenergy export declarations from 15 to 3 percent. The average customs clearance time was reduced from 45 to 18 minutes, with a reduction in average customs clearance time from 40 to less than 7 hours.
- *More accurate import recording:* The gap between the value of EU exports to Russia as reported by the EU and the value of imports from the EU as recorded by Russian customs has fallen from 40 to 16 percent.
- *Improved overall perceptions by clients:* Survey results have shown a strong improvement in the service user perception of the quality of customs services, responsiveness, and integrity.
- *Greater taxpayer compliance:* The ratio of revenues collected through revised assessments, interest, and penalties to total revenues fell from 77 to 19 percent.

^a Staffed by 149,000 tax officials and 9,700 outsourced personnel located in 2,408 local offices, 84 regional offices, 11 specialized federal inspectorates, and 1 federal inspectorate for data processing.

373. Customs administration reform achievements were the result of wide-ranging institutional changes and improvements in management practices. For example, as part of the effort to improve the legal and institutional framework a database for decisions related to customs laws and regulations was made operational, a code of ethics was implemented, customs organization was modernized, personnel policies were improved, and customs offices throughout Russia were reorganized on a functional basis. A unified automated information system for operations and management decision-making was put in place. Good practices were adopted, such as the introduction of “green corridors” at border crossings. An automated information exchange was introduced with EU member states as well as electronic

declarations and e-payment systems. Customer orientation improved.¹⁴⁹ However, the next phase of modernization of Russia’s customs administration is overdue, including application of new technologies that can more efficiently balance revenue collection needs with security requirements.

374. While there were also many advances in public financial management, more remains to be done to improve the public procurement framework. This includes efforts to make it more transparent and efficient, and leveling the playing field to enable firms to compete for government contracts.

375. Leveraging e-government more effectively could significantly simplify administrative procedures and increase business efficiency. Russia has achieved good progress in implementing e-government, with about 13 million unique users—9 percent of the population—registered on the central e-government portal (gosuslugi.ru) by 2014.¹⁵⁰ The vast majority of e-services in Russia, however, are not yet fully digital and still involve face-to-face interactions (World Bank 2016a). Building on its successes (e.g., extensively harnessing IT in Treasury management, tax administration, customs, and judicial modernization, to name only a few major applications), the government could improve the delivery of digital services to firms by embracing global good practices in digital governance.¹⁵¹ More even access to e-government services could facilitate the adoption of e-technologies by firms.

376. Another key governance risk under pathway one relates to corporate governance. Good corporate governance is essential to establish an investment climate conducive to the emergence of competitive companies and efficient capital markets. Countries with strong corporate governance attract more capital. They are more successful in reducing vulnerability to financial crises, developing well-functioning capital markets, and preserving retirement savings as pension funds are increasingly investing in equity markets. The perception of poor corporate governance practices of Russian firms is reflected in the discounted price-earnings ratio of Russian shares compared to other emerging economies. Russian company price-earnings ratios are one-third of those of companies from India and Latin America (Table 4.3). A survey of foreign companies investing in Russia (JP Morgan 2013) showed that 90 percent of respondents considered deficient corporate governance to be a major risk for investing in Russian equities. They also

Table 4.3. Average Price-Earnings Ratios for Stock Market Indices of Emerging Market Economies

	Dec-12	Dec-13	Dec-14	Dec-15
MSCI Russia	5.6	5.2	5.2	7.8
MSCI Turkey	12.0	8.7	12.9	9.6
MSCI China	11.3	10.0	10.2	11.0
MSCI Brazil	14.3	13.4	15.0	17.1
MSCI South Africa	15.9	18.7	18.9	17.8
MSCI India	16.3	17.1	18.8	22.7
MSCI Emerging Asia	13.2	12.3	12.6	10.7
MSCI Emerging Markets	12.7	12.1	13.2	11.8
MSCI Latin America	16.4	16.0	17.6	20.2

Source: Bloomberg.

Note: The price-to-earnings ratio is an equity valuation measure calculated as the ratio of a company’s stock price to its per share earnings.

¹⁴⁹ More customs officials now speak English and other languages; airport signage about passengers’ rights and obligations are clearer, explaining how grievances can be addressed.

¹⁵⁰ <http://minsvyaz.ru/ru/events/32541/>.

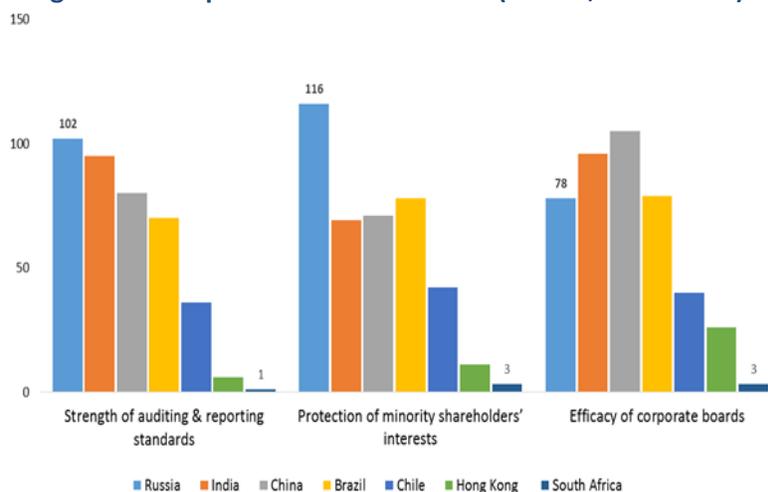
¹⁵¹ Including availability on multiple devices (primarily mobile), user-centric intuitive design, and a digital-by-default approach, i.e., with no paper or face-to-face interactions involved.

thought that improved corporate governance would be a key driver of competition for investors in emerging markets. Moreover, there is some evidence that better corporate governance practices introduced through reforms in the early 2000s led to higher valuations of listed Russian firms; they also helped increase the profitability of listed private companies (Banerjee et al. 2015).

377. Russia has implemented several important initiatives to improve corporate governance over the past decade, but uptake of good corporate governance practices remains slow. Implementation of the new Corporate Governance Code, which introduced many best-practice recommendations in 2014, became a secondary priority for many companies as the economy deteriorated. There is a perceived lack of incentives for Russian issuers to follow good practices because foreign capital markets are largely closed to Russian corporations due to the sanctions, and the domestic capital market has been at low levels.¹⁵² The Central Bank has issued a number of instructions in the two years since adoption of the Corporate Governance Code to strengthen disclosure rules regarding compliance. In addition, the Central Bank imposes administrative fines (starting from US\$8,000) in cases of violation of corporate governance regulations, signaling a serious attitude to promote good corporate governance. Major corporate governance deficiencies include the limited independence of boards of directors, inadequate corporate transparency, and weak protection of the rights of minority shareholders.

378. Corporate transparency is poor due to the limited disclosure in financial statements and lack of information on ownership structures and related party transactions. The 2015 Global Competitiveness Index ranks Russia at 102 (of 188 countries) for strength of auditing and reporting standards, below other BRICS (Figure 4.7). The situation has not improved over the past decade. While a significant amount of corporate information is now publicly accessible, some accounting documents are available only to shareholders who own in aggregate at least 25 percent of the company's voting shares—a very high barrier (World Bank 2013). Only publicly traded companies, banks, and insurance companies in Russia are required to prepare financial statements in line with International Financial Reporting Standards (IFRS), and the requirement does not apply to subsidiaries of listed companies.

Figure 4.7. Corporate Ethics Indicators (1=Best, 188=Worst)



Source: World Economic Forum 2015.

¹⁵² While sanctions are applied to a specific list of companies and banks, they have a wider impact on unsanctioned entities as international investors have less appetite to take on any Russia risk. For example, unsanctioned companies internationally issued bonds totaling about US\$50 billion in 2012–13 and less than US\$5 billion in 2014–15. Furthermore, some of the larger banks have seen a surge in corporate deposits as many Russian companies repatriated their cash held abroad. These banks are willing to lend, particularly to larger corporations, hence reducing the incentives for those corporations to implement good corporate governance practices.

379. Business surveys suggest that boards of directors in Russia are not effective. They are not able to oversee management effectively, nor do they clearly set the direction of the company in terms of strategy, budget and risk. To a large extent this is due to underrepresentation of independent directors on corporate boards and insufficient understanding of the role and functions of a board of directors. The Deloitte survey (2015) shows that independent directors account only for 27 percent of board seats, compared to about 60 percent in the United Kingdom and Germany. The remainder of the seats are occupied by executives (21 percent) and shareholders or their representatives (52 percent). Furthermore, the survey shows that it remains common for executives to be represented on board audit and remuneration committees. This implies that managers evaluate their own performance and set their own compensation. In the case of SOEs, management through its representation on the boards can exert considerable discretion over the use of resources provided by the government. Government officials sitting on boards of public SOEs are often required to vote according to the state's preference in certain board discussions. Misalignment of management incentives and company performance is a fundamental problem that weakens companies' competitiveness.

380. Rules about related-party transactions are in place, but their implementation is hampered by less transparent disclosure requirements for SOEs, poor disclosure of ownership, and complex group structures. SOEs, even when reporting according to IFRS, are allowed substantial disclosure flexibility with respect to transactions with other SOEs, which often leads to weaker disclosure. Some major companies have extremely complex subsidiary structures: Russian Railways has over 23,000 subsidiaries, Gazprom 4,328, Sberbank 3,677, VTB 2,513, and Rosneft 945 (World Bank 2016e). Complex ownership structures, in Russia and elsewhere, can serve multiple purposes. They can help reduce taxes, for example through transfer pricing. Subsidiaries can be used as a way of diluting benefits to specific classes of shareholders who are entitled to receive dividends based on the income of the main company. Significant transactions involving subsidiaries are generally not closely scrutinized by boards of directors and are not always concluded on market terms.

381. Protection of minority shareholders' rights in Russia remains weak. The concentration of ownership in Russian corporations, both public and private, is high. In the sample of publicly traded companies covered by the Deloitte survey (2015), the average holding of a controlling shareholder was about 58 percent. The state is the single largest owner of shares in the Russian economy, concentrated in a few large companies in the oil and gas sector, utilities, and the financial sector. High ownership concentration in private companies resulted from the privatization process in the 1990s, which was conducted in an environment of weak legal and political institutions and led to the consolidation of wealth and power among a small number of Russian entrepreneurs (Lehuede and Kossov 2014). Given the limited number of independent directors and inadequate disclosure practices, high concentration of ownership makes minority shareholders vulnerable to unfavorable decisions of boards dominated by the representatives of controlling shareholders. These issues may include decisions about dividends, changes in ownership structure, and related-party transactions. The Global Competitiveness Index ranks Russia 116th (of 188 countries) for protecting minority shareholders' interests. In the Doing Business 2015 report, only 40 countries (of 188) are ranked below Russia on protecting minority investors against directors' misuse of corporate assets for personal gain. Russia scores particularly poorly on the subindicator measuring minority shareholders' ability to obtain recourse for related-party transactions.

Governance Challenges Affecting the Likelihood of Achieving Pathway Two: Service Delivery to Citizens

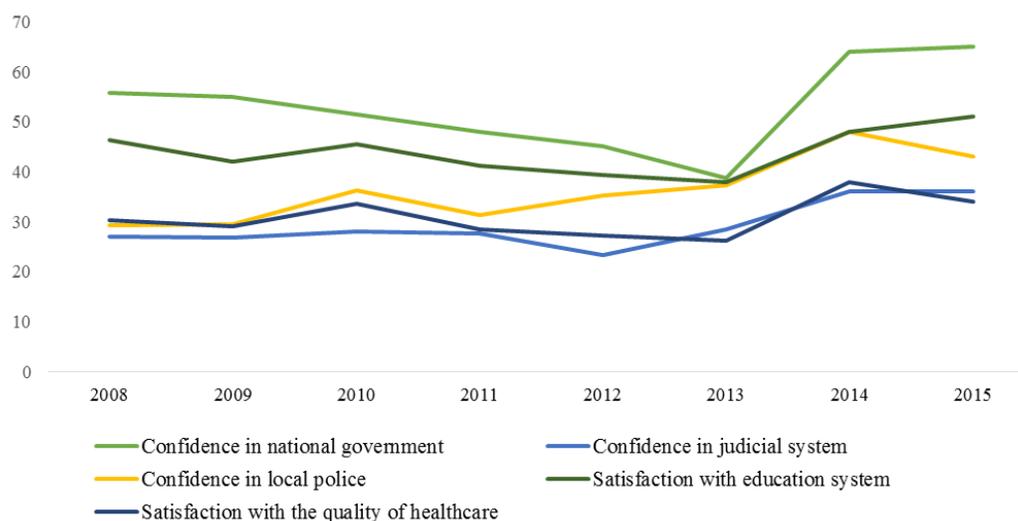
382. A central governance risk for pathway two is related to the challenge to deliver public services to a growing middle class. Strong income growth over the last decade has created a large middle class, which has increased demand for access to quality public services. However, despite increased spending

on public services, such as water, transport, health, and education, the government has had difficulty in improving service delivery. Citizen perception surveys show a significant increase in confidence in government institutions since 2013 (improving from 39 to 64 percent in 2014). However, confidence in the judicial system and local police remains low, and there is dissatisfaction with the provision of services such as health and education (Figure 4.8).

383. In recent years, Russia has implemented a series of administrative reforms to improve the quality and effectiveness of public services, as well as access to services. During the first phase of these reforms (2004–07), the government focused on formulating administrative processes, procedures, and standards for service delivery. In the second phase (2007–10), it expanded the focus to creating electronic platforms for service delivery and established multi-functional service centers across the country.

384. In particular, comprehensive subnational finance reforms helped provide more resources for service delivery at lower administrative levels, yet it might be difficult to sustain such reforms. The 2006 legislation introduced two-tier municipal self-government bodies (administrative/city district level and settlement level). The resulting arrangement of centralized revenue sources at the federal level and delegated mandates at the regional level helped improve intergovernmental fiscal relations and enabled significant growth in financial support to the regions. Fiscal transfers to the regions increased from 8.1 percent of total federal budget expenditures (1.3 percent of GDP) in 2000 to 45 percent in 2010 (World Bank 2015b). However, there is the question whether this can be sustained, given the fiscal pressures the federal government faces due to lower oil and gas budget revenues (see the previous discussion of fiscal sustainability).

Figure 4.8. Confidence in Government Institutions and Provision of Services, Percent, 2008–15



Source: Gallup World Survey Data.

385. To provide more efficient, transparent, and accountable governance and public service delivery, the government has been consistently investing in the development of e-government¹⁵³ and government open data.¹⁵⁴ To improve public services, a national e-government services portal¹⁵⁵ has been established with integrated national databases for pension registration, a register of taxpayers, a real estate cadastre, a passport database, and others. As part of the measures to enhance the efficiency and

¹⁵³ “Electronic Russia 2002-2010” and “Information Society 2011-2020”.

¹⁵⁴ data.gov.ru.

¹⁵⁵ www.gosuslugi.ru.

effectiveness of governance processes, common digital services have been made available for shared utilization across the whole of government, including e-identification, e-authentication, and payment systems. The authorities have introduced a range of reforms to address government transparency and accountability issues, including an “e-parliament” initiative allowing citizens to submit draft laws for consideration by the parliament; and an Open Government initiative.

386. As a result, thousands of datasets on education, health, transport and housing are now available on the central Open Data Portal and portals of several regions¹⁵⁶ and cities.¹⁵⁷ “Open data” in Russia has gradually entered the mainstream and is used to create apps,¹⁵⁸ monitor public procurement contracts,¹⁵⁹ and fix roads.¹⁶⁰ The *Clearspending* portal tracks and visualizes government spending, and monitors over 12 million contracts, 270,000 contractors, and 900,000 vendors using Open Government Data, which has helped to identify over 4 million procurement violations.¹⁶¹ The Active Citizen initiative of the Moscow City government allows for more transparency through open data on government operations.

387. The introduction of e-services was not just an important part of government’s strategy to improve citizens’ access to key public services and to realize efficiency gains, it also aimed to reduce petty corruption in service delivery. A federal program (Electronic Russia), begun in 2002, aimed to create a single point of entry for electronic interaction between the citizens and the state, without the need for additional permits and registrations. This approach has been rolled out across the federal and regional administrations. A higher-level integration of ICT into service delivery could also promote more inclusive governance through digital development and expansion, helping Russian cities and regions with high mobile broadband connectivity to gain access to more efficient e-government services (Box 4.6).¹⁶²

Box 4.6. ICT Integration into Service Delivery

The government plans to deliver at least 70 percent of all government services through e-channels by 2018. ^a Russia has made good progress on the delivery of ICT-enabled services through the national portal gosuslugi.ru, which provides information, application forms, payment services, and e-ID functionality. Government e-services are also available through the regional e-government portals, websites of individual government agencies, and multi-functional service centers—which in 2016 covered 94 percent of the population—and through telephone and post offices. All 85 regions are involved in integrating ICT into service delivery, but the quality and use levels of the regional portals vary greatly and usually correlate with the level of ICT sector development in the regions. Moscow and St. Petersburg lead in delivering e-services to the public and firms.

According to the 2015 Global Innovation Index, Russia leads in e-government development among BRICS but lags behind other oil-exporting countries like Canada, Australia, Norway, and Chile. In particular, the take-up of many electronic services in Russia is disappointingly low. As of 2015, an estimated 30 percent of the population used those services, one third of which are transacted through the portal, ^b which is well below levels in Canada (50 percent), Australia (55 percent), and Norway (80 percent). Furthermore, the vast majority of e-services in Russia still involve some face-to-face interaction, which reduces their efficiency. Factors contributing to this include lack of citizen-centric design; insufficient convenience and lack of other advantages to citizens compared to other channels; and a digital divide comprising both lack of ICT skills and lack of broadband

¹⁵⁶ data.ulgov.ru; www.opendata71.ru.

¹⁵⁷ data.mos.ru; data.gov.spb.ru.

¹⁵⁸ data.gov.ru/apps.

¹⁵⁹ zakupki.gov.ru.

¹⁶⁰ rosyama.ru.

¹⁶¹ <http://www.worldbank.org/en/news/feature/2015/01/13/unleashing-the-potential-of-open-data>.

¹⁶² The ICT-related policy and implementation implications (e.g., fair competition and nondiscriminatory access to ICT infrastructure and institutional capacity to implement ICT sector regulations) have been separately examined in the ICT section and are not repeated here.

access in some regions. Although government institutions are linked in technical terms, their business data are often not interoperable, and the government ICT infrastructure would need refreshing to meet the challenges of the future.

The government could build on the strengths already present in Russia's ICT sector^c and on system-wide ICT applications already implemented in the public sector. Russia could reap economic benefits by reducing administrative costs, improving satisfaction with public service delivery, and cutting red tape for businesses. The efficiency, effectiveness, and uptake of public services could be increased by implementing innovative approaches successfully applied by digitally advanced countries (e.g., user-centered service design; digital-by-default services; device-agnostic and mobile services; digital from end to end; and the Government as a Platform approach). This would require a whole range of transformations, including updating policy goals and objectives; changing legislation, business processes, institutional structure, and management; investing in technical infrastructure transformation and in capacity building for civil servants; and investing in change management, public communications, and outreach.

^a <http://gosman.ru/?news=29388>.

^b <http://minsvyaz.ru/ru/activity/directions/4>.

^c Including affordable broadband, a high level of mobile broadband, and wireless connectivity penetration.

388. The Russian government should encourage citizens and businesses to be actively engaged in data-driven innovations and enhancement of governance processes. Further reforms will be required to improve the regulatory framework, government capacity, and institutional structures through ICT-enabled changes in decision-making processes, enabling environment, and management systems. The level of acceptance of innovative governance practices will depend on civil servants' and citizens' awareness and skills to harness the full potential of digital tools and to co-create public services. The open data sets could be a great source for civic activists and for anti-corruption campaigns. To ensure the inclusiveness of digital governance, persistent regional gaps in broadband connectivity and still-significant age and gender inequalities in Internet use will also need to be addressed.

389. Despite some progress in service delivery as a result of these reforms, the overall impact remains limited. While administrative regulations and standards for delivery have been codified, implementation remains a challenge due to difficulties in integrating the reforms within wider, multilayered government structures and the lack of additional funding for the reforms from the federal budget. The health and education sectors offer potent examples of achievements and persistent challenges, some of which relate to governance.

390. In the health sector, significant service delivery improvements are being offset by substantial increases in out-of-pocket spending on outpatient drugs and services, especially by the poor. As summarized in chapter 3, the share of households experiencing financial catastrophe as a result of health care expenditures has declined. There have been large reductions in inpatient care spending, especially by the poor and those living outside Moscow and St. Petersburg. Informal payments, widespread in the 1990s, have declined. And economic development has been associated with a legalization of informal payments, both over time and across regions. However, Russia's public health spending remains relatively low, resulting in high out-of-pocket (OOP) health spending. The share of OOP spending in total health spending, often a crude indicator of the extent of financial barriers to access, has remained high. Per capita OOP spending has a strong positive correlation with per capita income and living in Moscow and St. Petersburg—most of the increase in OOP spending in 2005–12 was concentrated in these two cities. This problem is compounded by low levels and inefficient allocation of expenditures, creating significant regional variations in health sector service delivery across Russia.

391. Addressing health sector service delivery challenges requires strong and sustained focus on, among other things, health sector governance. Sector policy priorities outlined in chapter 3 include, for example, reducing high mortality rates through (1) health promotion, including through increased alcohol and tobacco taxes and introduction of sin taxes; and (2) improving financial protection (i.e., reducing OOP

spending) by expanding benefit packages to cover excluded items and by improved targeting of additional resources to poorest households first. In addition, the sector could begin to use health technologies assessment while including new services in the benefit package, close down excessive hospital infrastructure, improve the efficiency of health financing, and move to greater utilization of modern IT (e.g., for remote diagnosis and electronic health records).

392. Education sector governance challenges are manifested by growing inequality in access to quality education. This is exemplified by low enrollment in—and the low quality of—early childhood development (ECD) and preprimary education, and by uneven provision of preprimary schooling skewed to higher-income population segments (potentially impeding economic mobility across generations). Furthermore, regional inequalities in general education funding pose a threat to access, while the policy of supporting best-performing schools is widening the gap between poorer- and better-performing schools. Social stratification in Russia has also increased significantly.

393. Improving education outcomes will require rethinking key governance-related aspects of sector policy. This includes reviewing the currently inequitable fiscal decentralization arrangements (which have led to natural-resource-rich regions enjoying significantly higher funding per student), increasing support to poorer regions, and utilizing ICT more efficiently to provide the appropriate education to students in remote and underserved areas and to provide lifelong learning opportunities.

394. In the health and education sectors, attention to key governance aspects of sector policy could ensure successful policy implementation and attainment of desired outcomes. The success of these health and education policy priorities will depend on attention to sector governance in at least three crucial ways: (1) stakeholder consultations at the policy development stage and stakeholder oversight to ensure predictable and transparent implementation of the sector policies adopted; (2) management attention to the integrity of procurement where policies depend for their success on transparent, efficient, and competitive public procurement; and (3) publicly communicating the results sought to be delivered through the policies adopted, receiving user feedback through reliable public surveys and other means, and periodically reporting on implementation progress against results indicators or key performance indicators.

Better Natural Resource Management

395. Better natural resource management and improvements in environmental sustainability are central requisites for removing constraints on shared prosperity in Russia along the two pathways. Natural resources are critical for the country's economic development and an important source of income. This section will identify key risks to balancing growth and social progress with environmental sustainability. First, it will review key cross-cutting dimensions of natural resource and environmental management, especially climate change, which could offset many of the accomplishments achieved through economic growth and improved access to services. The second section will link the long-term goals of pathway one (increases in productivity and diversification) to the risk of depleting Russia's natural capital. Inefficiencies in the use of natural resources impose large economic costs and endanger long-term sustainability. The third section will discuss how environmental risks affect vulnerability and could limit reductions in morbidity and mortality. This evidence indicates how essential better natural resource management and environmental sustainability are for Russia's future growth path.

396. Russia's medium- to long-term growth prospects will be greatly affected by how well policies integrate environmental and natural resource management into economic planning. Huge reserves of oil, gas, minerals, forests, and fresh water resources constitute a significant share of the country's wealth and are key drivers of economic growth. They need to be managed well in order to generate savings for

future generations. Environmental challenges, including air and water pollution, threaten Russia's competitiveness and productivity, putting long-term sustainability at risk. Environmental challenges are addressed in national policies, strategies, and programs. The government's Policy for Economic Development until 2030 aims to ensure ecologically-oriented economic growth, and its Climate Doctrine acknowledges the effects of global warming and commits to improving energy efficiency and reducing emissions. However, Russia still needs to improve the coordination of environmental policies and regulation of the use of its natural resources across responsible government agencies, increase the availability of environmental information for decision making, and improve the enforcement of environmental legislation. There is growing recognition that appropriate policies, supported by the right innovations, can create new economic opportunities that reconcile environmental and economic development objectives.

Cross-Cutting Environmental Challenges: Natural Resource Degradation and Climate Change

397. The degradation of the natural resource base and climate change are cross-cutting environmental challenges that pose increasing sustainability risks. The efficient use of land and water is critical for achieving Russia's economic and environmental goals. Improving the sustainability of agriculture (e.g., through the adoption of environmentally sound practices) and better water management will be important for future productivity growth and welfare. There are many opportunities for Russia to address the risks associated with climate change. Higher energy efficiency would bring significant environmental and climate benefits and economic gains, including increased productivity and competitiveness. Climate change is already affecting the agriculture sector, including through an increase in the number of dangerous weather events with large material losses over the past decade (Oxfam, 2013).¹⁶³ Russia also has the unique asset of the world's largest forests, making it a good candidate to play a key role in the global climate change agenda. Adapting to increased climate risks and vulnerability will pose new challenges to policies in support of growth and shared prosperity.

398. The potential for the development of large areas of unutilized agricultural land is not clear and deserves further analysis. While the area under agricultural production declined over the 2000s, a slight increase was observed from 2010 to 2013. There are vast areas of agricultural lands that are not used for agricultural production. An analysis of the 2006 Agricultural Census data estimated a total of 73.6 million ha of unused agricultural land—33 percent of all agricultural land in the country, consisting of 20 percent of the agricultural land that was allocated to agricultural entities but not in productive use and another 13 percent that was not allocated to agricultural entities and remained with regions or municipalities. However, a large share of unused agricultural land is located in regions with low agro-climatic potential: the majority is located near abandoned agricultural operators and villages in the Northern and Eastern areas and in the non-black-soil zone and cannot easily be put back into productive use—it would require resettling people, establishing new operators, and investing heavily in machinery and land preparation. Complementary policies aimed at reducing transaction costs for land allotment, registration, sale/purchase, or lease would also be needed. A better understanding of areas that hold the highest production potential, taking into account both agro-ecological and economic potential, is needed (Box 4.7).

¹⁶³ A 2013 Oxfam research report estimated that without adequate measures to adapt agriculture to climate change, the annual economic loss from a decrease in crop yields would be on the order of RUB 108 billion by 2020 and RUB 120 billion by 2050. The same report further assessed the adaptive capacity of the Russian agriculture sector as very weak. In addition, the agriculture sector in Russia is the largest emitter of greenhouse gas in the ECA region and Russia is one of the 10 countries globally with the largest greenhouse gas emissions from agriculture. Initiatives related to climate-smart agriculture have been piecemeal at best; the country would benefit from a consolidated strategy for climate-smart agriculture.

Box 4.7. Land Use and Productivity in Agriculture

Agrarian reforms have deeply affected the allocation of land and assets in rural areas, resulting in a mixed agricultural economy. The implementation of reforms in post-Soviet Russia prevented the splitting of land into thousands of small plots. Agrarian reforms in each region of the Russian Federation had their own specific features, mainly because the privatization of land was not carried out homogeneously in all regions. For example, in some regions preference was given to the preservation of state farms^a or the creation of producers' cooperatives. The large corporate sector has prevailed in 30 percent of the republics/regions, with the predominance of large agricultural enterprises, agro-firms, and agricultural holdings. Approximately 30 percent of the regions are characterized by the predominance of a family structure of production (a combination of family farms—small and medium-sized private farms established in the post-reform period—and household plots producing for self-consumption with small surpluses sold on local markets), and the remaining 40 percent of regions have a mixed agrarian structure.

The most radical changes within the farming structure have been the resurgence of household plots and the concentration of production in large agricultural organizations (agro-holdings). From 1990 to 2009, the share of agricultural enterprises decreased from 98 to 71 percent of the agricultural area, that of household plots increased from 2 to 16 percent, and that of family farms grew from nothing to 13 percent. Among agricultural enterprises, the concentration of production in the largest organizations continues to increase. This process is also happening in the family farm sector. Large agricultural enterprises, agro-firms, and agro-holdings have come to dominate the corporate farm sector. Among the largest enterprises (agro-holdings), those with foreign parent companies are typically the most efficient and profitable (Uzun et al. 2014). Agricultural enterprises dominate grain and poultry production, while the family farm sector is the main producer of potatoes, fruit, and vegetables and other livestock products.

Recent agricultural growth has been driven by increases in productivity, yet overall productivity remains low compared to other countries, indicating potential for further productivity increases. Both the crop and livestock sectors have expanded over the 2000s, with the total value of agricultural production doubling (in nominal terms) from 2000 to 2014: Output of the poultry subsector increased by 4 times and of the swine subsector by 1.7 times; beef production, however, remains below its 2000 level, despite substantial government support as a priority industry. The expansion of grain production has been closely matched by that of grain exports since the early 2000s. Agricultural value-added per worker doubled between 2000 and 2011. However, the 2013 level of US\$6,342/worker (in constant 2005 dollars)^b was just above the average for ECA but only about one-fourth the US\$24,509/worker in high-income countries (figure B4.7.1). Agricultural value-added by hectare of arable land (US\$327/ha in 2013) is also well below that of the BRICS or other high-income countries with a large agricultural land base (figure B4.7.2).

Figure B4.7.1. Agricultural Value-Added Per Worker (Constant 2005 US\$)

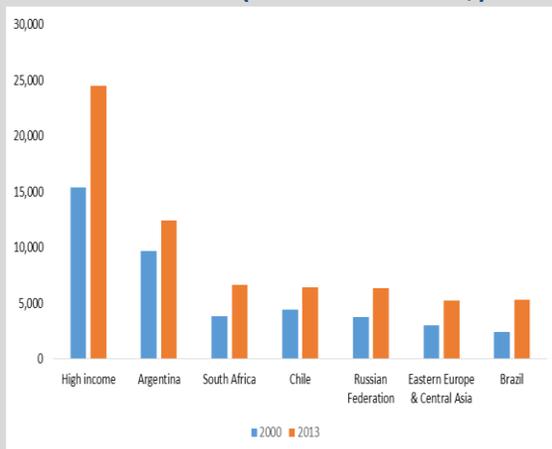
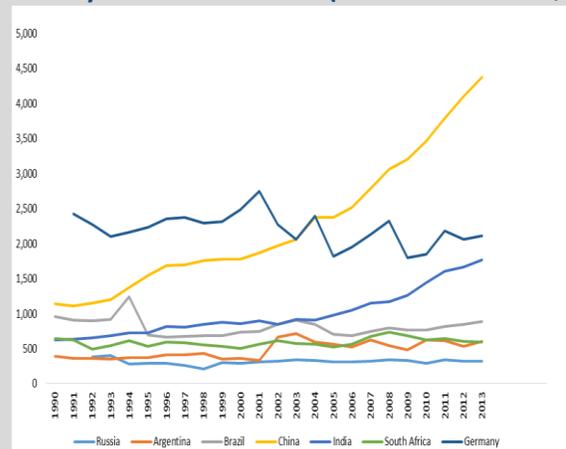


Figure B4.7.2. Agricultural Value-Added by Ha of Arable Land (Constant 2005 US\$)



Source: World Bank calculations.

^a Today it is still not allowed to privatize former collective and state farms in five republics of the Russian Federation (Chechnya, Dagestan, Ingushetia, Kabardino-Balkaria and North Ossetia)

^b Each represented about 50 percent of total agricultural production value in 2014.

399. Degradation of land and vulnerability to weather-related shocks are major threats to the sustainability of the agriculture sector. Almost a quarter of agricultural land, including 30 percent of arable land, is heavily water- and wind-eroded. It is estimated that 50,000 ha of agricultural land are destroyed annually due to poor agricultural practices (JRC EU 2014). Less attention has been paid to the environmental sustainability of agriculture than to increasing agricultural production. Environmental sustainability was addressed under the Federal State Program for the Preservation and Restoration of Soil Fertility of Agricultural Land and Agro-landscapes as National Heritage of Russia for the period through 2013, with measures that promoted good practices in the application of fertilizers and protecting agricultural land from erosion or withdrawal from agricultural production. However, most funding under the soil fertility programs supported the prevention of withdrawal of agricultural land from production and the rehabilitation of irrigated lands; measures facilitating more intensive use of natural resources still prevail over those preserving natural resources (e.g., water and soil conservation). The Russian Federation should consider the experience of several countries (for example, Brazil, Switzerland, the United States, and countries in the EU) that condition producer support on the adoption of environmentally sound practices. In sensitive areas affected negatively by agricultural activities (e.g., water catchments for larger urban centers), the government should consider programs that encourage producers to protect critical environmental resources, in collaboration with municipalities and/or the private sector, similar to programs that are being developed in other parts of the world.

400. Good water resource management is important for both health and firm-level productivity. While freshwater resources are plentiful, water use is inefficient and water quality is low and poses a serious risk to health. Water availability per capita is very high (3rd in the world) and water exploitation is very low. However, the water intensity of GDP is far above levels in Europe, the United States, and Canada, and use is highly inefficient. Russian foundries, for example, use 161 times more fresh water than the amount used in Europe to produce an equivalent volume (one ton) of good castings (IFC 2011). Matching EU standards in water efficiency would save enough water to supply more than 3.5 million Russian citizens for one year. No less than a third of sampled drinking water does not meet sanitary requirements. The poor quality of drinking water is due to polluted water sources and lack of protection zones around them, the lack or poor quality of water treatment systems, and the poor state of water supply networks. The total amount of polluted waste water discharged without treatment increased from 6.9 to 7.4 percent in 2014 compared to 2013 (Ministry of Natural Resources 2014).

401. Water resources during dry periods are in short supply in several regions, reducing the availability of water for drinking and household use, agriculture, and fisheries. Water withdrawal for irrigation in some key basins exceeds 50 percent, and about 87 percent of irrigation is in the southern part of the European portion of the country, where water is particularly scarce (Figure 4.9). Russia's water sector has not developed adequately; the Water Strategy until 2020 aims at overcoming sector problems, although its implementation has still to show results.

402. Floods are an increasing risk and impose large economic costs. There were more floods during the first decade of this century in several Russian river basins, including the basins of Volga and Ob. In many regions the frequency of catastrophic flooding caused by high water and spring floods increased by 15 percent compared to the last decade of the 20th century (figure 4.9). Many cities and regions of Russia are partially flooded once every 8–12 years, and the densely inhabited regions of the North Caucasus and the Don River basin are flooded once every 5 years. The frequency of floods and the size of the associated losses are growing.¹⁶⁴ It has been estimated that a 25-year flood could reduce GDP by 5 percent; losses

¹⁶⁴ Floods in the Krasnodar region in 2010 caused economic damage estimated at RUB 2.5 billion and the loss of 17 lives. Two years later, a much worse flood occurred in the same region and killed 170 people and caused damage of RUB 20 billion, followed

from a 100-year flood could be equivalent to more than 30 percent of the country’s gross fixed capital formation in a year, or 10 percent of total government revenues.¹⁶⁵

Figure 4.9. Water Stress Map



Source: World Bank.

403. Improvements in energy efficiency would reduce carbon emissions and create opportunities to increase productivity and competitiveness. As one of the most energy-intensive economies in the world, Russia continues to be responsible for a large share of global carbon emissions. Russia is in the top 10 of world-wide emitters, whether measured by total emissions or by emissions per capita (Figure 4.10). Russia generates about the same level of CO₂ emissions as the whole Latin America region while producing about a quarter of Latin America’s GDP and having less than a quarter of Latin America’s population. After dropping by 40 percent in 1990–98 following the dramatic economic decline, Russia’s emissions have risen steadily, although they remain well below the 1990 level.¹⁶⁶ The largest source of carbon emissions is energy, providing Russia with a significant opportunity to reduce its carbon emissions through higher energy efficiency.

404. Improving energy efficiency would bring significant environmental and economic gains. High energy intensity (Figure 4.11) stems from the combination of subsidized energy tariffs, the obsolete capital stock, and the structure of production but also fundamental characteristics of Russia, including low population density and the cold climate.¹⁶⁷ High energy intensity represents a huge drag on Russia’s competitiveness. Improvements in efficiency could reduce energy consumption by 45 percent, or 300

a few weeks later by another flood that killed four people and caused an additional RUB 1 billion in damage. The flood that occurred in the Altai region in 2014 was quite vast and led to RUB 1 billion rubles in damage.

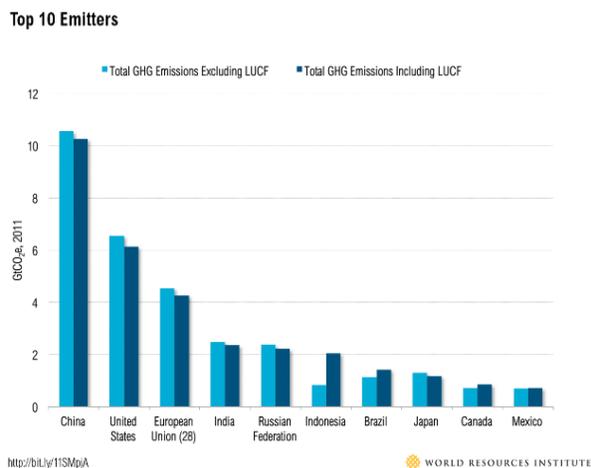
¹⁶⁵ World Bank estimates based on IMF and World Bank databases (in 2010 prices)

¹⁶⁶ In 2010, CO₂ emissions increased by 4 percent to 1.7 billion tons, following a 7 percent decrease in 2009.

¹⁶⁷ While Canada is similarly large and cold, only a very small proportion of its population lives and works in the coldest areas.

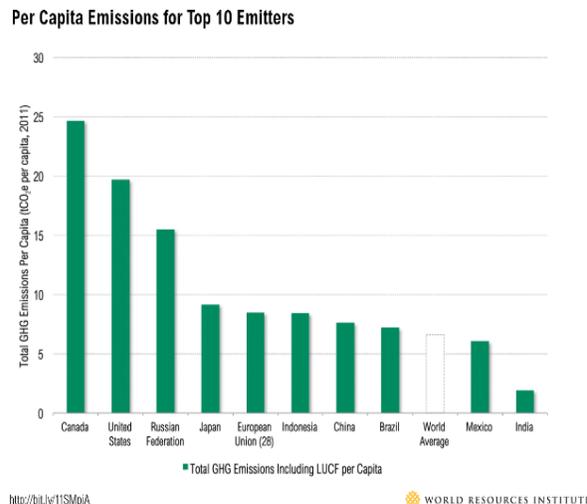
million tons of oil equivalent per annum, more than the total energy use in France (Figure O.15). Enactment of the 2009 Federal Law on Energy Efficiency and 2010 Federal program on energy savings gave considerable impetus to the energy efficiency agenda, but implementation quickly stalled. Significant bureaucratic hurdles prevent the implementation of energy efficiency programs already established by the government. Federal subsidies to the subjects of the Federation are currently frozen. So far efficiency improvements have been introduced mainly in public organizations and to some extent in residential buildings, but even these lag behind the measures implemented in developed countries.

Figure 4.10. Top 10 Emitters and Top 10 Per Capita Emitters¹⁶⁸



<http://bit.ly/11SMpYA>

WORLD RESOURCES INSTITUTE



<http://bit.ly/11SMpYA>

WORLD RESOURCES INSTITUTE

Source: World Resources Institute. 2014.

Source: World Resources Institute. 2014.

405. The uptake of energy-efficient technologies in the industrial sector and transport has been insignificant, despite the financial viability of these improvements (IFC 2011¹⁶⁹). The World Bank Group estimates that energy efficiency improvements will require incremental investments of about US\$320 billion, which would generate annual energy cost savings for end-users of about US\$80 billion (in 2007 prices).

406. The development of renewable energy, including hydro, solar, and wind, offers a substantial opportunity to lower carbon emissions. In the 1990s, it was estimated that the renewable energy potential in Russia could provide a third of the country's total energy needs. The government recognized renewable energy development as a priority and set a target to achieve about 2.5 percent of total electricity generation (about 6.2 GW) from renewable sources (excluding large hydro) by 2024. In 2013, the government adopted legislation which established a capacity-based mechanism that supports renewable energy projects. The support scheme is based on capacity payments to (competitively) selected renewable energy projects for a period of 15 years. Four tenders were held, but progress since then has been limited. Besides the limited access to finance due to the sanctions, the local content requirement of 65 to 70 percent, depending on the type of technology, is a significant barrier. Government and the private

¹⁶⁸ <http://www.wri.org//blog/2014/11/6-graphs-explain-world%e2%80%99s-top-10-emitters>.

¹⁶⁹ The report provides an assessment of economic and financial viability, the size of required investments, and potential cost savings for key sectors, including residential buildings, industrial enterprises, transport, electricity, heat supply, and gas flaring. It suggests high financial viability of energy efficiency improvements in industry (80 percent) and transport (84 percent).

sector still may not see enough economic incentives for diversifying Russia’s energy mix. However, in addition to reducing carbon emissions, renewable energy can be a cheaper choice for remote regions that rely on diesel-based generation with high transportation costs, and can contribute to the diversification and modernization agenda.

Figure 4.11. Russia’s Energy Intensity

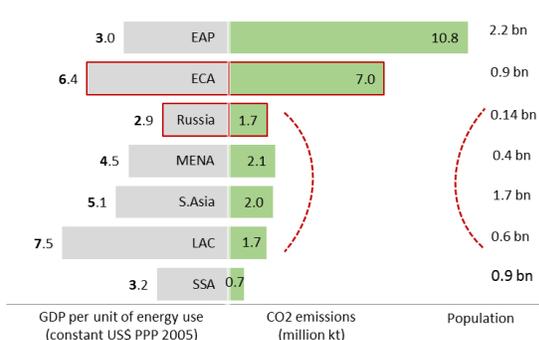
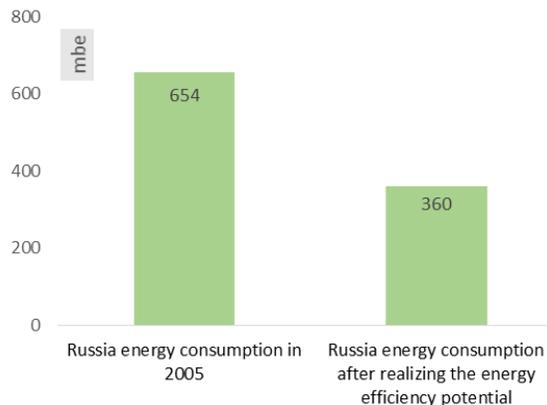


Figure 4.12. Russia’s Energy Efficiency Potential



Total incremental investments:	\$320 billion
End users cost savings:	\$80 billion/year
Benefits to economy:	\$120-150 billion/year

Source: World Development Indicators 2012.

Source: World Bank 2011.

407. Russian forests are a unique asset for the world and place Russia at the center of the global biodiversity and climate change agenda. Russia has the largest forested area in the world, representing 20 percent of the global forested area (FAO 2012). Russian forests contain unique biodiversity resources, deliver important ecosystem services, including through timber production, and store enormous amounts of carbon. Most of its forests (86 percent) are in the boreal zone, which store more carbon than any other terrestrial ecosystem. Russian forests play an important role in the global carbon cycle. The net annual accumulation of carbon in Russian forests accounts for about one-third of the carbon balance estimated for all forests worldwide. The future global climate will therefore be greatly influenced by Russia’s land use policies and forest management practices. There are two other forms of climate benefits that sustainable forests can provide: (1) Renewable, forest-based sources (including wood pellets) can be used instead of fossil fuels to produce energy. Renewable heat and power from wood and wood waste could be used by Russia’s villages and towns, particularly those in rural, heavily forested areas. (2) Renewable, innovative forest-based materials could be used in construction instead of other materials, such as aluminum, steel, and concrete, which require very large volumes of fossil fuels to produce.

408. Russian forests store one-third of the forest carbon balance worldwide but fires, pest infestations, and human activities severely impair forest effectiveness as a carbon sink and may result in additional carbon emissions. Forest fires, land use changes, and other related factors account for 15 to 20 percent of global carbon emissions—more than the entire transport sector (World Bank 2012b). According to official data, there are 24,000 forest fires annually in Russia, affecting 1.4 million ha of forest and releasing approximately 230 million tons of carbon a year. The role of land use, land use changes, and

forestry in regulating the global climate is acknowledged by the government, and maintaining the maximum absorption capacity of forests is included as part of the government commitments to the Paris Agreement on climate change.¹⁷⁰ These commitments underline the importance of preserving forests by limiting fires, disease, and decay and improving forest management to increase carbon sequestration through better growth.

409. Overall, climate change will increase the vulnerability of Russia's economy to weather-related hazards. Most of the Russian territory experiences quite high levels and a wide range of weather- and climate-related hazards, including floods, storms, and droughts. Although these effects are often limited to a particular region, they can affect the national economy by reducing agricultural production, destroying housing, and damaging oil pipelines and pumping facilities in the North, leading to disruptions of hydrocarbon exports. Along with energy efficiency, diversifying exports, promoting innovation, and protecting human lives and society, minimizing economic losses from hazardous and extreme weather is high on the economic and social agenda of the Russian government.

410. With rising temperatures, Russia's boreal forests face serious risk, including large-scale dieback, which could result in a substantial release of carbon. Unusual heat extremes, rising levels of rainfall, increasing numbers of forest fires, and the spread of pests could boost tree mortality and reduce forest productivity. The tree line could shift northward and the composition of species could change (World Bank 2014¹⁷¹). Russian climate and forest experts estimate that the absorptive capacity of Russian forests could fall from 14 percent to less than 5 percent, depending on four scenarios: (1) no increase in logging, (2) short-term moderate increase in logging, (3) long-term moderate increase in logging, and (4) rapid growth of logging (Zamolodchikov et al. 2015). With a changing climate the incidence and severity of forest fires is likely to increase. Thus, increases in the capacity for the prevention, detection (to reduce response times), and suppression of forest fires are urgent.

411. Climate-related hazards are likely to become more frequent and more costly to address. According to Roshydromet observations, the largest number of extreme hydro and meteorological events ever was recorded in 2014 (Figure 4.13). More frequent events, like 10-year floods, could generate public damage and losses close to US\$32 billion, equivalent to 2.1 percent of Russia's GDP.

412. Climate change and weather-related disasters have a particularly severe impact on the poor and the natural-resource-dependent population, who often lack sufficient coping capacity or insurance. Climate change shocks can increase the price of food, which absorbs a large share of the household budgets of the poor. Other negative effects from weather-related disasters include destruction of household assets and reduced labor productivity (Hallegatte et al. 2016).

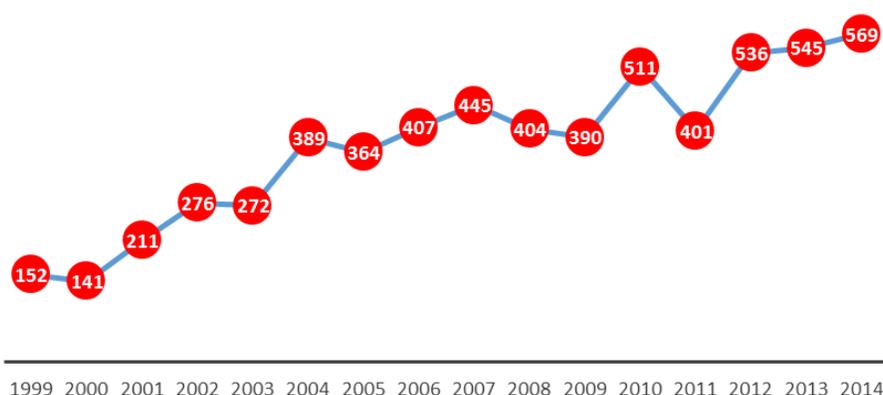
413. The frequency of extreme weather events is already affecting agricultural production (figure 4.13). Russia's vulnerability to weather-related shocks was demonstrated in 2010, when forest fires and a record drought destroyed one-third of Russia's crop harvest—about 10 million hectares of agricultural land were either burned or devastated by extreme weather conditions. In 2012, drought occurred in 20 regions, substantially reducing grain production.

¹⁷⁰ The Russia Intended Nationally Determined Contributions (INDC) submitted to the UNFCCC in March 2016 as part of the Paris Agreement states that "Limiting anthropogenic greenhouse gases in Russia to 70–75 percent of 1990 levels by the year 2030 might be a long-term indicator, subject to the maximum possible account of absorbing capacity of forests." The Paris Agreement was signed in New York on April 22, 2016.

¹⁷¹ With a 2°C warming, the report identifies several risks, including methane emissions from permafrost thawing increase by 20–30 percent across boreal Russia. Risks for timber production and ecosystem services include carbon capture and risks of substantial carbon and methane emissions.

414. Climate change will have a profound environmental impact on the Russian Arctic. Large-scale economic development and climate change have in recent decades opened up access to remote Arctic areas, increasing pressures on the pristine but fragile environment in the Arctic zone. Extensive industrial development in the Arctic and associated pollution from local sources and trans-boundary transport have impaired the quality of air, bodies of water, and soil. Pollutants range from harmful substances generated by metallurgy, oil and gas production and transportation, and unauthorized disposal of municipal and industrial waste. By 2050, the extent of ice cover in the Arctic may decrease by about 30 percent, which is equivalent to 3.5 million sq. km, and the entire Russian coast may be ice-free in late summer, allowing navigation through the Barents, Kara, Laptev, and East Siberian seas along the entire Northern Sea Route. The next two decades provide a window of opportunity to make development in the Russian Arctic more resilient to climate change while tapping the potential benefits.

Figure 4.13. Russia: Extreme Weather Events per Year, 1999 to 2014



Source: Ministry of Natural Resources and Environment of Russia. 2014.

Environmental Challenges Affecting the Likelihood of Achieving Pathway One: Natural Capital and Environmental Sustainability

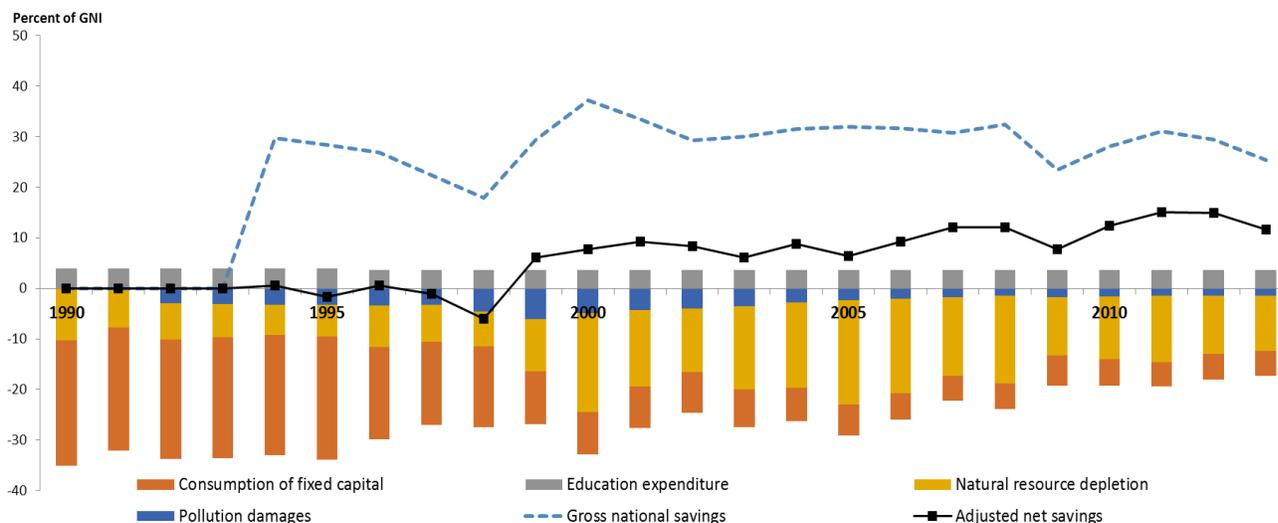
415. The key environmental risk for pathway one is the threat to economic sustainability due to the rapid depletion of natural capital. Russia’s natural resources make a fundamental contribution to economic development, income growth, and employment. Natural resources, such as oil and gas, contribute large shares of GDP and exports, and other resources, such as water, are a source of basic services. However, while Russia is depleting some of its natural resources at an alarming rate, other natural resources, such as forests, have largely untapped potential for economic growth. World demand for timber is growing very rapidly, increasing the potential for exporting forest products and boosting employment. There are other economic opportunities related to better environmental management; for example, improvements in waste management could make a significant contribution to growth and job creation. Similarly, large infrastructure projects and the transport system are likely to entail further urban land development, offering an opportunity to repair past environmental damage while increasing the value of assets.

416. Russia’s large endowment of natural capital overshadows the inefficiencies and cost of poor environmental management. About 65 percent of Russian territory is pristine and almost unaffected by economic activities, with well-preserved ecosystems. However, the World Bank estimates that in the 15

percent of the territory where 60 percent of the population live, environmental quality is deemed unsatisfactory. Air and water pollution and waste affect the quality of life. In the absence of significant technological modernization, industrial sectors continue to use high amounts of resources and generate large amounts of waste and pollution. The cost of environmental degradation due to adverse health effects from pollution and poor management of natural resources has been estimated at 1 to 6 percent of GDP.¹⁷² Russia ranks above all the other BRICS on the Environment Performance Index, although it shows negative trends for environmental health, forests, and biodiversity. However, the Global Competitiveness Index ranks Russia below all the other BRICS countries for economic competitiveness adjusted for environmental and social sustainability.

417. Russia’s growth has been achieved at the expense of natural capital, hampering the ability to save for future generations and putting long-term sustainability at risk. Russia has a high level of wealth per capita (the sum of physical, human, and natural capital), on a par with Canada and China and well above that of Brazil and South Africa. However, Russia’s adjusted net savings (ANS), the difference between production and consumption adjusted for the use of natural resources and investment in human capital, is less than that of its peers. This indicates that income growth is being achieved at the expense of depleting the natural resource base, especially mineral and energy resources (Figure 4.14 and Figure 4.15). However, there are large variations across regions. The risk to the sustainability of growth is especially high in regions with large hydrocarbon and mining sectors and where there is insufficient investment in maintaining natural resources, such as in the Nenets and Khanty-Mansiysk Autonomous Okrugs and the Sakhalin region. The Tyumen region, which is also heavily dependent on mineral extraction, uses the income generated from mining to increase investment in environmental protection (ranking first among regions on environmental spending) and human capital development, partly offsetting the depletion of its natural capital.¹⁷³

Figure 4.14. Adjusted Net Savings for Russia

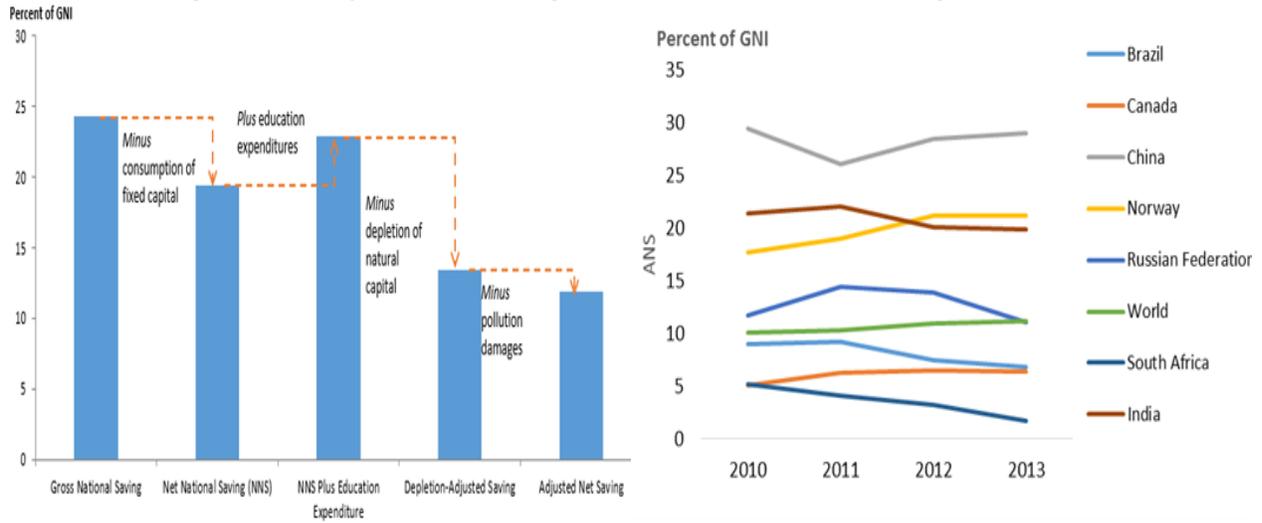


¹⁷² The World Bank estimated that degradation and health costs were 1.2 percent of GDP in 2013. In the official reports of the Ministry of Natural Resources the costs of environment degradation amounted to 4–6 percent of GDP.

¹⁷³ Similarly, the Krasnodar Krai region’s ANS score is high, despite the region’s high level of economic development. Pollution emissions and environmental degradation linked to economic activities are offset by investments in human capital, management of protected areas, and economic growth diversification away from heavily polluting activities. Another good example is the Altai republic region, which scores very high in ANS. Here forest resources contribute almost 50 percent of gross regional product, mineral resource depletion is negligible, and spending on human development is very high.

Source: World Bank Development Indicators.

Figure 4.15. Adjusted Net Savings Calculation and Benchmarking of Russia



Source: World Bank Development Indicators.

418. At the same time, Russia’s abundant forests are seriously underutilized. While forests cover about 50 percent of Russia—an area 15 times the size of France—forestry contributes only 1.3 percent of GDP. In comparison, countries with similar forest types generate a higher contribution to GDP from forests, for example, Finland at 4 percent and Sweden at 3 percent. Russia’s forest sector accounts for 3.7 percent of industrial production, 1 percent of employment, and 2.4 percent of export revenues. Despite the huge forest coverage and growing tree stock, only half of the annual increase in wood is actually available for use (FAO 2015). The opportunities presented by the forest sector are clearly underestimated by policy-makers. The economic benefit of forest use in Russia is estimated at US\$38 per ha, while in Sweden (US\$508) and Finland (US\$512) it is more than 13 times higher.¹⁷⁴ However, illegal forest utilization is a problem.¹⁷⁵ According to official data, the share of illegal logging in most Russian regions has exceeded 1–3 percent of the total wood harvest in recent years, although preliminary results of the ENPI Forest Law Enforcement and Governance Program studies indicate a share of illegal logging that varies by region from 10 to 20 percent of the total cut. Forest reform resulting from the adoption of the 2006 Forest Code has produced a complicated and not always effective system of forest governance, which continues to undergo changes.

419. The Russian forestry sector and economy could greatly benefit from the expected quadrupling of world demand for timber by 2050. In addition to timber for construction, there is growing potential for exporting forest products like wood pellets and biofuels, especially to Europe, where there is increasing demand for renewable energy supplies. Global wood pellet demand is projected to double over the next decade and reach about 50 million tons by 2024 (RISI 2015). The Russian Federation has the capacity to produce about 1 million tons of wood briquettes per year—actual production was about

¹⁷⁴<http://www.forestforum.ru/viewtopic.php?f=9&t=19276&view=unread&sid=879337864e71376f025ed20a59c5a069#unread>

¹⁷⁵ Illegal logging distorts the market; impairs investment flows to the forest sector; leads to the bankruptcy of legally operating forest enterprises and the impoverishment of people living in forest communities and working at logging and wood processing enterprises; and also gives rise to social conflicts.

800,000 tons in 2014 (REN21 2015). Russia's forests also have enormous potential for nontimber forest uses; increased commercial utilization of highly abundant nontimber forest resources should be a major objective for the Russian forest sector. Proactive, productive, and sustainable management of forests would help stimulate the wood harvesting, transport, and processing sectors and in turn help to generate and sustain rural employment.

420. Urban land development offers an opportunity to address past environmental damage while increasing the value of assets. Increasing demand for land suitable for commercial and residential development in and around economically strong urban centers puts a premium on industrial sites that were abandoned and are now owned by municipal governments. "Brownfields" developers have an incentive to clean up these sites for new, higher-value purposes, as has been done in Moscow and St. Petersburg. Pursuing these opportunities should be a priority for government, since delaying the clean-up of contaminated lands will lead to higher costs of remediation and more severe ecological impacts later on.

421. Addressing solid waste management could also contribute to growth. The contribution of improved solid waste management to GDP is estimated at 1–1.5 percent, which is comparable to that of the tourism sector and is estimated to generate 3,000–4,000 jobs per 1 million of urban population. The government is giving high priority to this issue and introduced several regulatory improvements in 2014–15. Similar steps should be taken at the regional and municipal level.

Environmental Challenges Affecting the Likelihood of Achieving Pathway Two: Pollution and Past Environmental Liabilities

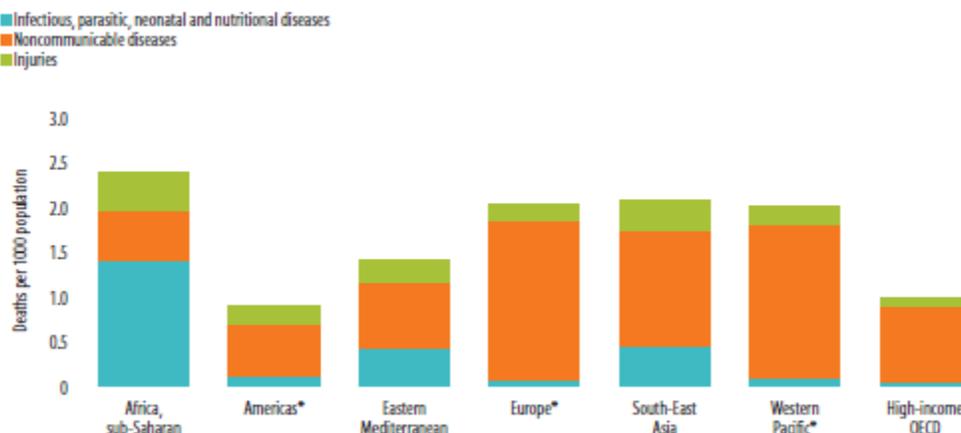
422. The key environmental risk for pathway two is related to the impact of pollution and natural resource degradation on people, especially the most vulnerable. In addition to increasing morbidity and mortality risks, living or working in an unhealthy environment, where air, water, soil pollution, chemical exposure, climate change, and ultraviolet radiation are serious risk factors, results in lost productivity and wages and increasing health treatment costs. The negative impact of pollution and degraded natural resources also disproportionately affects the poor.

423. Pollution is a longstanding and increasing threat to health, inhibiting workers' productivity. As recently announced by the World Health Organization (Prüss-Ustün et al. 2016), nearly 1 in 4 of all global deaths resulted from living or working in an unhealthy environment. Air, water, and soil pollution; chemical exposure; climate change; and ultraviolet radiation contribute to more than 100 diseases and injuries. Noncommunicable diseases attributable to the environment account for the largest share of deaths per capita in the ECA region (Figure 4.16; Prüss-Ustün et al. 2016). Air pollution is associated with 3–6 percent of total deaths in Russian cities. Every year, between 40,000 and 88,000 people die in Russia from circulatory and respiratory system diseases (World Bank 2008). High concentrations of fine airborne particulate matter and other conventional air pollutants particularly affect children, who exhibit a higher incidence of environment-related diseases, such as pharyngitis, conjunctivitis, bronchitis, bronchial asthma, and generally diminished respiratory function. Very conservative estimates based on partial data for 2013 indicate that environmental health costs amounted to 0.3 percent of GDP.

424. If not properly managed, increased solid waste poses an additional threat to health, especially for the most vulnerable groups. Up to 30 percent of existing landfills sites in Russia do not meet sanitary standards. Toxic substances accumulate in a landfill, pollute the air, infiltrate the soil, and contaminate the groundwater, causing fires and impairing biodiversity, soil fertility, and human health, especially for the poorer and marginalized groups that live near landfills and dump sites. Only 5 percent of the municipal solid waste (MSW) currently generated is recycled, compared to 60 percent in EU countries. It is expected

that MSW generation will reach 450–500 kg per capita per year, or more than 60 million metric tons annually (IFC 2011), with serious threats to the health of the local population.

Figure 4.16. Number of Deaths by Type of Disease



Source: Prüss-Ustün et al. 2016.

Note: *Non-OECD countries.

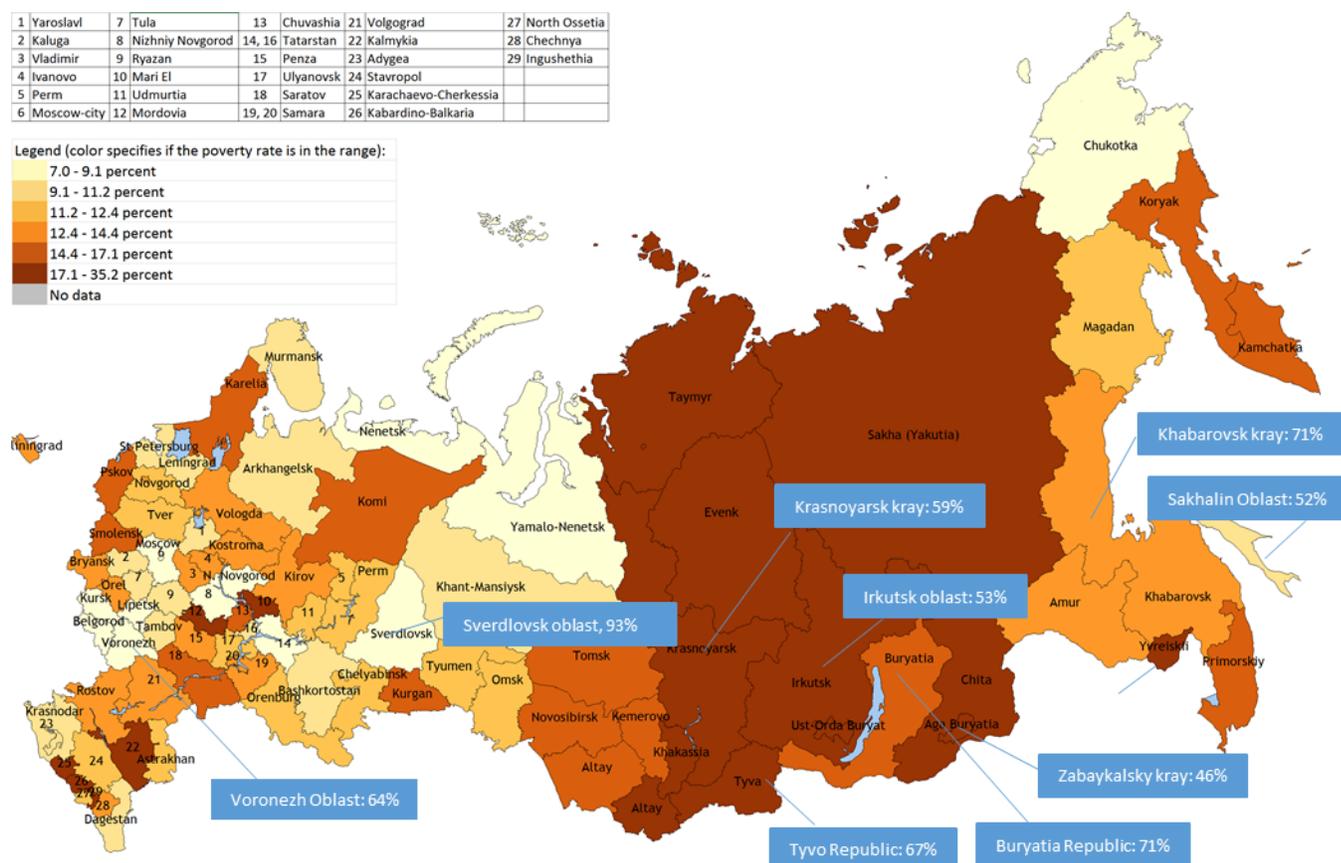
425. Contaminated soil, air, water, and radioactive waste, a legacy from past economic and military activities, also create significant health hazards. The legacy of 150 years of heavy industrialization, extraction of natural resources, and military (and more recently nuclear) infrastructure, often developed in close proximity to urban centers created to support such activities, is one of the largest, most diverse, and most widely dispersed environmental liabilities in the world. A survey carried out in 2006 (Blacksmith 2006) concluded that 3 of the 10 most polluted places in the world were in Russia (all others, except Chernobyl, were in developing countries). Russia is about 20 years behind other industrialized nations in systematically addressing these legacies. Lack of experience in assigning legal responsibilities for environmental damage to sites that remained orphans after the privatization of the industrial sector, or that continue to operate but have changed ownership multiple times, and in assessing remediation costs are at the root of the lack of action. The Ministry of Natural Resources identified about 340 hot spots of accumulated ecological damage; remediation of half of them would improve the quality of life for 15 million Russians.

426. Better environmental management would reduce vulnerability, because pollution and degraded natural resources disproportionately affect the poor. Poor urban populations often live in the most marginalized, under-served areas, where health and disaster risks are high. A comparison of regional poverty rates and the exposure of urban populations to high and very high levels of air pollution¹⁷⁶ shows that the most heavily polluted regions have average poverty rates ranging from 12.4 to 35.2 percent (Figure 4.17). The most vulnerable rural communities live near forests and depend on forest products for their livelihoods. More than 17,000 forest fires were reported in Russia in 2014 covering a territory of

¹⁷⁶Voeikov Main Geophysical Observatory is calculating and monitoring a composite index of air pollution on a regular basis. Details on the methodology may be found in the following report at pages 13–14: http://www.voeikovmgo.ru/images/stories/publications/2015/ejegodnik_zagr_atm_2014.pdf.

3,738,207 ha. The eight regions that suffered the most damage from forest fires had poverty rates ranging from 11 to 27.9 percent.

Figure 4.17. Poverty Rates and Share of Urban Population Experiencing High Air Pollution, 2014–16



Source: Roshydromet^a and Rosstat data.

Note: ^a <http://www.voikovmgo.ru/ru/sub-ekty-rf-i-chislo-zhitelej-v-nikh-ispytyvayushchikh-vozdeystvie-vysokogo-i-ochen-vysokogo-zagryazneniya-vozdukha.html>.

Conclusion

427. For growth and shared prosperity to be sustainable, Russia will need to make progress on the key requisites of fiscal reforms, good governance, and better natural resource management. Progress along the two pathways to inclusive growth in Russia will in the long term depend on (1) how well the government can maintain a healthy fiscal balance that ensures intergenerational equity; (2) how well it can enhance governance, including through improved accountability and equal enforcement of the law, so that public institutions are responsive to the needs of businesses and citizens; and (3) how well the management of Russia’s natural resources and environment will support productivity growth and welfare.

428. Advancing fiscal reforms to mitigate medium- and long-term fiscal pressures will be important for maintaining fiscal sustainability. The recent decline in global commodity prices has demonstrated the need to increase nonoil revenues and improve the efficiency of spending, especially for infrastructure investment and social expenditures, to limit the adverse impact on economic growth and the incomes of the poor. In the long term, fiscal pressures also will arise from the shrinking and aging population of Russia, underlining the importance of advancing pension reforms, including adjustments to the retirement age,

changes in contribution rates, or a shift from publicly funded to contribution-funded benefits. Policies to boost labor force participation and a change in the fiscal rule to achieve a more rapid increase in savings will also be important. Finally, the management of fiscal risks related to contingent liabilities due to large state ownership of banks and enterprises needs to improve. Higher autonomy of subnational governments would enable them to mitigate shocks without resorting to debt.

429. Enhanced governance would enable public institutions to be more responsive and implement effective policies that facilitate inclusive growth. Improvements in growth, economic diversification, and service delivery can be achieved by advancing the implementation of the Anti-corruption Plan and ensuring impartial, transparent, and predictable implementation of laws through the strengthening of institutional checks-and-balances arrangements and social accountability mechanisms. The government has already stated its intent to increase the independence of courts and judges and to continue to increase transparency through publication of all judicial decisions on the Internet. Modernizing public procurement would enable more private businesses to compete for government contracts at federal and subnational levels. It will be important to encourage the implementation of the new Corporate Governance Code—particularly by SOEs, financial intermediaries, and companies listed on the domestic stock exchange. Russia's push to increase e- and mobile phone-enabled service delivery has the potential to simplify administrative procedures, increase business efficiency, and improve access to services in urban and rural areas, especially for the vulnerable. Accountability in public service delivery can be improved by better linking financing arrangements, sector strategies, and outcomes, from planning to implementation to results monitoring.

430. Better environmental and natural resource management is critical if Russia's inclusive growth is to be sustainable. The depletion of natural capital and inefficiencies in the use of natural resources pose a large cost to the economy and are reducing the resources that will be available for future generations. Increased energy efficiency and renewable energy development could generate significant environmental and economic gains. Sustainable forest management would allow Russia to benefit from the fast-growing global timber market while ensuring its forests remain one of the largest carbon storage areas in the world. Forward-looking environmental and climate policies could create new economic opportunities and promote Russia's role as a major player in global climate change. Better air quality management and water and soil pollution control would reduce morbidity and mortality and curb health costs. Sound and well-targeted environmental and natural resource management practices would benefit the most vulnerable groups in marginalized urban areas and the rural poor. Finally, climate change, and its impact on land, forests, water, and health, poses increasing risks to the economy and welfare that may offset the benefits of economic growth. Integrated climate adaptation and disaster risk reduction measures could reduce people's vulnerability to climate-related hazards, especially the poor and natural resource-dependent population who have limited capacity to cope.

Chapter 5. Policy Priorities and Actions

Introduction

431. This chapter summarizes the findings of the SCD and presents policy priorities for the two pathways and three requisites to support inclusive and sustainable economic growth in Russia. The two pathways are (1) increasing productivity for diversified growth, and (2) reducing vulnerability by deepening human capital and improving access to services. To achieve shared prosperity sustainably, three requisites must be in place: good governance, fiscal sustainability, and better management of the environment and natural resources. A three-step process was used to determine policy priorities and actions: First, the country team confirmed a long list of constraints on progress toward inclusive growth and poverty reduction. Second, the SCD core team identified the top three policy priorities for each pathway by applying filters to the list of constraints to take into account impact on the twin goals, timing and sequencing, complementarities between actions, and preconditions for progress. Finally, the experts who contributed to the SCD and the country team as a whole participated in an exercise to prioritize measures within the selected policy priorities.

432. Priority areas for policy reform were identified. The crucial areas for policy action to boost productivity and formal job creation relate to *creation of a better investment climate, improved connectivity and infrastructure, and enhancement of innovation and skills*. These policy priorities are complemented by creation of a sound human capital base that is both better able to participate productively in labor markets and less vulnerable to fall into poverty as a result of shocks. Here three policy priorities stood out: *reducing premature mortality and improving health outcomes, improving the quality of and access to education, and making social protection systems more efficient and effective*. Moreover, sustainable advances on all these dimensions are conditional on progress in *good governance, maintaining fiscal viability, and managing environmental and natural resources wisely*.

The Prioritization Process

433. The SCD moved from the diagnostic findings to articulation of policy priorities—and subsequently to concrete policy actions—in three steps:

1. **The country team confirmed a long list of what was constraining progress toward inclusive growth and poverty reduction,** based on the analysis of each pathway and the cross-cutting requisites. After the core SCD team drafted the list, it was discussed by both the full SCD team and World Bank experts on Russia and was refined based on their expertise.
2. **The SCD core team then identified the top three policy priorities (and later the policy actions) for each pathway by applying filters to narrow down the extensive list of constraints.** At this point three filters were applied:
 - a. Impact on the twin goals of sustained inclusive growth and poverty reduction.
 - b. Timing of impact and sequencing of measures: policy areas were identified based on their expected impact within six years; in particular, the six-year time horizon refers to the country being on the *path to progress* toward the twin goals by then, rather than having achieved all

expected results by then. This allows the SCD to make the case for urgent measures to be taken in the short term the impact of which will only be visible in the longer term (e.g., issues related to health and aging, environmental sustainability, etc.).

- c. Complementarities and preconditions: how addressing one set of constraints might also trigger or be a condition for progress in other areas.

Nine policy priorities emerged, three for each of the cross-cutting requisites. The core team then formulated policy actions for each priority area based on the comprehensive analysis carried out for the SCD.

3. **The entire country team participated in an open discussion to validate and refine the policy priorities and actions proposed.** All country team members and management and a representative of the SCD Central Support team were invited to a half-day discussion at which the core team presented the proposed priorities and detailed the analytical basis and rationale for each. During the discussion, the policy actions were refined in response to the sector-specific expertise of participants and dialogue on complementarities between different policy areas.

434. The SCD team also built on an extensive internal and external consultation process. The objective from the conceptual stage of the SCD onward was to get advice from experts in Russia and the World Bank as a whole on areas of emphasis and, as the work progressed, on the emerging storyline and main messages. The consultation process is described in Annex 1. These discussions identified a number of major knowledge gaps (Box 5.1).

Box 5.1. Data and Knowledge Gaps

Despite the wealth of data and analysis available for Russia, there are some major knowledge gaps in terms both of World Bank sector expertise and more generally of topics not well covered in the academic or policy research literature. Of these, four emerged as the most important areas for additional analysis:

- **Regional knowledge, on the part of the World Bank team, is underdeveloped.** Full knowledge of the geographic dimensions of numerous topics was lacking—including, for example, intensive measurement of shared prosperity trends, factors driving regional productivity, and divergences in access to social protection programs, education, and health services. The interest here is not just regional but also the varying challenges that impact areas with different degrees of agglomeration, from vast metropolitan areas to smaller cities to less-connected towns and rural areas. This is a subject on which further work could be valuable.
- **A comprehensive review of both federal and regional public spending, and the revenue and fiscal liabilities created by state-owned enterprises, banks, and other financial institutions is missing** and would assist with the challenge of restoring fiscal space. A detailed analysis of public spending could identify opportunities for using public investments more efficiently or highlight useful reforms that would broaden the tax base. This SCD describes main categories of spending, most prominently public pensions and other social expenditures, that could offer opportunities to optimize spending while safeguarding the poor. Also worth exploring are possible improvements to public investment management practices in Russia. Most importantly, because regions differ greatly in their fiscal circumstances and in impediments to delivering adequate public services, further regional analysis is a priority.
- **A better understanding of the factors constraining the financing and implementation of investment is warranted.** This SCD has identified several issues that hold back infrastructure investment, such as complex regulatory frameworks for public-private partnerships, institutional shortfalls in project preparation and planning that cause implementation delays, the lack of predictability of public funding, weaknesses in public sector governance and transparency, and an environment that seems to benefit insiders, for example in public procurement. The lack of long-term funding sources is an additional challenge. Given the infrastructure gap, there is a need for more evidence-based practical solutions to develop models for executing projects that are cost-effective and deepen private sector participation.
- **Further empirical knowledge is needed of how different dimensions of welfare in the poorer segments of the population affect the environment.** For instance, knowledge of how to more sustainably leverage Russia's natural wealth for long-term improvements in shared prosperity will be crucial. There is also a need to analyze economic opportunities for the poor and the bottom 40 percent that could result from better management of Russia's natural resources. The evidence to date about the adverse impact of air and water pollution on the welfare of the poor is only inferred indirectly from the fact that the poor reside in areas more likely to be polluted.

Future engagement of the World Bank will provide an opportunity to address several other knowledge gaps. The World Bank will seek to collaborate with the authorities and research institutions, think tanks, and civil society organizations to address the data and knowledge gaps.

Constraints on Progress toward Inclusive Growth and Poverty Reduction

435. The analysis of pathway 1 (chapter 2) shows that to sustain past economic achievements in a more challenging macroeconomic and fiscal environment it is necessary to heighten productivity to allow for more diversified growth. It concludes that growth in the long run will depend on the ability to increase firm productivity at the sectoral level; however, a series of constraints stand in the way of progress on this front. Among them are uneven competition that favors public sector and larger

incumbents and conditions that discourage private sector investment—not least weak financial markets. Rapidly decaying connectivity infrastructure and congestion also constrain productivity: they impede not only trade and logistics but also convergence between and within regions, especially in the East, and urban-led growth. Finally, there are barriers to the accumulation and upgrading of firm capabilities like managerial skills, technology adoption, and innovation.

436. A second set of constraints, emerging from the analysis of pathway 2 (chapter 3), relates to individual or household vulnerabilities that limit worker productivity and contribute to lasting or increasing inequalities. The steep decline in the reliance on labor incomes among the bottom 40 percent of the population in recent years (outweighed by a greater reliance on pensions and other forms of transfers as drivers of shared prosperity) has reinforced vulnerabilities that are likely to be exacerbated by the present constrained fiscal environment and an aging society. The diagnostics found that reducing vulnerability to poverty and ensuring future income gains for the bottom 40 percent will require people to get (better) jobs—specifically, higher-productivity formal jobs. However, delivery of health, education, and other services currently falls short of building the human capital necessary to ensure that people can be in productive employment across the life cycle. The main concerns are with the quality of, access to, and limited and inefficient allocation of resources to these services. Similarly, social protection systems are not efficient enough to effectively protect people from shocks.

437. A series of cross-cutting challenges undermine sustainable welfare gains by reinforcing the constraints highlighted in the two pathways:

1. Fiscal space is shrinking due to falling natural resource revenues, and financing the gap between pension contributions and benefits has become a growing challenge. Fiscal pressures make it difficult for public institutions to invest in infrastructure and public services.
2. Building a stronger private sector that can become more of a source of incomes, particularly for those in the bottom 40 percent, could be fostered by stronger governance. Institutional and capacity-related challenges also directly affect local ability to deliver quality services.
3. Finally, weak implementation of environmental policies and legislation, minimal energy efficiency and diversification, and the increased risks related to climate change and land degradation directly impact both the current growth model and household vulnerability.

Together these three constraints undermine the sustainability of growth and improved welfare for the bottom 40 percent of the population.

438. Because some of the constraints are linked or mutually reinforcing, unlocking one constraint can (and in some cases is needed to) trigger progress in other areas. These considerations were the foundation for the filtering by criteria related to complementarities and preconditions. For example, improving the business climate directly opens up opportunities for the creation of formal jobs in the private sector. Similarly, supporting innovation that can unlock firm productivity depends on enhancement of human capital and skills. The concerns with growth and inclusion that inform both pathways are indeed closely linked and mutually supportive. Moreover, by definition the policy priorities emerging from the requisites related to sustainability affect other policy priorities, and vice versa.

439. Given these complementarities, the timing and sequencing of reforms matters. Recent changes in the external environment bring more urgency to Russian reforms directed to reviving productivity as a growth driver and increasing nonenergy investment so as to reduce dependence on oil and gas for exports and budget revenues. While some reforms are already underway, such as simplifying business regulations, they could be accelerated to generate quick wins. Benefits from other major structural reforms, such as improving competition and more efficient allocation of labor and capital, are likely to accrue only over the longer term. Nevertheless, it is essential that they be launched swiftly, in order to create the right

incentives for an innovative economy that creates high-paying jobs. Hence, the focus of this SCD is on policy priorities that put the country on a solid path to progress over the next six years, rather than policies that deliver the hoped-for results by then. At the same time, because fiscal sustainability is already being tested, reforms in this area are not just paramount but also urgent. More effective targeting of social assistance benefits can bring immediate benefits in terms of reducing poverty and vulnerability. Reforms to increase the efficiency of the delivery of social services are necessary to enhance the impact of human capital investment so that people can continue to share in prosperity.

Policy Priorities and Links to the Twin Goals

440. Moving from the long list of constraints to policy priorities required selectivity and aggregation to ensure that the policy areas identified were actionable. The earlier use of diagnostics to filter and benchmark challenging areas for Russia facilitated the process. Given the inherent conceptual difficulty of prioritizing across pathways, three top policy priorities have been identified for each pathway, closely following the analysis in the SCD and based on the three filters.

441. The impact of addressing these constraints on the twin goals was taken into account. Table 5.1 sets out the pathways and policy priorities and articulates how advances in these areas are expected to impact progress toward shared prosperity and poverty reduction in a sustainable way in the next six years. During this period, the implementation of policy priorities is expected to set the course for progress, although not all objectives will necessarily be accomplished within the six-year timeframe. This prioritization exercise in fact acknowledges that the actual impact might be achieved in the longer term, although important measures need to be put in place urgently to set Russia on the path toward progress on addressing a number of substantial challenges.

Table 5.1. Policy Priorities and the Impact on the Twin Goals

Pathways/ Requisites	Policy Priorities	Impact on the Twin Goals
Increasing productivity for diversified growth	Create a better investment climate and reallocate labor into higher-productivity formal jobs.	Removing economy-wide constraints to productivity in the form of market and trade distortions will help to allocate factors of production, such as labor and capital, to more efficient sectors and firms and create opportunities through greater exposure to foreign know-how and global integration. This will ultimately support firm growth and the creation of productive jobs. These conditions are necessary to spur the creation of higher-productivity formal jobs, which are central to ensuring future income gains for the bottom 40 percent.
	Improve infrastructure and connectivity.	Overcoming economy-wide constraints to productivity related to the lack of connectivity and infrastructure investment could reduce transport costs, facilitate trade, and support urban-led growth. This would spur general economic growth and job creation, thus boosting shared prosperity. At the same time, improving connectivity and infrastructure would also remove some major barriers for the bottom 40 percent and Russians living in remote areas to access jobs and services, such as education and health. Improvements in infrastructure and connectivity thus have considerable potential to reduce inequality of opportunity.
	Strengthen innovation and skills.	Reducing firm-level constraints on productivity by encouraging firms to innovate, adopt new technologies, and upgrade the skills of their workforce will improve competitiveness. Diminishing individual constraints on productivity related to skills gaps and skills mismatches will create new income opportunities for households—which is particularly important for lower-skilled workers who have limited basic competencies (reading, math, problem-solving) and are unlikely to participate in training (formal or informal) once they are of working age.

Pathways/ Requisites	Policy Priorities	Impact on the Twin Goals
Reducing vulnerability by deepening human capital and improving access to services	Reduce premature mortality and bad health.	Poor health outcomes are not solely a welfare issue; reducing excess mortality and the incidence of poor health would also generate large economic benefits. Better prevention of noncommunicable diseases could significantly increase the number of years lived in good health, broaden the pool of potential workers, and raise the productivity of these workers. Given the higher mortality and morbidity of lower socioeconomic groups, this would have significant benefits for the bottom 40 percent.
	Ensure the quality of and access to education.	Improving the quality of education from early childhood education onward, particularly in postsecondary education, will be beneficial for inclusive growth. As the number of young labor market entrants shrinks, higher skill levels (acquired through the formal education system and training) can boost productivity and opportunities for better-paid formal jobs. Meanwhile, closing gaps in access to quality education directly enhances the chances that those coming from lower-income families will have greater opportunities to engage in good jobs in the future, thus decreasing inequality.
	Improve the effectiveness and efficiency of the social protection system.	Strengthening the impact of social protection programs on helping the poor and vulnerable will contribute to economic security for individuals, limit increases in poverty, and improve the welfare of the bottom 40 percent in times of crisis. Limiting informality will protect people from old-age poverty and generate social security revenues to ensure fiscal sustainability.
Cross-cutting requisites for sustainability: Good governance, fiscal sustainability, and better management of the environment and natural resources	Enhance good governance and improve accountability and enforcement.	The quality of governance is a requisite for transparent application of policies, improving access to and the quality of services in urban and rural areas, and thus strengthening social and economic outcomes. Better corporate governance practices are essential to boost investor confidence in Russian companies, attract capital at lower cost, and encourage much-needed investment to support economic growth and creation of quality jobs.
	Maintain fiscal sustainability.	Without fiscal sustainability, it will be difficult to support productivity growth in a diversifying economy, and it will be challenging to reduce the remaining vulnerabilities of Russian citizens through better social service delivery, social protection, and provision of infrastructure.
	Improve management of the environment and natural resources.	Sustainable exploitation of Russia's natural capital, especially renewable resources, is critical for diversification, stronger growth, and the wealth of future generations. Poor environmental management and huge inefficiencies in the use of natural resources, particularly energy sources, threaten competitiveness and productivity, pose a large cost on the economy, and exacerbate climate change and risks. Pollution, environmental degradation, and climate change risks impact individuals' vulnerability and threaten human capital gains in morbidity and mortality. Appropriate environmental policies can also create new economic opportunities and promote innovation.

Create a Better Investment Climate and Reallocate Labor into Higher-Productivity Formal Jobs

442. Productivity-led inclusive growth is deeply affected by economic distortions in markets and trade, such as lack of competition, regulations favoring incumbents and public firms, nontariff barriers, and a feeble financial market. These challenges affect a variety of sectors, from agriculture and agribusiness to manufacturing and banking, to name just a few. Addressing these obstacles to the creation of efficient and productive firms that can generate formal jobs for the bottom 40 percent is of immediate high priority with a medium-term horizon. Several actions, illustrated in Table 5.2, are expected to stimulate domestic and foreign investments and entrepreneurship. Progress in these areas is also tightly linked to other policy priorities. For example, adequate macrofiscal management is needed to avoid exchange rate appreciation that would make investment in tradable sectors less attractive. Adoption of new technology and skills upgrading are needed for firms to become more competitive; however, before investing in these, firms

will look for a business environment that enforces competition policy and has transparent regulatory requirements and improved corporate governance. These linkages demonstrate the importance of comprehensive reforms; several policy priorities build on each other and rely on preconditions, such as the ability of the public sector to enforce its laws.

Table 5.2. Policy Priorities and Actions

Pathways/ Requisites	Policy Priorities	Policy Actions
Increasing productivity for diversified growth	Create a better investment climate and reallocate labor into higher-productivity formal jobs.	<ul style="list-style-type: none"> • Create a level playing field for all firms by enhancing competition conditions and streamlining regulatory requirements for business operations, such as the inspection regime, to encourage entrepreneurship and SME growth. • Diversify and deepen the financial sector to help improve access to finance for SMEs, introduce long-term financing instruments and reduce the cost of credit. • Remove nontariff barriers, improve trade facilitation through greater reliance on risk-management techniques, streamline international transit procedures, increase the transparency of trade legislation, and address the fragmentation of trade promotion. • Support labor mobility by developing housing markets and transportation networks, reducing regulations that restrict the movement of labor, and assisting individuals with high job search and moving costs.
	Improve infrastructure and connectivity.	<ul style="list-style-type: none"> • Remove the infrastructure bottlenecks on the main trade corridors and improve logistics services. • Improve connectivity and transport infrastructure and services in lagging regions and urban areas. • Improve public investment management: increase the economic impact of public infrastructure investment through better institutional capacity to plan and manage large-scale initiatives in transport and logistics, and enhance the use of PPPs.
	Strengthen innovation and skills.	<ul style="list-style-type: none"> • Support catch-up innovation and growth of internal business capability through supply-side interventions to help firms upgrade their capabilities, demand-side reforms for more competitive markets, less regulation, and better IP protection. • Improve Russia’s Science Technology and Innovation (STI) base and its contribution to the broader economy through better coordination and design of interventions. • Align skills demand and supply by introducing effective incentives to change the content, forms, and methods of skills training, strengthening the capacity of the skills development system, and introducing a modern information system into the demand for and supply of skills and jobs.
Reducing vulnerability by deepening human capital and improving access to services	Reduce premature mortality and bad health.	<ul style="list-style-type: none"> • Strengthen health promotion, disease prevention, early detection, and management of non-communicable diseases (NCDs). • Reorient health care delivery toward greater reliance on primary health care in order to manage the growing epidemic of NCDs, avoid unmanageable escalation of health care spending in the medium term, and target premature mortality among men and less advantaged socioeconomic groups. • Increase financial resources for health spending on outpatient services and preventive care, as fiscal constraints allow, and improve access for poorer households.
	Ensure the quality of and access to education.	<ul style="list-style-type: none"> • Improve access to, and the quality and efficiency of, education across regions and incomes at all levels of the education system, from early childhood through tertiary education. • Increase education financing while improving the efficiency of public infrastructure financing, and make it more equitable to reduce the bias toward well-performing schools and richer regions.
	Improve the effectiveness and efficiency of the social protection system.	<ul style="list-style-type: none"> • Improve the efficiency and effectiveness of social assistance by increasing the consistency of its objectives and instruments, consolidating overlapping programs, and better targeting. • Reduce the rigidity of labor market institutions and curtail social security contributions exemptions to decrease informality and increase social security revenues.

Pathways/ Requisites	Policy Priorities	Policy Actions
Cross-cutting requisites for sustainability: Good governance, fiscal sustainability, and better management of the environment and natural resources	Enhance good governance; improve accountability and enforcement.	<ul style="list-style-type: none"> • Advance the implementation of the Anti-Corruption Plan and guarantee the impartial, transparent, and predictable application of laws by strengthening institutional checks and balances and social accountability mechanisms. • Improve use of the public procurement framework to enable firms to compete for federal and subnational government contracts. • Leverage e-government more effectively to simplify administrative procedures, increase business efficiency, and strengthen access to services (such as health and education) in urban and rural areas and especially for the vulnerable. • Encourage the implementation of the new Corporate Governance Code—particularly by SOEs, financial intermediaries, and companies listed on the domestic stock exchange—to tackle outstanding corporate governance deficiencies, such as the including the independency and accountability problems of corporate boards, inadequate corporate transparency, and weak protection of the rights of minority shareholders. • Improve service delivery by better linking financing arrangements with sector strategies and outcomes from the planning stage through completion.
	Maintain fiscal sustainability.	<ul style="list-style-type: none"> • Increase nonoil revenues and improve the efficiency and effectiveness of spending, especially capital infrastructure investment and social spending, in order to reduce the expected fiscal consolidation burden and preserve fiscal space for building infrastructure and protecting the poor. • Address the deficit-generating mechanisms of demographic aging: advance pension reforms, especially adjustments to the retirement age, changes in contribution rates, or a shift from publicly funded to contribution-funded benefits; and revise labor market policies to boost labor force participation. • Improve the management and mitigation of contingent fiscal liability risks at all administrative levels.
	Improve management of the environment and natural resources.	<ul style="list-style-type: none"> • Improve the application of environmental policies to ensure that growth is sustainable: increase coordination of policies and regulation of the use of natural resources across the government agencies responsible; increase the availability of environmental information for decision making; and better enforce environmental legislation. • Adapt to and mitigate increased climate and disaster risks by safeguarding against the degradation of land and vulnerability to weather-related shocks through promotion of good agricultural practices. Improve forest and water management. Reduce carbon emissions by increasing energy efficiency and developing renewable energy sources. • Offset depletion of natural wealth with sustainable investments in human and built capital, maintain irreplaceable water and forest ecological services, and diversify economic growth away from activities that pollute heavily. Improve waste management and address past environmental legacies.

Improve Infrastructure and Connectivity

443. Removing infrastructure bottlenecks on the main trade corridors, together with improving logistics services and ICT connectivity, would help Russia’s transition from a resource-oriented economy to one that is diversified and better integrated into global trading networks. Besides contributing directly to the performance of firms, improvements in connectivity can also contribute to more and better access to markets (including labor markets) for those living in more remote areas or congested urban centers. Better infrastructure can therefore act as an equalizer of opportunities across regions and income levels. To achieve these objectives, heavier investments in infrastructure will be necessary. However, to be effective, these need to be accompanied by improved capacity for public investment management, which is linked to sustainability concerns. Fiscal sustainability and good governance (captured in two separate policy priorities) are therefore important preconditions to advances in infrastructure and connectivity.

Strengthen Innovation and Skills

444. While enhancing the investment climate is fundamental to boosting productivity growth, this objective will not be achieved without enhanced innovation and skills upgrading—the two sets of priorities are mutually reinforcing. The policy actions in clearly illustrate that supply-side interventions that improve worker and management skills can help firms to upgrade their capabilities. However, their effectiveness is greatly enhanced by more competitive markets, better protection of intellectual property, and other demand-side reforms that increase the likelihood that firms will benefit from investment in capabilities. While closely linked to other policy priorities for pathway 1, the skills agenda is also critically complementary to, and rests on, the general improvements in human capital discussed in pathway 2. Building up the skills of workers for greater productivity and innovation is part of the broader agenda to address individual vulnerabilities and the aging of Russia’s labor force: training and inclusion of workers in productive employment throughout the life cycle are critical but will require improvements in education and health.

Reduce Premature Mortality and Bad Health

445. Promoting long, healthy lives and improving health outcomes is a development objective per se because it reduces the vulnerability of the less well-off. For Russia, however, demographic changes in the labor markets make the economic case for improved health outcomes particularly urgent. Higher life expectancy with healthier aging would help counter the effect that the decline in the working-age population, accompanied by the eroding skills and health of older workers, has on productivity and fiscal pressures. To achieve this, the health care delivery system needs to be adequately and efficiently funded—but that cannot come at the expense of fiscal sustainability. It will thus be vital for Russia to allocate increased financial resources for health spending more efficiently, with a focus on preventive care and outpatient services. As with other priority areas, advances on the health agenda are also closely linked to progress on cross-cutting themes and requisites (i.e., maintaining fiscal sustainability). For instance, given uneven health outcomes between genders and across regions, progress will require targeted measures and greater attention to improving local capacity for service delivery and to more equitable health financing.

Ensure the Quality of and Access to Education

446. Moving toward a more diversified economy, where growth is driven by higher productivity and sustained by higher innovation, will require a solid human capital base. Quality education in particular will be crucial to equip the shrinking workforce with the skills and competencies demanded by firms. Gains can be made by better including everyone in education, regardless of their income level and location, and laying the foundations for later inclusion in the labor market. Currently, early childhood education and tertiary education constitute the greatest obstacles to Russia’s progress in this area, together with the inchoate state of lifelong learning options. To address these challenges, the education system not only needs more financial resources, it also needs to manage them more efficiently and equitably across regions and schools. The fiscal sustainability and local governance challenges are clear, but Russia has the potential to refocus its approach to resource allocation and demands on regional service delivery to one that is a more efficient.

Improve the Effectiveness and Efficiency of the Social Protection System

447. Heightened vulnerabilities to economic and other shocks, along with the demographic shift to an aging population, make social protection systems critical to prevent deterioration in welfare and reversals in poverty reduction. But the current system, while providing significant support to the vulnerable, operates inefficiently, appears to discourage formal employment, and is not fiscally sustainable. To meet

the goals of promoting inclusive growth through formal jobs and protecting people from vulnerabilities and shocks, both systems need to be reoriented. Social assistance programs can be better targeted, less fragmented, and more flexible to respond to crisis situations—and can in parallel address the risk that they may increase inequalities across the country. On the other hand, although pensions do play a significant role in covering the vulnerable and elderly, they need to evolve to meet the changing demographic and fiscal pressures. As formal jobs are expected to be a driver of shared prosperity, social protection systems urgently need to be fine-tuned to avoid acting as a disincentive to formal employment (and thus increased social security revenues). It is clear that changes in the investment climate, labor market institutions, and social protection must go hand in hand.

Enhance Good Governance; Improve Accountability and Enforcement

448. Good governance—whether related to greater local capacity to deliver quality services or to institutional arrangements that facilitate productive economic activity—has come to the fore as a cross-cutting priority area that is complementary, and often necessary, to many other areas. Measures to improve control over corruption and regulatory quality, strengthen corporate governance, and improve accountability and capacity in delivering services are expected to improve the business climate and foster productivity. The policy actions identified in thus represent urgent preconditions to sustainable progress in other priority areas. It is, of course, crucial that such priorities trickle all the way down to local governments, and that advances take into account the enormous regional and local variations in conditions, so that gaps between the accountability of local institutions and their ability to deliver services can progressively be closed and inequality of opportunities reduced.

Maintain Fiscal Sustainability

449. Both the SCD and the previous discussion of policy priorities highlight the role that sound fiscal policy—state, regional, and local—must play to enable any sustainable progress on shared prosperity and poverty reduction. Several of the policy actions identified in this SCD require that more public resources be allocated to infrastructure investment, health programs, and education and training programs—to name just a few. But these should not come at the expense of future generations. Yet the current external environment and the reduced contribution of the natural resource sector to the budget are expected to result in a challenging burden of fiscal consolidation through the medium term. It is therefore urgent that Russia put in place a strategy and contingency plans for managing fiscal risks and improving the efficiency and effectiveness of spending in the short and medium term down to the local level. Meanwhile, addressing the deficit-generating mechanisms of demographic aging is also becoming more and more urgent if there are to be positive impacts in the longer term.

Improve Management of the Environment and Natural Resources

450. The sustainability of progress across generations also requires avoiding depletion of natural wealth and the environment. The shift to a growth model reliant less on natural resources and more on productivity gains and a diversified economy (as advocated by pathway 1) is complementary to policy actions to offset natural wealth depletion and regulate the use of natural resources. Better environmental policy and management can also be expected to result in less vulnerability to shocks and climate-related risks and an overall healthier population, thus boosting advances in pathway 2 policy areas. Although much of the impact of shifts in environment and natural resource management will only become obvious in the long term, it is crucial that action in this area begin immediately. This will guarantee that additional strains and risks are not created and that future gains are not prejudiced by today's policies.

Summary of Policy Actions

On the basis of the priority policy areas identified and the diagnostic results, it was possible to prioritize reform policy actions. These policy actions are presented in Table 5.2.

451. These actions will need to be tailored to different contexts and groups within Russia. Achieving a sustainable distribution of the benefits of economic growth across the population requires acknowledging the large diversity within the country, in terms of both geography and population groups. The policy actions proposed require paying particular attention to excluded groups on aspects other than their efforts and abilities that limit their opportunities. Actions should be taken that address the specific constraints faced by those living in secondary towns, monotowns and rural areas, older workers, women, minorities, the disabled, and other vulnerable groups.

Conclusion

452. Russia's advances toward sustainable inclusive growth and poverty reduction must now come from concerted policy actions on many fronts. The evidence presented in the SCD analysis and the discussion in this chapter clearly highlight that reviving productivity-led growth—where labor markets can once again drive shared prosperity and income mobility—requires immediate action that addresses obstacles in markets and institutions and weaknesses in the human capital base.

453. Although the fruits of many policy actions will only be visible in the medium and longer term, it is vital that Russia start now, before inequalities and vulnerabilities worsen under the pressing fiscal challenges resulting from lower commodity prices, before demographic changes grow to represent too big a strain on labor market demands and fiscal resources, and before the opportunity to reinforce the results of a decade of successful growth fades away.

References

- Abras, A., A. Hoyos, A. Narayan, and S. Tiwari. 2013. "Inequality of Opportunities in the Labor Market: Evidence from Life in Transition Surveys in Europe and Central Asia." Background Paper for the *World Development Report 2013*. Washington, DC: World Bank.
- Abras, A., A. Hoyos, A. Narayan, and S. Tiwari. 2013. "Inequality of Opportunities in the Labor Market: Evidence from Life in Transition Surveys in Europe and Central Asia." Background Paper for the *World Development Report 2013*. Revised version published at *IZA Journal of Labor & Development* (2013), 2:7.
- Acemoglu, D., P. Aghion, and F. Zilibotti. 2006. "Distance to Frontier, Selection, and Economic Growth." *Journal of the European Economic Association* 4(1): 37–74.
- Aghion, P., N. Bloom, R. Blundell, R. Griffith, and P. Howitt. 2005. "Competition and Innovation: An Inverted-U Relationship." *Quarterly Journal of Economics* 120 (2): 701–28.
- Alesina, A., E. Spolaore, and R. Wacziarg. 2005. "[Trade, Growth and the Size of Countries.](#)" In *Handbook of Economic Growth*, edited by P. Aghion and S. Durlauf, 1499–1542. Amsterdam: North Holland.
- Andrienko, Y., and S. M., Guriev. 2003. "Determinants of Interregional Mobility in Russia." *Economics of Transition* 12(1): 1–27.
- Araujo, J.T., M. Brueckner, M. Clavijo, E. Vostroknutova, and K. Wacker. 2014a. *Benchmarking the Determinants of Economic Growth in Latin America and the Caribbean*. Washington, DC: World Bank.
- Arellano, M., and S. Bond. 1991. "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies* 58(2): 277–97.
- Arezki, R., and M. Brueckner. 2012. "Commodity Windfalls, Democracy, and External Debt." *Economic Journal* 122: 848–66.
- Balzer, H., and J. Askonas, 2015. *The Triple Helix after Communism: Russia and China Compared*.
- Barnett, W. S. 2006. "What Is the Value of Early Childhood Education for our Society: Maximizing Returns from Prekindergarten Education?" In *The Quality of Early Childhood Education*, edited by J. J. van Kuyk (pp. 57–72). Arnhem, The Netherlands: Centraal Instituut voor Toetsontwikkeling.
- Barnett, W. S., and C. R. Belfield. 2006. "Early Childhood Development and Social Mobility." *The Future of Children* 16(2): 73–98.
- Barro, R.J. and J. W. Lee. 1994. "Sources of Economic Growth." *Carnegie-Rochester Conference Series on Public Policy* 40: 1–46.
- Bassanini, A., and E. Ernst, 2002. "Labour Market Institutions, Product Market Regulation, and Innovation: Cross-country Evidence." OECD Economics Department Working Papers, No316. Paris: OECD.

- Bloom, N., M. Draca, and J. Van Reenen. (2011), "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity." Centre for Economic Performance Discussion Paper No 1000. London: London School of Economics.
- Bornhorst, F., and S. Commander. 2006. "Regional Unemployment and its Persistence in Transition Countries." *Economics of Transition* 14(2) 269–88.
- Breznitz, D. 2007. *Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, China and Ireland*. Yale University Press: New Haven, Connecticut.
- Bussolo, M., and L. F. Lopez-Calva. 2014. *Shared Prosperity: Paving the Way in Europe and Central Asia*. Washington, DC: World Bank Publications.
- Bussolo, M., J. Koettl, and E. Sinnott. 2015. *Golden Ageing: Prospects for Healthy, Active, and Prosperous Ageing in Europe and Central Asia*. Washington, DC: World Bank.
- Calvo, P. A., L. F. Lopez-Calva, and J. Posadas. 2015. "A Decade of Declining Earnings: Inequality in the Russian Federation." Policy Research Working Paper WPS7392. Washington, DC: World Bank.
- CBR (Central Bank of Russia). 2016. "Main Directions for Development and Financial Stability of the Financial Market of the Russian Federation for the Period of 2016–2018," Draft as of February 19, 2016, pending Government approval.
- Christiaensen, L., B. Ruchira, P. Lei, and W., Sangui. 2009. "Pathways Out of Poverty in Lagging Regions: Evidence from Rural Western China." World Bank, Washington, DC.
- Christiaensen, L., D. Lionel, and J. Kuhl. 2011. "The (Evolving) Role of Agriculture in Poverty Reduction—An Empirical Perspective." *Journal of Development Economics* 96 (2): 239–54.
- Coad, N., and P. Pritchard. 2013. *Leading Sustainable Innovation*. Cambridge, UK: Cambridge Institute for Sustainable Leadership.
- Compass. 2015. 2015 Startup Ecosystem Report. Startup Compass Inc., San Francisco.
- Corrado, C., C. Hulten, and D. Sichel. 2005. "Measuring Capital and Technology: An Expanded Framework." In *Measuring Capital in the New Economy, Studies in Income and Wealth*, Vol. 65, edited by C. Corrado, J. Haltiwanger, and D. Sichel. Chicago, IL: University of Chicago Press.
- Cunha, F., J. J. Heckman, L. J. Lochner, and D. V. Masterov. 2006. "Interpreting the Evidence on Life Cycle Skill Formation." In *Handbook of the Economics of Education*, edited by E. A. Hanushek and F. Welch (pp. 697–812). Amsterdam: North-Holland.
- Dahl, G., and L. Lochner. 2008. "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit." National Bureau of Economic Research Working Paper No. 14599. <http://www.nber.org/papers/w14599>.
- Dang, H-A., and P. Lanjouw. 2012). "Measuring Poverty Dynamics and Labor Transitions with Synthetic Panels Based on Cross-Sections." Policy Research Working Paper Series 6504, World Bank, Washington, DC.
- Donchenko, V. 2013. "Towards Sustainable Mobility in Russian Cities: Problems, Challenges and Risks." Moscow: OPTOSOZ, 14 mapra.

- Dutz, M., L. Ferreira-Mation, S. O'Connell, and R. Willig. 2015. "Technological Change and Labor Market Segmentation in the Developing World: Evidence from Brazil." Background paper for the World Development Report 2016. World Bank, Washington, DC.
- Easterly, W., and R. Levine. (2001), "What Have We Learned from a Decade of Empirical Research on Growth? It's Not Factor Accumulation: Stylized Facts and Growth Models." *World Bank Economic Review* 15 (2): 177–219.
- Easterly, W., N. Loayza, and P. Montiel. 1997. "Has Latin America's Post-Reform Growth Been Disappointing?" *Journal of International Economics* 43: 287–311.
- Eich, F., C. Guts, and M. Soo. 2012. "Reforming the Public Pension System in the Russian Federation." IMF Working Paper WP/12/2012, Washington, DC: IMF.
- Ernst&Young. 2014. *The Road to 2030: A Survey of Infrastructure Development in Russia*.
- Estache, A., 2008. "Infrastructure and Development: A Survey of Recent and Upcoming Issues."in: *Rethinking Infrastructure for Development*. Edited by Bourguignon, F, and B. Pleskovic. Annual World Bank Conference on Development Economics Global 2007. World Bank, Washington, DC.
- Federal State Statistics Service, Higher School of Economics, Moscow. 2016: "Indicators of the Information Society," Data Book, Ministry of Communications and Mass Media, pp. 275–277.
- Fedorov, L. 2002. "Regional Inequality and Regional Polarization in Russia, 1990–99." *World Development* 30(3): 443–56.
- Gill, I. S., I. Izvorski, W. Van Eeghen, and D. De Rosa. 2014. *Diversified Development: Making the Most of Natural Resources in Eurasia*. Washington, Dc: World Bank Publications.
- Gimpelson, V. 2015. "Industrial Foundations of Russian Inequality: Looking from the Demand Side." Background paper for World Bank's project on *Shared Prosperity in the Russian Federation*, Mimeo.
- Gimpelson, V. 2015a. "Inequality of Labor Market Incomes." Background paper. Shared Prosperity Task, Washington, DC: World Bank.
- Gimpelson, V., and R. Kapeliushnikov. 2013. "Labor Market Adjustment: Is Russia Different?" *The Oxford Handbook of the Russian Economy, edited by M. Alexeev and S. Weber*: 693-274. Oxford University Press.
- Global Innovation Index. 2015. *Effective Innovation Policies of Development*. INSEAD, Cornell University. <https://www.globalinnovationindex.org/>.
- Gonzalez A., L. Iacovone, and H. Subash. 2015. *Russian Volatility: Obstacle to Firm Survival and Diversification*. Washington, DC: World Bank.
- Guriev, S., and E. Vakulenko. 2015. "Breaking out of Poverty Traps: Internal Migration and Interregional Convergence in Russia." *Journal of Comparative Economics* 43(3): 633–49.
- Heckman, J. J., and D. V. Masterov. 2007. "The Productivity Argument for Investing in Young Children." NBER Working Paper. www.nber.org/papers/w13016.pdf.

- Higher School of Economics, National Research University. Various dates. "Russia Longitudinal Monitoring Survey, RLMS-HSE", Conducted by HSE, ZAO "Demoscope," Carolina Population Center, University of North Carolina at Chapel Hill, and the RAS Institute of Sociology. RAS
- Higher School of Economics. 2014. *Information Society Indicators in Russia*. Moscow: Ministry of Communications and Mass Media.
http://wbfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/CountryReports/TCH/SABER_Teachers_Russia_CR_Final_2014.pdf
- IERT 2012. *The Reference and Analytical Paper on the Railway Infrastructure Development in the Regions of the Russian Sea Ports until 2015*.
- IFC.2011a. Energy Efficiency in Russia: Untapped Reserves. Washington, DC: World Bank.
- IMF. 2014. "Russia: Fiscal Transparency Evaluation." Washington, DC: International Monetary Fund.
- Ivanova, A., E. Zemlyanova, A. Mikhaylov, and S. E. Golovenkin. 2014. "The Difference in Mortality of Adult Population of Russia According to Level of Education. *Zdravoochranenie Rossiyskoy Federatsii* 6: 4–8.
- Kauffman, L., and P. J. Rousseeuw. 1990. "Finding groups in data." *An introduction to cluster analysis*. New York: John Willey and Sons.
- Kontsevaya, A., A. Kalinina, and R. Oganov. 2013. "Economic Burden of Cardiovascular diseases in the Russian Federation." *Value Health Regional Issues* 2: 199–204.
- Korinek, J., and P. Sourdin. 2011. "Various Studies Confirm the Strong Impact on Trade of Logistics Quality."
- Krugman, P. R. 1994. *The Age of Diminished Expectations*. Cambridge, MA: MIT Press.
- Kuznetsov, Alexey. 2010. "Inward FDI in Russia and its Policy Context." Columbia FDI Profiles. New York, NY: Vale Columbia Center on Sustainable International Investment.
- Layard, R., and A. Richter. 1995. "How much Unemployment Is Needed for Restructuring: The Russian Experience." *Economics of Transition* 3(1): 39–58.
- Lehmann, H., and A. Zaiceva. 2013. "Informal Employment in Russia: Definitions, Incidence, Determinants and Labour Market Segmentation." OECD Economics Department Working Papers No. 1098, Paris: OECD.
- Leigh, D., L. Weicheng, M. Poplawski-Ribeiro, R. Szymanski, V. Tsyrennikov, and H. Yang 2016. "Exchange Rate and Trade: Disconnect?" Forthcoming IMF Working Paper Washington, DC: International Monetary Fund.
- Levin, V. 2015. *Promoting Active Ageing in Russia: Working Longer and More Productively*. Washington, DC: World Bank.
- Loayza, N., P. Fajnzylber, and C. Calderon. 2005. *Economic Growth in Latin America and the Caribbean: Stylized Facts, Explanations, and Forecasts*. Washington, DC: World Bank Publications.

- Lopez-Calva, L. F., N. Lustig, M. Matytsin, and D. Popova. 2016. "Who Benefits from Fiscal Redistribution in Russia?" *World Distributional Impact of Taxes and Transfers: Evidence from eight developing countries*, edited by Gabriela Inchauste and Nora Lustig: 177-209. Washington, DC: World Bank.
- Lopez-Calva, L.F. 2015. *Deconstructing Russia's Shared Prosperity Success: The Role of Labor and Non-Labor Income*. Washington DC: World Bank.
- Loungani, P, and S. Mishra. 2016. "The Future Wealth of Nations: World Trade in Services and Comparative Advantage." Forthcoming IMF Working Paper. Washington, DC: International Monetary Fund.
- Lucas, R. E. 1988. "On the Mechanics of Economic Development." *Journal of Monetary Economics* 22(1): 3-42.
- Lukiyanova A. and V. Gilmpelson. 2015. "Inequality of labor market incomes." Background paper for World Bank's project on *Shared Prosperity in the Russian Federation*, Mimeo.
- Lukiyanova, A., and V. Gimpelson. 2015. "Inequality of Labor Market Incomes." Background paper. Shared Prosperity Task, Washington, DC: World Bank.
- Lukiyanova. A. 2015. "Earnings Inequality and Informal Employment in Russia." *Economics of Transition* 23(2): 469-515.
- Lundvall, B-A. (ed.). 1992. *National Innovation Systems: Towards a Theory of Innovation and Interactive Learning*. London: Pinter.
- Lynch, R. G. 2004, "Exceptional Returns. Economic, Fiscal, and Social Benefits of Investment in Early Childhood Development." Economic Policy Institute, Washington, DC. http://www.unicef.org/lac/spbarbados/Finance/Global/exceptional_returns_ECD_2004.pdf
- Matytsin, M., L. Moorty, and K. Richter. 2015. "From Demographic Dividend to Demographic Burden? Regional Trends of Population Aging in Russia." Policy Research Paper 7501, Washington, DC: World Bank.
- Ministry of Communications and Mass Media, Federal State Statistics Service, Higher School of Economics. 2015. *Information Society: Development Trends in the Regions*, Data Book, Issue #2. Moscow: Ministry.
- Muravyev, A., and A. Y. Oshchepkov. 2013. "Minimum Wages, Unemployment and Informality: Evidence from Panel Data on Russian Regions": IZA Discussion Paper No. 7878. Bonn: Institute for the Study of Labour.
- Nellemann S., O. Podolskiy, and V. Levin. 2015. "State of adult education in Russia: ensuring that older workers can acquire skills for the future." Washington, DC: World Bank.
- OECD. 2013. *Competition Law and Policy in the Russian Federation*. Paris: OECD
- OECD. 2014. *Education at a Glance 2014*. Paris: OECD Publishing.
- Pages, C. 2010. *The Age of Productivity: Transforming Economies from the Bottom Up*. Inter-American Development Bank. Washington, DC: Palgrave Macmillan.

- Popovich, L., E. Potapchik, S. Shishkin, E. Richardson, A. Vacroux, and B. Mathivet. 2011. "Russian Federation: Health System Review." *Health Systems in Transition* 13(7):1–190.
- Romer, D. 2011. *Advanced Macroeconomics*. 4th edition. New York: McGraw-Hill.
- Rosmorport. 2012. *Strategy for Seaport Infrastructure Development of Russia until 2030*. Moscow Rosmorport.
- Rossotto, C. N. Gelvanovska, Y. Natalija, V. Maciule, and S. Shaposhnik, Sergei. 2015. *Broadband in Russia*. Washington, DC: <https://openknowledge.worldbank.org/handle/10986/21709> License: CC BY 3.0 IGO.
- Rosstat. 2014. Income and Program Participation Survey. Moscow: Rosstat.
- Rosstat. 2015. *Indicators of Innovation in the Russian Federation*. Moscow: Rosstat.
- RVC (Russia Venture Company). 2015. "Public Analytical Report on the Implementation of the Strategy for Innovative Development of the Russian Federation for the Period until the Year 2020," Issue 3.
- Schepin, V.O. 2013. "The Provision of Population of the Russian Federation with Basic Personnel Resources of the Public Health Care System." *Problems of Social Hygiene, Public Health and History of Medicine* (6): 24-28.
- Schweinhart, L. J., J. Montie, Z. Xiang, W. S. Barnett, C. R. Belfield, and M. Nores. 2005. *Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40*. Ypsilanti, MI: High/Scope Pres.
- Shishkin, S., E. Potapchik, and E. Selezneva. 2014. "Out-of-pocket Payments in the Post-Semashko Health System. Basic Research Program Working Papers, WP BRP 14/PA/2014, Washington, DC: World Bank.
- Sinnott, E. M. Matytsin and D. Popova. 2016. "Russian Federation Distributional Impact of Fiscal Policy over the Boom and Downturn." Washington, DC: World Bank.
- Standard and Poor's. 2013. *Global Ageing 2013: Rising to The Challenge: Argentina, Brazil, Canada, China, Iceland, India, Indonesia, Korea, Mexico, Saudi Arabia, Turkey, and the United States.* https://www.nact.org/resources/2013_NACT_Global_Aging.pdf
- Syverson, C. 2011. "What Determines Productivity?" *Journal of Economic Literature* 49 (2): 326–65.
- United Nations. 2015. *World Population Prospects: The 2015 Revision*, DVD Edition. Department of Economic and Social Affairs, Population Division. New York, NY: United Nations.
- URL:
<http://www.ifc.org/wps/wcm/connect/de1e58804aababd79797d79e0dc67fc6/IFC+EE+in+Russia+Untapped+Potential.pdf?MOD=AJPERES>.
- URL:
[https://books.google.com.ph/books?hl=en&lr=&id=S0gIfP4OGUC&oi=fnd&pg=PA47&dq=Estac he,+et+al,++\(2007.\),+%22Infrastructure+and+Development:+A+Survey+of+Recent+and+Upcomin g+Issues&ots=bB4OpkrAPa&sig=RmQhpKDP_rTHQ_VbRN4tgclDYnrE&redir_esc=y#v=onepage&q&f=false](https://books.google.com.ph/books?hl=en&lr=&id=S0gIfP4OGUC&oi=fnd&pg=PA47&dq=Estac he,+et+al,++(2007.),+%22Infrastructure+and+Development:+A+Survey+of+Recent+and+Upcomin g+Issues&ots=bB4OpkrAPa&sig=RmQhpKDP_rTHQ_VbRN4tgclDYnrE&redir_esc=y#v=onepage&q&f=false)

URL: <https://startup-ecosystem.compass.co/ser2015/>

URL:

https://www.rusventure.ru/ru/programm/analytics/docs/2015_Public_report_Strategy_Innovative_Development_RU_web.pdf.

URL: Stable URL: <http://www.jstor.org/stable/j.ctt1nppt9>

Vasiliev, K. and F. H. Rogers. 2014. *Systems Approach for Better Education Results (SABER) Russia: Teachers*. Washington, DC: World Bank.

Vasiliev, K., A. Lukiyanova, D. Chugunov, I. Maltseva, I. Shulga, J. Rutkowski, P.M. Cahu, P. Travkin, S. Roshchin, and S. Nellemann. 2013. *Developing Skills for Innovative Growth in the Russian Federation*. Washington DC: World Bank.

WEF (World Economic Forum). 2013, 2015. *Global Information Technology Report*. Geneva: WEF.

World Bank (2015b). *The Growth Challenge of Latin America and the Caribbean*.

World Bank and EBRD. 2012. *BEEPs Survey, 2011–12*. World Bank. 2008. *Unleashing Prosperity: Productivity Growth in Eastern Europe and Former Soviet Union*. Washington, DC: World Bank

World Bank. 2011. *Russia: Reshaping Economic Geography*. Washington, DC: World Bank.

World Bank. 2012. *Russian Federation: Social Expenditure and Fiscal Federalism in Russia*. Washington, DC: World Bank.

Zubarevich, N., and E. Gorina. 2015. *Social Expenditures in Russia: Federal and Regional Level* (in Russian). Moscow, Russia: HSE. <https://publications.hse.ru/en/view/149966735>

—. 2008. "Preschool Education and its Lasting Effects: Research and Policy Implications." Education and Public Interest Center & Education Policy Research Unit, University of Colorado, Boulder.

—. 2009. "Intangible Capital and U.S. Economic Growth." In *Measuring Capital in the New Economy, Studies in Income and Wealth* 55 (3), edited by C. Corrado, J. Haltiwanger, and D. Sichel. Chicago, IL: University of Chicago Press.

—. 2011b: *Russian Federation: Export Diversification through Competition and Innovation: A Policy Agenda*. Washington, DC: World Bank.

—. 2012a. *Enterprise Survey 2012: Russian Federation*. Washington, DC: World Bank.

—. 2012b: *Strengthening Capital Budgeting in Road and Rail Sectors*. Washington, DC: World Bank.

—. 2013a: *Developing Skills for Innovative Growth in Russia*. Washington, DC: World Bank.

—. 2013b: *Reported Assessment of Traffic Congestion Problems. Review of Urban Transport Sector in the Russian Federation*. Washington, DC: World Bank.

—. 2014. "Between Light and Shadow: Informality in the Russian Labour Market." IZA DP No. 8279. Bonn: Institute for the Study of Labour.

- . 2014. *Diversified Development Report*. Washington, DC: World Bank
- . 2014. *Russian Federation Gender Assessment*. Washington, DC: World Bank.
- . 2015. EU Regular Economic Report: Sustaining Recovery, Improving Living Standards.” Fall 2015.” Washington, DC: World Bank. <http://www.worldbank.org/en/region/eca/publication/eurer>
- . 2015. Improving Transport Infrastructure in Russia.” Working Paper 1193. Paris: OECD.
- . 2015. Policy note: Deconstructing Russia’s shared prosperity success: the role of labor and non-labor income. World Bank: Washington D.C. May 2015.
- . 2015a. Broadband in Russia: A Sector Note. Washington, DC: World Bank.
- . 2015b. “Industrial Foundations of Russian Inequality: Looking from the Demand Side.” Background paper. Shared Prosperity Task, Washington, DC: World Bank.
- . 2015b. Export Competitiveness and FDI Performance across Russia’s Regions. Washington, DC: World Bank.
- . 2016. Financial Sector Assessment Program, Draft Technical Note on Role of State. Washington, DC: International Monetary Fund.
- . 2016. *Global Competitiveness Report 2016*. Geneva: WEF.
- . 2016. *Indicators of the Information Society*, Data Book, pp. 79, 82. Moscow: Ministry.
- . 2016. *World Development Report 2016: Digital Dividends*. Washington, DC: World Bank.
- . *World Development Indicators* database.
- 2015. “Monitoring the Economics of Education.” Moscow: Ministry of Communications and Mass Media.
- 2016. “Growth Drivers in Russia.” World Bank Working Paper *Forthcoming*.
- 2016. “Information Society Monitoring,” Information Bulletin # 1 (6). Moscow: Ministry of Communications.

Annexes

Annex 1.1. Growth Decomposition Analysis¹⁷⁷

The growth decomposition regression for Russia employed the methodology of Araujo et al. (2014), which builds on and expands the econometric approach developed by Loayza, Fajnzylber, and Calderon (2005). Using a dynamic panel data regression, this approach investigates how aggregate economic, political, and social variables affect per capita GDP growth rates using a sample of 126 countries for the 1970–2010 period. To smooth out most cyclical short-run effects, the model is estimated using 5-year averages of nonoverlapping panel data. The period used here, 1996–2010, consists of four data points (1996, 2000, 2005, 2010) and captures the average values for the following periods:

The 2000s: Avg. [2006-2010] – Avg. [1996–2000] = 2010-2000

Early 2000s: Avg. [2001-2005] – Avg. [1996–2000] = 2005-2000

Late 2000s: Avg. [2006-2010] – Avg. [2001-2005] = 2010-2005

Thus, we refer to “Early 2000s” as the change between the 1996–00 and the 2001-05 averages. The “Late 2000s” is defined as the performance between the 2001–05 and the 2006-10 averages.

The model incorporates the most relevant factors influencing growth in neoclassical growth models. Variables are grouped to capture the contributions of different policies to growth in GDP per capita over time. Structural policy variables that reflect capital accumulation and technology effects are proxied by human capital (schooling), financial development (private credit/GDP), trade openness, and infrastructure (telephone lines). Government consumption and institution quality (polity2) are also included to consider the effects on capital formation and allocative efficiency. Stabilization policies such as the inflation rate, a proxy for exchange rate misalignment, and the banking crisis measure the extent to which the macroeconomic environment supports the efficient allocation of resources.

External conditions, captured by terms of trade growth, growth in (country-specific) commodity prices, and time dummies (capturing global effects such as liquidity), reflect the effects of commodity price booms and access to international liquidity, which are favorable conditions for commodity exporters. The model also includes a growth-persistence parameter capturing effects of past shocks and interventions, which is introduced by the lagged dependent variable. (See table A1.1 for a detailed description of variables and their sources.)

¹⁷⁷ World Bank (2016). The basis for this study was the book by Norman Loayza, Pablo Fajnzylber, and Cesar Calderon *entitled Economic Growth in Latin America and the Caribbean: Stylized Facts, Explanations, and Forecasts* (World Bank 2005) and *Beyond Commodities: The Growth Challenge of Latin America and the Caribbean* (World Bank 2015b). Using panel data regression, the authors followed the approach of Barro and Lee (1994) and Easterly, Loayza and Montiel (1997), which consists of linking aggregate economic, political, and social variables to rates of growth in GDP per capita for a large sample of countries. Specifically, they identified five major categories of factors affecting growth: (1) transitional convergence (due to diminishing returns); (2) cyclical reversion (from temporary recessions or booms); (3) structural policies (education, financial depth, trade openness, government burden, and public infrastructure); (4) stabilization policies (to control inflation, cyclical volatility, real exchange rate overvaluation, and banking crises); and (5) external conditions (terms of trade shocks and prevailing global conditions). The econometric methodology used by Loayza et al. was the Generalized Method of Moments (GMM), as in Arellano and Bond (1991). The GMM approach, given panel data, makes it possible to control for unobserved effects using previous observations and lagged-dependent variables as instruments.

The following model is estimated to explain per capita GDP growth in country c in year t as the dynamic (“steady-state”) process:

$$\ln y_{ct} = \theta \ln y_{ct-1} + \Gamma \ln(X)_{ct} + \alpha_c + b_t + e_{ct} \quad (1)$$

where $\ln y_{ct}$ is the natural log of real PPP GDP per capita of country c in period t ; X_{ct} is a vector of growth determinants; α_c and b_t are country and year fixed effects; and e_{ct} is an error term. The model is estimated using the System Generalized Methods of Moments (GMM) approach, which uses internal instruments to prevent endogeneity biases due to the lagged dependent and explanatory variables.

However, the framework developed by Loayza, Fajnzylber and Calderón (2005) and updated in Brueckner (2014) needs to be adjusted to the case of Russia and other European and Central Asian countries to correct for shorter samples and the effects of structural change in the 1990s. The original framework used cross-country regression analysis to determine the economic and social factors that drive per capita GDP growth in countries in the Latin America and the Caribbean region. Loayza et al. (2005) used a sample of 78 countries in the world and for the 1960–2000 period. They were primarily concerned with identifying the factors behind the Latin America “lost decade” of the 1980s, when economic growth in the region was slow, resulting in failure to converge to developed economies.

Table A1.1 Description of Variables

Variable	Description	Source
Growth rate of GDP per capita	The change in the natural logarithm of real PPP GDP per capita between period t and t-1.	PWT 7.1
Schooling	The natural logarithm of the secondary school enrollment rate. The natural logarithm of the ratio of domestic credit to the private sector divided by GDP.	WDI (2013)
Private credit/GDP	Domestic credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment.	WDI (2013)
Trade openness	The natural logarithm of the ratio of exports plus imports over PPP GDP adjusted for country's population.	PWT 7.1
Telephone lines	The natural logarithm of main telephone lines per capita. Telephone lines are fixed lines that connect a subscriber's terminal equipment to the public switched telephone network and that have a port on a telephone exchange. Integrated services digital network channels and fixed wireless subscribers are included.	WDI (2013)
Mobile phones	The natural logarithm of mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology that provides access to the public switched telephone network. Post-paid and prepaid subscriptions are included.	WDI (2013)
Government size	The logarithm of the ratio of government consumption expenditures over GDP.	PWT 7.1
Polity2	The polity2 score measures the degree of political constraints, political competition, and executive recruitment. It ranges from -10 to 10 with higher values denoting more democratic institutions.	Polity IV (2012)
CPI inflation	The natural logarithm of 100+ consumer price inflation rate. CPI inflation reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services.	WDI (2013)
Real exchange rate	The natural logarithm of the GDP price level divided by the nominal exchange rate.	PWT 7.1
Banking crisis	Indicator variable that is unity in period t if the country experienced a banking crisis.	Reinhart and Rogoff (2011)
Terms of trade growth	The change in the natural logarithm of the net barter terms of trade index. That index is calculated as the percentage ratio of the export unit value indexes to the import unit value indexes, measured relative to the base year 2000.	WDI (2013)
ComPI Growth	The change in an international commodity export price index. The index is constructed as	Arezki and Brueckner (2012)

$$ComPI_{ct} = \prod_{i \in I} ComPrice_{it}^{\theta_x}$$

where $ComPrice_{it}$ is the international price of commodity i in year t , and ic is the average (time-invariant) value of exports of commodity i in the GDP of country c . Data on international commodity prices are from UNCTAD Commodity Statistics and data on the value of commodity exports are from the NBER-United Nations Trade Database (Feenstra et al., 2004). The commodities included in the index are aluminum, beef, coffee, cocoa, copper, cotton, gold, iron, maize, oil, rice, rubber, sugar, tea, tobacco, wheat, and wood.

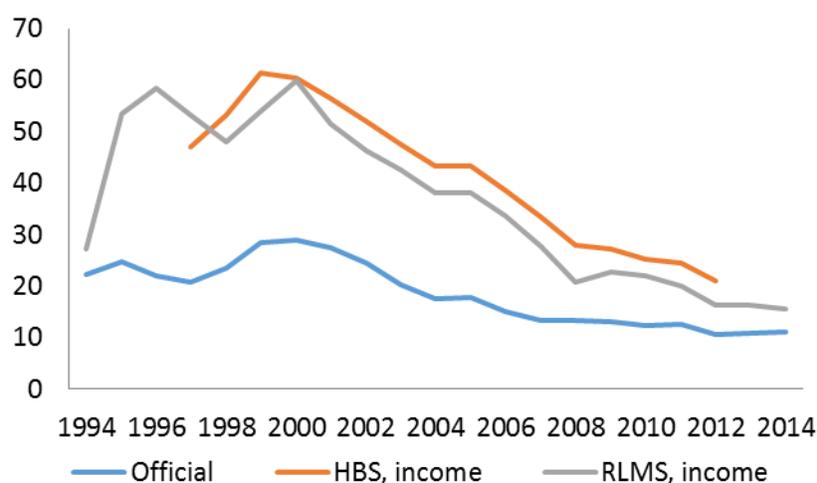
Annex 1.2. Poverty Measures for the Russian Federation

Threshold. Measuring income poverty according to traditional global poverty measures (per capita consumption of US\$1.25 per day and US\$2.50 per day in 2005 PPP prices) makes little sense in Russia (figure A2.1). According to the extreme poverty measure, Russia is poverty-free, and only 0.7 percent of Russians would be considered poor under the global moderate poverty line (US\$2.50 per day in 2005 PPP). Even when the US\$5 per day (2005 PPP prices) poverty line is applied—commonly used as a measure of moderate poverty in Europe and Central Asia—poverty in Russia is only about 7 percent.¹⁷⁸

Instead, in its cross-country comparative micro-analysis on Russia, the World Bank tends to use an alternative measure related to moving out of vulnerability: US\$10 per day (2005 PPP prices). This indicator is treated as a measure of economic security. It is close to the OECD international poverty line, and for Russia it captures a more credible share of the vulnerable population, about 28 percent in 2012, based on the Household Budget Survey of Rosstat. There are two reasons why this measure is used for comparative micro-analysis, including for Russia. First, it is a commonly-used international threshold that is closest to Rosstat’s current national poverty line and indeed to the subsistence line used in EU countries with levels of income similar to Russia’s. Second, World Bank analysis points to US\$10 per day as a threshold above which people are less likely to fall back into poverty (global estimates).

In addition to this measure, useful especially for international comparisons and benchmarking, this Systematic Country Diagnostic for Russia will predominantly analyze the bottom 40 percent of the income distribution, which has been found to be particularly relevant in framing inclusion and sustainability issues.

Figure A2.1 Official and Estimated Poverty Rates, Different Surveys, Percent



Source: World Bank calculations based on Rosstat HBS by Rosstat and RLMS-HSE data.

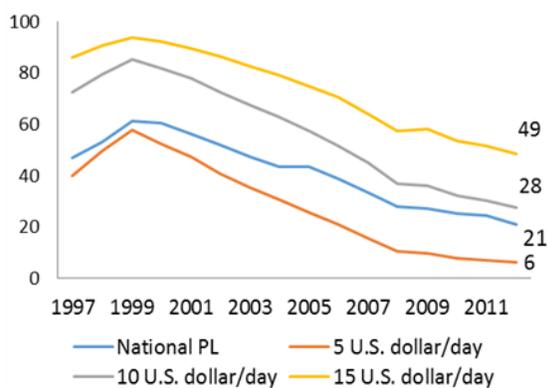
Survey. Russia has several household budget surveys with available microdata. However, none of them alone provided enough information for this analysis carried out in this report. The first is the Household Budget Survey (HBS) conducted by Rosstat, which is available for 1997–2015 (2012 for the time when the

¹⁷⁸ The World Bank’s Poverty team for the Europe and Central Asia region (ECAPOV) made this estimate using a dataset harmonized across the region to ensure comparability.

analysis was conducted), has the largest sample (200,000 households a year), and provides detailed information on expenditures and consumption. The second survey used in this report is the Higher School of Economics RLMS-HSE¹⁷⁹ which is available for 1994–2015(except for 1997 and 1999, when no survey was conducted), with a much smaller sample of 5,000–8,000 households a year. Rosstat has also produced an income survey, which is representative at the regional level but because it was available for only 2012 and 2014, it was not used in this analysis.

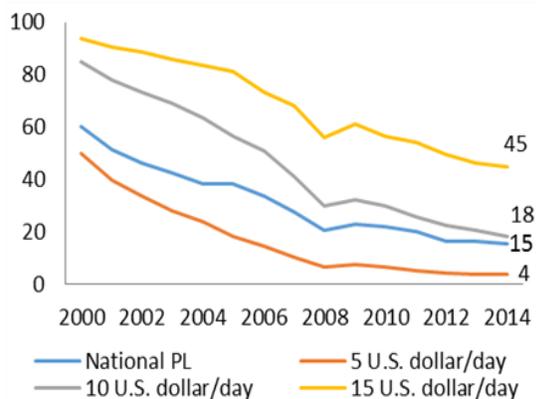
Neither of these surveys can be used to replicate the official poverty rates reported by Rosstat. Rosstat scales up the whole distribution to match the average income from macro statistics and publishes poverty data based on this adjusted income distribution. The exact process Rosstat follows cannot be replicated. Since average income in the surveys is 20–30 percent lower than the average taken from macro statistics, estimated poverty rates using the national methodology are two to three times higher using survey data than the official calculations. Moreover, income as reported in the HBS is on average lower than in the RLMS, leading to higher estimated poverty rates (by 5 percentage points compared to national poverty rates) when HBS data are used (see figures A2.1, A2.2 and A2.3).

Figure A2.2. Share of Population with Per Capita Income Below Threshold Using HBS, Percent



Source: World Bank calculations based on Rosstat HBS data.

Figure A2.3. Share of Population with Per Capita Income Below Threshold Using RLMS, Percent



Source: World Bank calculations based on RLMS-HSE data.

The strategy adopted for this report and other micro-analysis is to use a combination of both data sources. The RLMS-HSE is treated as the main source of information, because it provides the most recent data (2014 at the time of analysis) and has the largest number of indicators. However, this survey is not official in that it is not produced by the Russian statistical office, so for the purpose of this report when possible results calculated with RLMS-HSE data are compared with official Rosstat data for a consistency check. National trends are calculated using the RLMS-HSE data (ensuring that conclusions are consistent with HBS on the observed horizon). The structure of incomes and simulation for changes in the income distribution are based on RLMS-HSE.

¹⁷⁹ “Russia Longitudinal Monitoring Survey, RLMS-HSE”, conducted by the National Research University Higher School of Economics and ZAO “Demoscope” together with Carolina Population Center, University of North Carolina at Chapel Hill and the Institute of Sociology RAS.

Cross-country comparisons use the ECAPOV¹⁸⁰ consumption aggregates from HBS data and World Bank standard thresholds (in particular the US\$10/day in 2005 PPP). Depending on the data available on PovCalNet,¹⁸¹ Russia is compared to the richest ECA country (Poland), resource-rich non-OECD countries with upper-middle or high-income levels (Brazil, Argentina), and other commodity-exporting OECD members (Australia, Canada, Chile, Norway).

Cross-country comparisons follow the common approach of measuring poverty as the share of the population with per capita consumption below the poverty line fixed in PPP terms is followed. However, the consumption aggregate used in the Russia-specific micro-analysis is total per capita income, which includes both money and in-kind incomes. This ensures consistency with Russia's official poverty definition (share of population with per capita incomes below the minimum subsistence level). It also gives the flexibility necessary to analyze the income source of the bottom 40 percent and economically secure groups, as well as the main drivers of upward economic mobility. This is because, for individuals, consumption and income can be quite different; an individual who is treated as poor based on consumption may have much more or much less income from various sources than the poverty line indicates.

¹⁸⁰ ECAPOV is a harmonized database produced by the World Bank for European and Central Asian countries based on household budget surveys and Living Standard Measurement surveys.

¹⁸¹ PovcalNet is an interactive computational tool that makes it possible to replicate calculations made by World Bank researchers in estimating the extent of absolute poverty in the world. See <http://iresearch.worldbank.org/PovcalNet/>.

Annex 1.3. Description of Cluster Analysis for the Bottom 40 Percent

Latent class analysis (LCA) was applied to the RLMS-HSE dataset to investigate the groups of people that have incomes in the bottom 40 percent in Russia. The latest available household survey round that includes all necessary characteristics was used (2014). The sample included 3,964 individuals aged 15+ years who fell into the bottom 40 percent of the income distribution by their per capita household incomes in the 2014 cross-sectional wave of RLMS-HSE. The list of the observed covariates used to predict vulnerability status included sex, age categories, marital status, disability status, the highest achieved level of education, whether currently in education, occupation, sector of employment, various types of labor market vulnerabilities (whether economically inactive, self-employed, employed in informal sector, or low wages), whether employed in a state-owned enterprise, household composition, and region/type of settlement. In addition to these active covariates, some additional variables were added to the descriptive statistics for classes to facilitate the interpretation, although they were not used to define the classes themselves. These included the share of the population with income below the national poverty line, shares of various sources of income in household income, individual earnings, length of social insurance contribution period, and number of working hours per week.

At the preliminary stage, the LCA model was run with one to fifteen classes. Based on the steepness of changes in the two statistical criteria that maximize the cohesion within clusters and the distance between clusters, the results indicated that models with four to nine classes represented the potential optimum solutions. Of these, a model with seven classes was selected based on the size of groups and their ease of interpretation (see Table A3.1).

Table A3.1. Results of Cluster Analyses Profiling the Bottom 40 Percent

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Average Probability
		Female Pensioners Living Alone or Pensioner Couples	Young Unemployed	Older Low-Skilled Workers	Female Public-Sector Workers	Vulnerable Working-Age Individuals with Dependent Children	Students	
N		1085	414	712	476	922	355	3964
%		27.37	10.44	17.96	12.01	23.26	8.96	100
Active covariates (probability that an individual with this characteristic belongs to cluster/group)								
Sex	Men	28.1%	60.4%	50.1%	18.8%	57.3%	52.2%	43.1%
Age group	15-19 years	0.0%	4.6%	0.1%	0.4%	0.4%	82.6%	8.0%
	20-24 years	0.5%	33.9%	2.7%	3.6%	6.3%	17.3%	7.6%
	25-29 years	0.8%	26.0%	4.9%	10.6%	17.0%	0.0%	9.0%
	30-34 years	0.4%	12.1%	7.0%	19.4%	21.7%	0.0%	9.9%
	35-39 years	0.5%	9.8%	10.3%	17.8%	21.3%	0.0%	10.0%
	40-44 years	1.5%	4.9%	16.0%	18.3%	16.5%	0.0%	9.8%
	45-49 years	1.3%	5.6%	20.1%	11.7%	7.3%	0.0%	7.7%
	50-54 years	2.5%	2.3%	23.0%	7.2%	4.5%	0.0%	7.0%
	55-59 years	13.9%	0.8%	11.0%	7.6%	3.2%	0.0%	7.6%
	60-64 years	21.3%	0.0%	3.5%	2.1%	1.4%	0.0%	7.1%
65-72 years	22.7%	0.0%	1.0%	1.2%	0.5%	0.0%	6.7%	
>72 years	34.8%	0.0%	0.3%	0.0%	0.0%	0.0%	9.7%	
Civil status	Single	3.1%	100.0%	0.0%	7.6%	0.0%	98.6%	21.0%
	Married	43.0%	0.0%	46.2%	69.9%	100.0%	1.4%	51.6%
	Separated/Divorced	13.7%	0.0%	45.7%	17.1%	0.0%	0.0%	14.1%
	Widowed	40.3%	0.0%	8.2%	5.3%	0.0%	0.0%	13.3%
Disability status	Disabled	25.2%	5.0%	2.8%	1.6%	1.2%	1.6%	8.6%

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Average Probability
		Female Pensioners Living Alone or Pensioner Couples	Young Unemployed	Older Low-Skilled Workers	Female Public-Sector Workers	Vulnerable Working-Age Individuals with Dependent Children	Students	
Education - highest status	Primary or incomplete secondary	23.7%	10.3%	4.6%	3.2%	7.0%	38.0%	12.4%
	Vocational training or ptu w/t se	19.0%	14.7%	18.6%	5.6%	14.3%	1.9%	14.2%
	Secondary genera or ptu with se, Technikum	45.3%	61.3%	66.9%	48.7%	62.0%	60.0%	54.1%
	Higher and post-graduate	12.1%	13.7%	9.8%	42.5%	16.6%	0.0%	15.5%
Education - current status	Enrolled in full-time studies	0.0%	3.8%	0.4%	0.2%	0.3%	92.5%	8.8%
Labor market vulnerability	Self-employed	0.0%	10.9%	13.6%	0.9%	13.3%	0.0%	6.7%
	Unemployed	0.0%	20.4%	13.2%	0.0%	4.3%	0.7%	5.6%
	Economically inactive	99.8%	28.8%	21.3%	0.0%	24.7%	98.6%	48.9%
	Informally employed	0.0%	12.6%	12.8%	0.0%	8.8%	0.0%	5.6%
	Working poor	1.5%	16.7%	17.8%	23.8%	7.4%	1.9%	10.1%
	Employed in state-owned or co-owned organization	0.0%	9.3%	15.3%	92.6%	13.4%	0.0%	18.0%
Sector of employment	Light industry, food industry	0.0%	3.4%	5.6%	0.0%	7.1%	0.0%	3.0%
	Heavy industry	0.0%	4.3%	6.2%	1.6%	11.2%	0.0%	4.3%
	Construction	0.0%	6.5%	5.8%	0.5%	8.9%	0.0%	3.8%
	Transportation, communication	0.0%	5.4%	7.4%	2.5%	8.4%	0.0%	4.1%
	Agriculture	0.0%	2.4%	7.0%	2.0%	4.1%	0.0%	2.7%

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Average Probability
		Female Pensioners Living Alone or Pensioner Couples	Young Unemployed	Older Low-Skilled Workers	Female Public-Sector Workers	Vulnerable Working-Age Individuals with Dependent Children	Students	
	Government and public administration	0.0%	1.0%	0.3%	7.5%	0.3%	0.0%	1.2%
	Education, science, culture, public Health, army	0.0%	3.3%	3.1%	77.0%	1.8%	0.0%	10.7%
	Trade, consumer services	0.0%	17.1%	19.1%	0.0%	21.7%	0.0%	10.2%
	Power industry, housing and communal services	0.0%	2.9%	6.3%	1.2%	3.6%	0.0%	2.4%
	Finances, real estate operations	0.0%	1.3%	1.5%	4.0%	0.7%	0.0%	1.1%
	Other services	0.0%	2.1%	2.1%	2.9%	1.9%	0.0%	1.4%
Occupation (ISCO-88)	Senior officials and managers	0.0%	1.0%	2.8%	4.1%	4.5%	0.0%	2.1%
	Professionals	0.0%	2.8%	2.0%	36.9%	3.0%	0.0%	5.8%
	Technicians and associate professionals	0.0%	7.7%	6.5%	29.0%	8.5%	0.0%	7.4%
	Clerks	0.0%	3.3%	3.8%	2.9%	2.6%	0.0%	2.0%
	Service and sales workers	0.0%	8.0%	11.2%	10.4%	10.9%	0.0%	6.6%
	Craft and trades workers	0.0%	8.2%	9.4%	0.3%	14.1%	0.0%	5.8%
	Plant and machine operators	0.0%	7.7%	14.1%	1.9%	19.3%	0.0%	8.0%
	Elementary occupations	0.0%	11.8%	15.1%	13.2%	7.7%	0.0%	7.3%
	Household type	Couple 1 child	10.9%	11.8%	10.8%	33.5%	44.1%	30.1%	23.0%

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Average Probability
		Female Pensioners Living Alone or Pensioner Couples	Young Unemployed	Older Low-Skilled Workers	Female Public-Sector Workers	Vulnerable Working-Age Individuals with Dependent Children	Students	
	Couple 2 children	5.2%	3.7%	6.7%	21.9%	36.0%	16.7%	15.4%
	Couple 3+ children	2.5%	2.8%	2.4%	8.6%	19.2%	10.8%	7.8%
	Lone parents	6.5%	14.2%	8.6%	10.8%	0.7%	14.8%	7.6%
	Only adults	2.0%	29.8%	46.2%	15.4%	0.0%	19.7%	15.6%
	Only pensioners	43.9%	0.0%	1.8%	1.1%	0.0%	0.0%	12.6%
	Mixed	29.0%	37.8%	23.5%	8.7%	0.0%	7.8%	18.0%
Presence of children	Children aged 0-2 years	5.3%	7.4%	7.3%	18.1%	39.2%	6.7%	15.3%
	Children aged 3-6 years	6.6%	8.7%	9.4%	25.3%	41.9%	14.7%	18.3%
	Children aged 7-17 years	19.5%	24.9%	20.8%	58.5%	67.1%	69.0%	40.2%
Type of settlement	Big cities (over 500 thousand)	22.9%	25.8%	21.4%	20.3%	22.7%	23.6%	22.6%
	Other cities (50-500 thousand)	30.0%	26.4%	30.3%	26.4%	31.9%	31.6%	29.8%
	Small towns and rural	41.6%	29.5%	40.9%	49.5%	39.8%	40.7%	40.7%
	North Caucasus	5.6%	18.2%	7.3%	3.8%	5.6%	4.1%	6.9%
Descriptive statistics for other variables								
Income below the national poverty line, %		18.7%	37.3%	39.2%	33.9%	38.9%	37.5%	31.5%
Wages, %		18.8	56.4	61.2	71.0	74.1	46.2	0.5
Pensions, %		70.1	28.7	21.7	13.9	8.2	21.8	0.3
Social transfers, %		4.0	3.3	4.5	4.8	6.0	7.9	0.0
Private transfers, %		2.2	2.9	4.3	4.4	4.8	17.6	0.0
Home production income, %		1.1	2.7	2.3	0.9	1.7	2.0	0.0
Other income, %		0.6	1.2	1.6	1.5	1.8	1.4	0.0

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
	Female Pensioners Living Alone or Pensioner Couples	Young Unemployed	Older Low-Skilled Workers	Female Public-Sector Workers	Vulnerable Working-Age Individuals with Dependent Children	Students	Average Probability
In kind consumption, %	3.2	4.8	4.4	3.5	3.4	3.1	0.0
Individual employment income, rubles per month	93.7	8,969.0	8,920.3	13,371.0	14,652.2	895.8	7,989.1
Contribution period, months	408.3	98.3	242.3	208.7	159.4	5.4	259.2
Hours worked per week	0.0	29.3	27.8	38.9	34.0	0.0	21.6

Source: Based on RLMS-HSE data for 2014. Cross-sectional sample of individuals aged 15+ years falling into the bottom 40 percent of the income distribution.

Note: “Vocational training or ptu w/t se” denotes less than upper secondary education, but with some vocational training and/or with a vocational qualification and “secondary general or ptu with se, technikum” denotes upper secondary education, vocational school with upper secondary education diploma, TVET (technical and vocational education and training) school.

Annex 2.1. Russia's Diversification Potential

Russia's economy has struggled to diversify over the past few decades, but recently new competitive sectors have emerged that could become important for more diversified growth in the future. Because of the commodity boom, Russian exports became even more concentrated in natural resources: The share of hydrocarbons in total exports doubled from 35 percent in 1995 to 70 percent in 2014. However, the product space analysis shows that about half of its nonoil products were exported by Russia competitively, i.e., with revealed comparative advantage. It also indicates that based on its existing production capabilities, Russia can become competitive in other products. For example, in 2014, Russia exported about 170 nonoil product groups with an export value ranging from US\$50 million to US\$3 billion. While Russia did not demonstrate revealed comparative advantage in these products, they represent sizable already established domestic industries. Globally, these industries range from US\$2 billion in slag wool to US\$250 billion in medicaments and US\$500 billion in microchip manufacturing. These products can be grouped in five broad categories (table A2.1.1).

The machinery and electronics category is represented by the largest number of product groups that are not yet competitive but have potential. This category includes such products as agricultural machinery, oil extraction equipment, cars and automotive parts, and household electric appliances. These products are on average more complex, have significant income potential, and represent a sizable US\$3 trillion global industry.

A relatively large number of products in chemicals and petrochemicals, metal products, and agro-processing already have revealed comparative advantage, indicating Russia's existing production capabilities. For example, Russia competitively exports a range of fertilizers and pharmaceuticals. It remains an important producer of various metals, and it is becoming one of the top exporters of grain. While Russia's exports from these product groups are not very complex, their global income potential is high, making them attractive candidates for diversification. There is, however, one common pattern across all products with export potential: their quality significantly lags behind the top-performing exporters of the same products. For example, between 20 and 68 percent of exporters of agro-processing products demonstrate higher quality than Russia. Even with exports of metal products, Russia does not rank high in terms of quality; 27 to 61 percent of exporters are ranked higher than Russia.

Table A2.1.1. Russia's Exports with Potential to Become Competitive

	Products in Russia's Export Basket, Export Value above US\$50 Million and without Revealed Comparative Advantage, 2014						Number of Products Exported by Russia with Revealed Comparative Advantage, 2014
	Number of Products	Russia's Exports, US\$ Billion	Global Exports, US\$ Billion	Product Income Potential*	Complexity **	Export Quality, Percentile***	
Machinery & electronics	59	10.6	2,905.2	25,625	1.56	55–61	38
Chemicals & petrochemicals	32	4.4	841.8	26,397	0.32	30–68	91
Agro-processing	33	5.6	401.1	15,797	0.24	32–80	50
Construction materials	24	3.6	314.6	19,676	0.28	43–72	9
Metal products	21	7.6	580.2	15,720	0.16	39–73	95
Total	169	32.0	5,043.0	23,461	0.68	30–80	283

Notes and Sources:

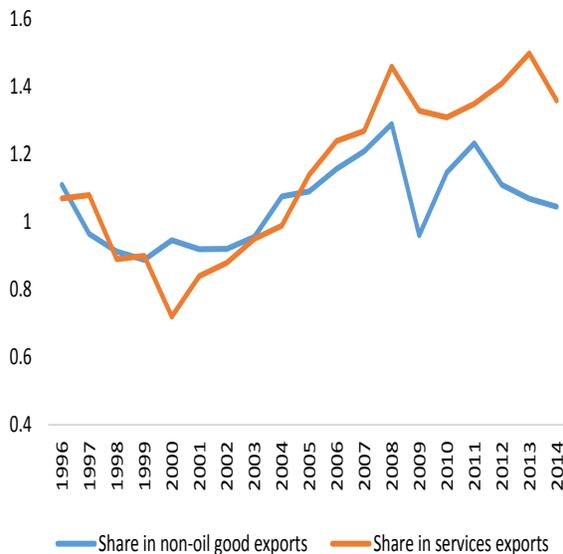
* Average GDP per capita of the countries exporting these products (weighted by export volume).

** *Harvard's Atlas of Economic Complexity* (more sophisticated products are more complex).

*** IMF's export diversification database. Percentile indicates Russia's standing vis-à-vis all exporters of a specific product; the lower bound of the range corresponds to the worst-performing product (55 percentile means that 45 percent of countries, exporting a specific product, demonstrate higher quality than Russia).

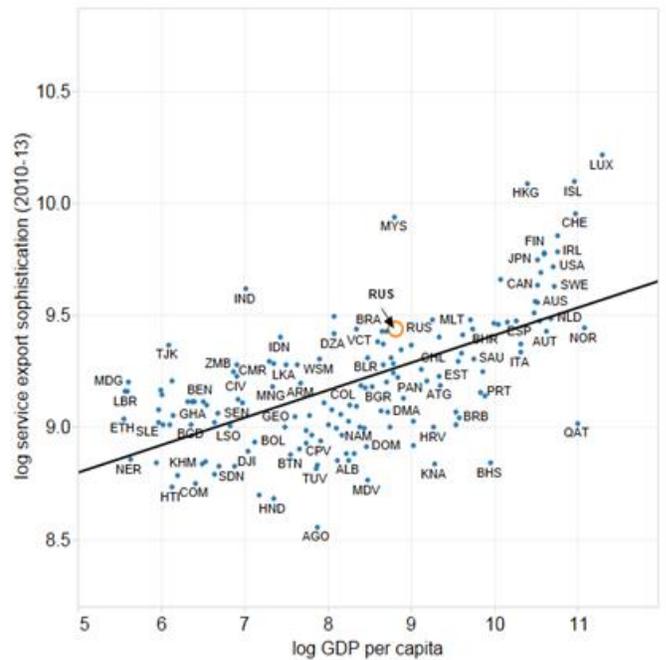
The Russian services sector demonstrates more dynamism and greater uptake of diversification. The share of Russia in the world's total exports of services outpaced its share in global nonoil exports (figure A2.1.1). Russia's services exports are more sophisticated than predicted by its income level (figure A2.1.2). Importantly, the composition of services exports has become significantly diversified over time. In 1994, they were dominated mainly by business and trade-related services; other types of services, including only construction and financial, accounted for less than 10 percent of the total. By 2014, in addition to those, exports of services included various types of transportation, both passenger and freight, software development and telecommunication, maintenance, insurance, recreation, and others. Russia's IT services sector in particular has demonstrated remarkable progress over the past several years. This is one of the few noncommodity industries that has built a successful track record both domestically and globally (see Box 2.1).

Figure A2.1.1. Russia's Share of Exports in World Exports, Percent



Source: Data from IMF BOP Statistics and UN COMTRADE.

Figure A2.1.2. Services Sector Sophistication vis-à-vis Income per Capita



Source: Loungani and Mishra 2016.

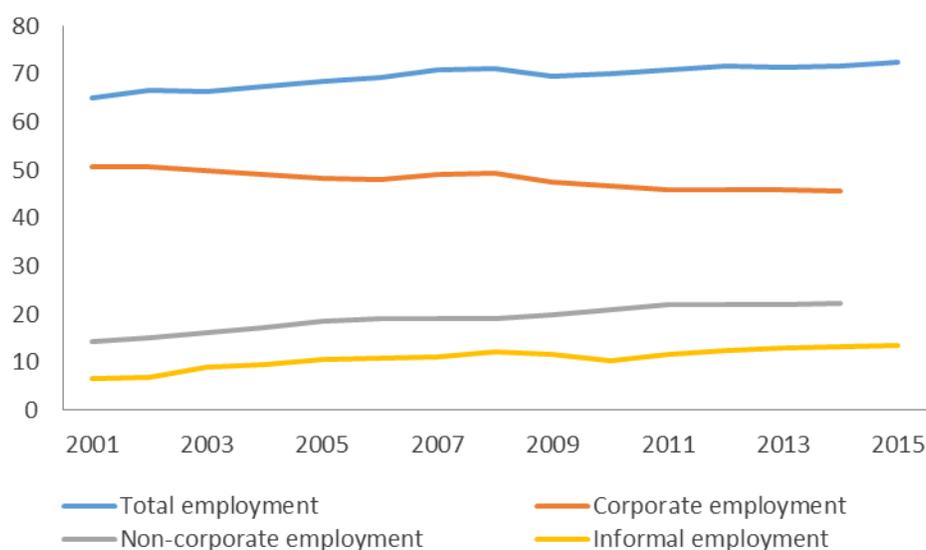
Whether Russia will be able to further improve the competitiveness of its nonoil exports and seize diversification opportunities depends on many factors. Historically, a flexible exchange rate arrangement proved to be conducive to expansion of exports and diversification (Leigh et al. 2016). However, Russia has not yet seen significant export response to the large exchange rate depreciation that took place in 2014–15. The Diversified Development Report (World Bank 2014) argues that a successful longer-term diversification strategy for commodity-rich countries should aim to improve infrastructure, better educate the labor force, and strengthen institutions. Once these assets have been strengthened, diversification in the goods and services market is expected to follow as a result of market forces.

Annex 3.1: Estimates of the Size of Informal Sector Employment in Russia

Labor market informality estimates vary by method and data source, but most measures show a growth in informality in Russia since the early 2000s. A narrow and broad definition are used here to compare estimates of the size and trends in informal employment in recent years.

The official Rosstat estimate includes in the informal sector those working in firms or for households, or individual entrepreneurs that are not registered as a legal entity. By this measure, informal workers are estimated to have made up 20.5 percent of all workers in 2015 and the number of informal workers rose from 8.2 million in 2001 to 14.8 million in 2015. These numbers include those involved in informal activity even if they also had a formal job. Those who only had an informal job equaled 6.5 million (10 percent of total employment) in 2001 and 13.5 million (18.7 percent) in 2015 (Figure A3.1.1). The 6.6 million rise in those informally employed accounts for nearly all the overall increase of 7.2 million people in employment in 2001–15 (Figure A3.1.1).

Figure A3.1.1. Employment in Russia by Types, 2001–15, Million People



Source: Rosstat data.

Note: Informal employment is the official estimate by Rosstat of those employed in the informal sector (those working in firms or for households, or individual entrepreneurs not registered as a legal entity). Non-corporate employment is the difference between total employment and employment in legal entities (large, medium, and small enterprises).

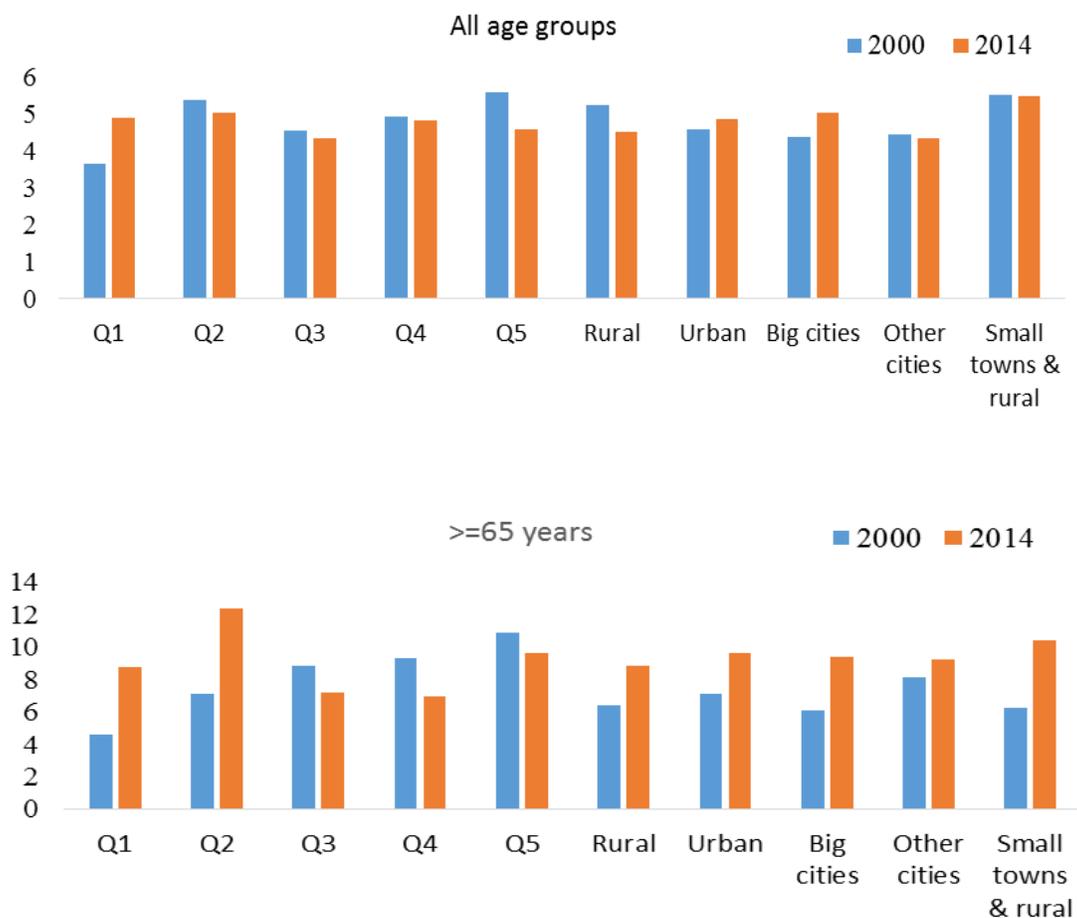
A broader definition of the informal sector—widely used in analysis in Russia—is non-corporate employment. This is the amount of total employment that is not accounted for by employment in legal entities (firms and organizations, including the public sector), termed non-corporate employment (Gimpelson and Kapeliushnikov 2014). Information on employment in legal entities is taken from the frequently updated statistical registry covering all officially registered firms. Informality is then calculated as the difference between employment in legal entities and total employment. According to this definition, the non-corporate sector reached 22 million people in 2014, a third of total employment

(Figure A3.1.1). While the levels of informality differ across these two measures, the trends are similar: the number of informal jobs grew most rapidly in the early 2000s and over 2011–12. This is a larger estimate for informality than given by the LFS measure because the LFS measure may exclude some workers employed by unregistered small businesses, if respondents answer that they are working for “a firm.” Neither definition includes those who work in registered enterprises without a formal contract.

Analysis to look at the share of the bottom 40 percent of the income distribution and the top 60 percent in informal jobs or self-employment for the Systematic Country Diagnostic was done using RLMS-HSE data. Individuals are counted as informally employed if they meet one of three conditions: (1) working for an enterprise/organization, but without an official contract; and (2) working for an individual who is not registered as an entrepreneur; or (3) working for an individual but it is not known if the employer is registered as a firm. In addition, this definition includes the self-employed who are not working in an enterprise or organization that is officially registered. According to this measure, the informal or self-employed grew from 15.9 percent to 20.4 percent of the total employed from 2007 to 2014. They made up 26.9 percent of total employment for the bottom 40 percent of income earners and 17.4 percent of the top 60 percent.

Annex 3.2. Health Care Utilization Indicators

Figure A3.2.1. Utilization Rate of Inpatient Care Services in the Past Three Months by Socioeconomic Status, Area of Residence and Age, 2000–14, Percent

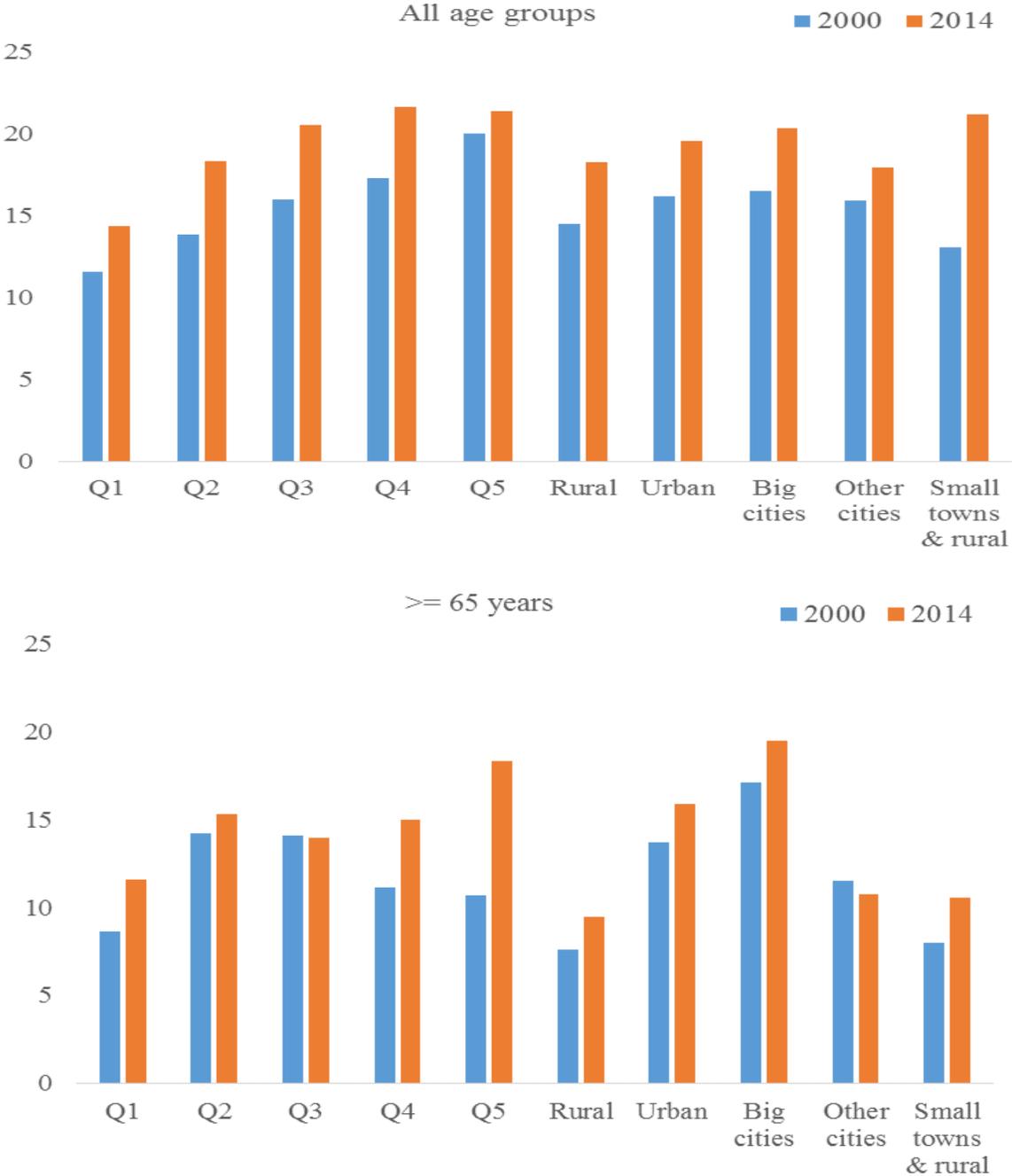


Source: World Bank analysis of Russia Living Standards Measurement Surveys for 2000 and 2014.

Notes: Q1 to Q5 refer to consumption-based quintiles calculated using household consumption reported in the survey with Q1 being the poorest and Q5 the richest.

Big cities have populations of over 500,000 and Other cities have populations of 50,000–500,000.

Figure A3.2.1. Probability of Having Seen a Doctor in the Past Three Months, by Socioeconomic Status, Area of Residence, and Age, 2000–14, Percent

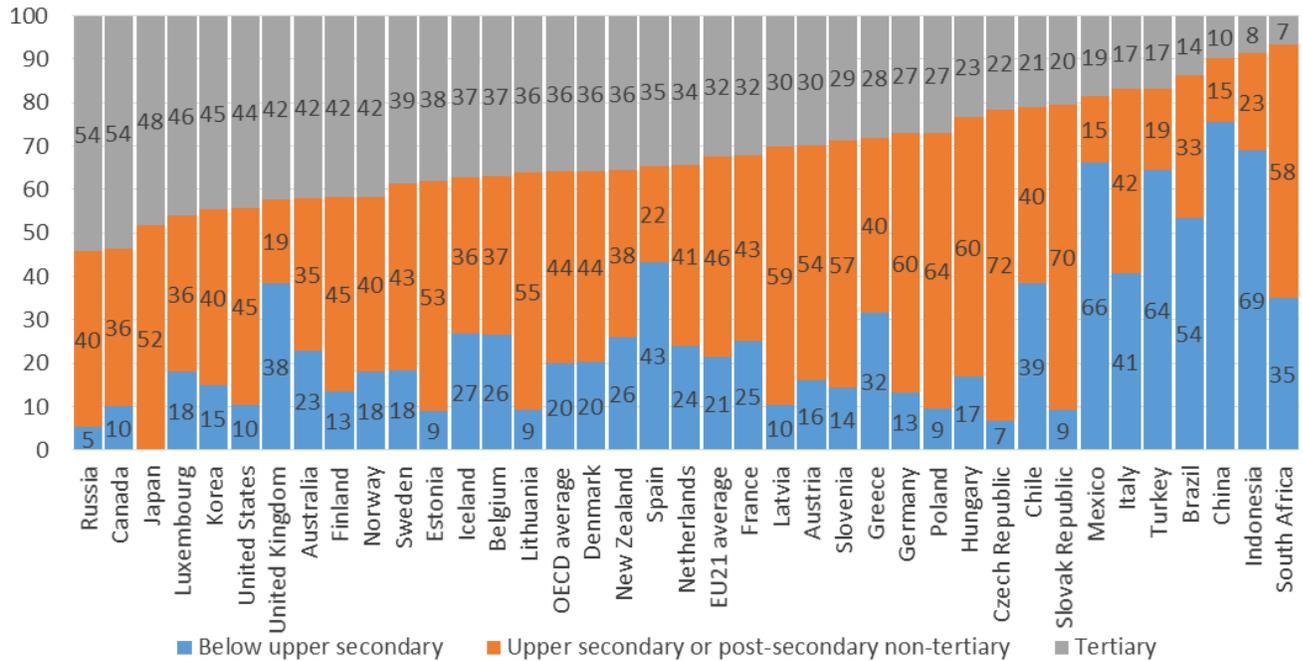


Source: World Bank analysis of Russia Living Standards Measurement Surveys for 2000 and 2014.
Notes: The outcome variable is the probability of having seen a doctor in the past three months without being sick. This was the only outpatient care variable for which comparable data were available for both years. Q1 to Q5 refer to consumption-based quintiles calculated using household consumption reported in the survey with Q1 being the poorest and Q5 the richest. Big cities have population of over 500,000 and Other cities have populations of 50,000–500,000.

Annex 3.3. Education Indicators

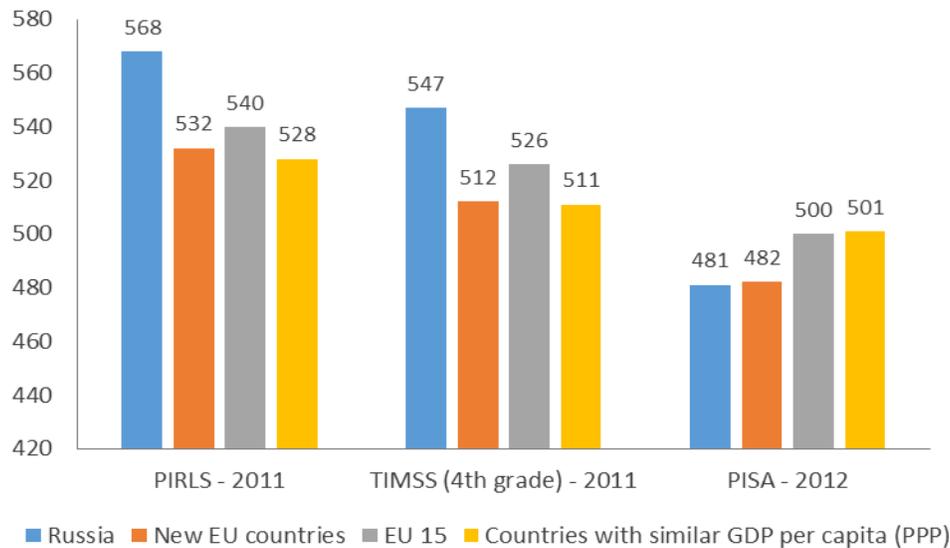
Figure A3.3.1. Educational Attainment of 25–64-year-olds, 2014

Percentage of adults with a given level of education as the highest level attained



Source: OECD 2014.

Figure A3.3.2. Russia's Educational Test Scores from an International Perspective



Source: World Bank (2012), with data update from OECD and the International Education Association (IEA).

Annex 5.1. The Consultation Process

The SCD team conducted two rounds of both external and internal consultations, a number of informal meetings and a separate prioritization discussion with internal stakeholders. The SCD consultation process was designed to ensure that all key stakeholders were included in the deliberations and their views taken into account. For example, the internal consultations and discussions included members of the SCD Advisory Group and the SCD central team, the Russia country team, and other experts from across the World Bank's Global Practices, the International Finance Corporation (IFC), and the Multilateral Investment Guarantee Agency (MIGA). The external consultations included separate meetings with diverse groups of experts on Russia, including representatives of the government, the central bank, line ministries, the Russian statistical authorities, academia, think tanks, the private sector, international partners, and civil society.

Consultations and meetings:

1. The first round of external and internal consultations was held January 19–23, 2015, and took place before the Concept Note review. Its purpose was to brainstorm on main themes, potential data sources, and the analytical framework for the SCD.
2. Two informal pre-Concept Note discussions were held at World Bank Group headquarters in Washington DC in May 2015: the first with the SCD Advisory Group, and the second with the Russia country team members and managers from all the Bank Global Practices, as well as MIGA and IFC. The purpose of these discussions was to stimulate open debate on the proposed main messages and areas of emphasis of the SCD.
3. The second external consultation round was held January 25–29, 2016, half a year before the finalization of the SCD. The purpose of the second consultation was to verify the storyline and main messages on key challenges to inclusive and sustainable growth in Russia and to identify missing dimensions. It was essential in shaping the final SCD.
4. Finally, a prioritization workshop took place in May-June 2016, shortly before the decision review of the SCD on July 13, 2016. It included a number of discussions with the SCD core team, the wider SCD team, country experts, and the full Russia country team and included a member of the SCD advisory group. The purpose of the prioritization process was to validate the constraints identified in the SCD, agree on the proposed methodology for policy prioritization, and finalize the prioritization of policy areas and policy actions as reflected in the policy priorities matrix.

In addition, background analysis on governance, regulatory uncertainty, and growth drivers were commissioned, featuring experts from Altura Partners, the Moscow Higher School of Economics, and the Australian National University.