European Bank
for Reconstruction and Development

TRANSITION REPORT 2020-21

THE STATE STRIKES BACK

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ABOUT THIS REPORT

The EBRD seeks to foster the transition to an open market-oriented economy and to promote entrepreneurship in the economies where it invests. To perform this task effectively, the Bank needs to analyse and understand the process of transition. The purpose of the *Transition Report* is to advance this understanding and to share our analysis with partners.

Responsibility for the content of the report is taken by the Office of the Chief Economist. The assessments and views expressed are not necessarily those of the EBRD. All assessments and data in the online country assessments are based on information as of late October 2020.

CONTENTS

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EXECUTIVE SUMMARY

The *Transition Report 2020-21* focuses on the role of the state, looking at the size of the state across various economies, the role of state-owned enterprises and state banks in the modern economy, and the role that the state plays in supporting the transition to a green economy. The online version of this report includes assessments of recent economic developments and structural reforms in individual economies (which are also summarised in the Structural Reform section).

The report draws on rich sources of data, such as firm and bank-level surveys, representative household surveys (including a survey conducted by the EBRD and the ifo Institute in August 2020, which looked at the impact that the Covid-19 crisis was having on individuals in 14 economies) and a special EBRD survey examining the legal frameworks governing state-owned enterprises in the EBRD regions.

Back in the mid-19th century, government spending totalled around 8 per cent of GDP in advanced economies. Today, that figure stands at more than 40 per cent as a result of increased spending on education and healthcare and higher levels of income redistribution on account of technological change. While public-sector employment peaked in the 1980s, support for the expansion of public ownership has risen around the world as inequality has increased. Indeed, 45 per cent of people living in post-communist economies in the EBRD regions are now in favour of higher levels of state ownership. At the same time, the Covid-19 crisis has highlighted citizens' growing expectations regarding the state's ability to reduce the health and economic risks that are faced by individuals.

State ownership can help to ensure that services such as utilities or broadband are universally available and affordable. It can also help disadvantaged regions to cope with economic and technological shocks. However, weak governance and poor management at state-owned firms can result in inefficiencies and hamper productivity growth, with data showing that state enterprises are only half as likely to innovate as private firms.

Meanwhile, state banks have become increasingly important in many economies, expanding their assets almost twice as fast as private banks. They have a greater appetite for risk than their counterparts in the private sector and are able to lend to young firms without a sufficient credit history, which are often shunned by privately owned banks. However, politicians often interfere in the decisions of state lenders, resulting in inefficient allocation of funding and weak economic growth.

The state has a particularly important role to play in fostering the transition to a green economy. All of the economies in the EBRD regions have adopted environmental laws, which have focused mainly on the most polluting sectors. At the same time, however, current levels of carbon pricing are not sufficient to have a meaningful impact on climate change.

HOW BIG IS THE STATE?

The response to Covid-19 has highlighted high levels of demand for the socialisation of risks, which are partly a response to the fact that economic risks have increasingly been shifted onto people with low earnings and less tolerance of risk. The crisis has also revealed increasing expectations regarding the services that the state should provide.

While most governments have seen increases in their fiscal space, the administrative capacity to deliver on citizens' growing expectations varies considerably. The expansion of the state's role in the economy may take the form of increased government spending on goods, services and transfers, and the state may also become an increasingly important employer and provider of goods and services.

Patterns in terms of the state's expansion following major crises have varied over time and across countries on account of differences in citizens' preferences. Since the mid-19th century, state spending has risen as a share of GDP, reflecting the increasing importance of providing education, healthcare and social safety nets. While state employment has also risen over the longer term, it peaked in the 1980s and has since declined somewhat on account of privatisation and automation, despite government spending continuing to rise.

In post-communist economies, the state's share of total employment declined from around 45 per cent in the mid-1990s to 24 per cent in the mid-2010s, but remains 7 percentage points higher than the levels seen in other economies with similar characteristics. Meanwhile, government spending in post-communist economies is consistent with that of their peers at around 35 per cent of GDP.

Even as the state's share of employment has declined in recent decades, public support for state ownership of businesses and industry has grown – probably in response to rising inequality. Surveys in post-communist economies suggest that 45 per cent of people favour an increase in public ownership. Analysis also shows that women, older people, highly educated individuals and people who are more risk-averse are all more likely to work in the public sector.

https://2020.tr-ebrd.com/how-big-is-the-state

STATE-OWNED ENTERPRISES

State-owned enterprises have historically played an important role in the EBRD regions. Today, they provide almost half of all public-sector employment in those economies and are increasingly concentrated in the energy, utilities and transport sectors, where their services are often subsidised to ensure universal affordability. While private firms are able to supply such services under public service obligations with the support of compensation schemes, governments often opt for direct provision through state enterprises, particularly where administrative capacity is limited.

State enterprises can also act as automatic stabilisers, providing more stable employment during downturns and in disadvantaged regions. Employees of state firms were less likely to have their pay reduced in the early months of the Covid-19 crisis, according to a household survey conducted by the EBRD and the ifo Institute in August 2020. Similarly, levels of public sector employment are higher in regions with higher unemployment. More stable employment in the face of economic and technological shocks can help to reduce negative externalities associated with rising inequality and the erosion of social cohesion and trust. State-owned enterprises can also play an important role in winding down stranded assets in sunset industries.

However, governments often struggle to manage state-owned enterprises effectively. For instance, state-owned firms in the EBRD regions are half as likely to innovate as private-sector counterparts. Meanwhile, the goals of state ownership are often not clearly defined, with managerial responsibilities being spread across multiple government entities with conflicting interests. Management of state enterprises is often seen as an exercise in compliance, with little attention paid to strategy or risk management. Equally, state support is extensive but not transparent, reducing accountability.

As discussed in Chapter 1, the Covid-19 crisis may boost support for state ownership. This will further increase the importance of improving the governance of state-owned firms – for example, by defining the objectives of state ownership, clarifying the managerial responsibilities of government entities, separating those entities' managerial and regulatory functions, and increasing the autonomy of firms' boards.

https://2020.tr-ebrd.com/state-owned-enterprises

STATE BANKS ON THE RISE

State-owned banks have grown in importance across the EBRD regions since the mid-2000s, expanding their assets almost twice as fast as private banks and accounting for a growing percentage of bank branches. Today, state banks own more than half of all banking assets in a number of emerging market economies (including Belarus, China, India, Russia and Ukraine).

Private-sector banks are increasingly regarding state-owned banks as major competitors, particularly because state banks tend to have less stringent lending requirements, operate with a lower interest margin (the difference between the rates that are charged on loans and paid to depositors) and tolerate higher levels of non-performing loans. Indeed, state banks' average annual return on assets in the period 2010-19 was 1.1 percentage points lower than that of similar private banks, while their average non-performing loan ratio was 1.6 percentage points higher than that of private-sector counterparts.

State banks' greater appetite for risk can soften the impact that economic shocks have on households, small businesses and specific regions, playing a particularly important role when it comes to serving small young firms that lack collateral and/or a sufficient credit history.

While state banks can exert a stabilising influence on economic performance and support financial inclusion, this comes at a cost, with firms that choose to borrow from state-owned banks demonstrating less innovation and weaker productivity growth. This partly reflects the fact that state-owned banks may be more susceptible to political interference in lending decisions (which can result in misallocation of resources, with finance being channelled away from more productive firms towards more connected ones, thereby reducing aggregate growth). Indeed, a 5 percentage point increase in state banks' share of branches in a particular region is associated with a 10.5 per cent decline in that region's aggregate productivity.

Explicitly defining the non-commercial objectives of state banks' lending and improving their corporate governance can help to minimise the economic costs that are associated with state banks' relative inefficiency and political interference in their day-to-day decisions.

https://2020.tr-ebrd.com/state-banks-on-the-rise

THE STATE AND THE GREEN ECONOMY

Economies in the EBRD regions have made significant progress in reducing greenhouse gas emissions relative to the levels seen in the 1990s. However, the emission targets set by those economies under the Paris Agreement are not yet sufficiently ambitious, given the reductions that are needed to keep global temperature rises well below 2°C relative to pre-industrial levels.

All countries have adopted green laws and policies that can help reduce CO_2 emissions relative to output. However, the enforcement of such measures is key, and that is where the EBRD regions are lagging behind. Green policies and laws in those regions have reduced CO_2 emissions by 12 per cent over the period 1997-2016 relative to the levels that would otherwise have been seen. That is encouraging, but much more is needed to accelerate the shift to a green economy.

In the short term, countries must build the transition to a green economy into their post-Covid-19 recovery plans. Happily, many of the government investment projects that are necessary for that transition are also effective ways of boosting the economy. Such measures must prioritise industries and firms that have a zero-carbon future, without propping up zombie firms that will struggle in the green economy.

In the medium term, the state must address the market and policy failures that are impeding the transition to a green economy. The key here is to get prices right, which means removing fossil fuel subsidies, putting a higher price on carbon and applying that higher price to more emission sources. Additional incentives, subsidies and regulation are also needed to encourage resource efficiency, leverage the network effects of green investment and ensure access to capital for firms with green investment plans.

In the longer term, the state must facilitate the "creative destruction" that this transition process will unleash, while supporting workers and communities that are adversely affected. Environmental policies must be integrated into a broader industrial strategy fostering clean growth, in order to encourage private-sector investment in the green economy.

https://2020.tr-ebrd.com/the-state-and-the-green-economy

5 STRUCTURAL REFORM

This section of the report presents updated transition scores for individual economies, assessing developments over the last year, as well as changes over the period 2016-20. It focuses on six key qualities of a sustainable market economy, looking at whether economies are competitive, well-governed, green, inclusive, resilient and integrated.

Successfully implementing structural reforms is more difficult during economic downturns, when policymakers' focus shifts from addressing longer-term issues to tackling immediate challenges. At the same time, however, the economic and social fallout from the Covid-19 pandemic has emphasised the need for further structural reforms across the EBRD regions to ensure that economies recover quickly and become more resilient to external shocks.

Governments across the EBRD regions have implemented a wide range of measures in response to the pandemic. Those actions, which have been unprecedented in terms of their scope and the speed of their implementation, have ranged from the provision of liquidity to the banking system and moratoriums on loan repayment to various tax breaks for businesses and cash transfers to households.

Many countries have continued to carry out structural reforms over the last year, with reform measures including the strengthening of governance frameworks for state-owned enterprises, anti-corruption measures, the digitisation of government services, the expansion of technical and vocational education and training programmes, and the enhancement of frameworks governing public-private partnerships. Many of those reforms were initiated before the pandemic, but in most cases their implementation has continued despite the challenging environment. However, some reforms have been delayed, with Kazakhstan, Romania and Ukraine, for instance, all postponing the privatisation of major assets.

Over the last year, increases in transition scores have been observed primarily in eastern Europe and the Caucasus, south-eastern Europe and Central Asia. At the same time, declines have tended to be moderate, have been concentrated in scores for green transition and governance, and have been seen primarily in central Europe and the Baltic states and south-eastern Europe.

https://2020.tr-ebrd.com/reform

FOREWORD

The end of communism in eastern Europe in the late 1980s and the subsequent collapse of the Soviet Union seemed to be the ultimate justification for reducing the state's role in the economy. In the decade and a half that followed, privatisation, deregulation and measures aimed at freeing enterprises and banks from state interference were the order of the day.

Since then, however, three countervailing forces have triggered calls for a stronger economic role for the state. First, it has become evident, particularly in light of the global financial crisis of 2008-09 and the economic recession that followed in its wake, that financial markets will not always produce socially optimal outcomes when left to their own devices. Second, the climate change crisis has made it clear that government intervention is required at national and international level to prevent coordination failures, boost green innovation and address market failures. And third, growing economic inequality (documented in the *Transition Report 2016-17*) and the shifting of economic risks onto the very individuals who are least able to shoulder them have further increased calls for greater state intervention in the economy.

New survey data in this *Transition Report* show that 45 per cent of people living in postcommunist economies where the EBRD invests are now in favour of expanding government ownership of business and industry. What is more, the ongoing Covid-19 crisis has accelerated that trend, highlighting citizens' growing expectations regarding the state's ability to contain the health and economic risks that individuals face.

The title of this year's *Transition Report* – "The State Strikes Back" – reflects both the trend towards growing acceptance of state involvement and the increased expectations that are now being placed on the state. That is to say, the title is a statement of fact, rather than a value judgement. For libertarian free marketeers, "The Empire Strikes Back" might have been a more suitable title, while for those on the left, the renewed strength of the state may be more akin to "The Return of the Jedi". This report does not engage in such ideological "star wars", instead using data to signal emerging trends, explain their core drivers and identify policy implications.

The report begins with an in-depth analysis of the size and capabilities of the state across the EBRD regions, followed by chapters looking more closely at the role that state-owned enterprises and state banks play in the modern economy. A separate chapter then looks at the role of the state in the transition to a green economy.

This report shows, perhaps surprisingly, that state-owned enterprises continue to account for around half of all public-sector employment in the EBRD regions. State-owned firms tend to be concentrated in the energy, utilities and transport sectors, often providing subsidised services to people living in remote areas and low-income households. Moreover, in many economies state-owned enterprises continue to act as automatic stabilisers, providing a relatively stable source of employment during economic downturns. Indeed, a new household survey conducted by the EBRD and the ifo Institute in August 2020 reveals that employees of state firms were less likely to lose their job or see their income reduced in the early months of the Covid-19 crisis. At the same time, however, this report also highlights the fact that, precisely because state-owned enterprises target a variety of different objectives, governments often struggle to manage them effectively. To the extent that the Covid-19 pandemic will result in increased state ownership of enterprises, such governance issues will become even more salient.

The banking sector is perhaps the area where the state has struck back most clearly in recent years. State banks have become increasingly important in many economies in the EBRD regions, growing their assets almost twice as fast as private banks. This report discusses both positive and negative aspects of that development. On the one hand, state banks have sometimes displayed a greater appetite for risk, for instance by providing credit to young firms that have not yet established long credit histories and have been shunned by private-sector banks. On the other hand, however, state banks can also be susceptible to political interference in their lending decisions, resulting in less efficient allocation of funding and weaker economic growth.

One of my predecessors as EBRD Chief Economist, Lord Nicholas Stern, has described the failure to tackle climate change as the greatest market failure that the world has ever seen. The guiding hand of the state is desperately needed in that area. This report argues that, in the short term, countries' responses to the Covid-19 crisis should ideally seek to foster a transition to the green economy by providing state support for greener industries and firms, and by supporting labour-intensive projects with clear environmental benefits, such as the retrofitting of buildings and investment in public transport infrastructure. In the medium term, the focus will need to shift towards addressing the barriers which are currently impeding that transition process. And in the longer term, more creative destruction will be called for, while the green economy will need to be supported using incentives, targeted subsidies and regulation.

Overall, this *Transition Report* sets out a challenging agenda for emerging economies, both in the EBRD regions and beyond. Its implementation will depend crucially on the quality of institutions and public governance. If institutions are weak, there is a danger that the *grabbing* hand of the state will siphon off resources intended for people in need, give jobs to political allies and family members, and use state banks for political gain. Firms that cannot operate profitably in the new low-carbon economy may be kept alive as "zombie companies", and firms that are nationalised during the Covid-19 crisis may never be privatised. If governance is improved, however, the *caring* hand of the state can guide economies through the transition to a green economy, providing essential support in a transparent manner and adopting forward-looking policies. The governance of state enterprises and banks can be significantly enhanced by clearly defining the objectives of state ownership, clarifying the managerial responsibilities of government entities, separating those entities' managerial and regulatory functions, making the boards of such firms and banks more autonomous, and reducing political interference in operational decisions.

The economies of the EBRD regions stand at a crossroads, with decisions on policies and institutions that are taken now potentially determining their paths for decades to come. The current period of crisis and upheaval triggered by the global pandemic represents a valuable opportunity to lay the foundations for a wealthier, fairer and greener future. Let us hope that those economies do not allow this opportunity to pass them by.

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Chief Economist
EBRD

1 HOW BIG IS THE STATE?

Covid-19 has highlighted citizens' growing expectations regarding the role of the state and increased demand for the socialisation of risks. The state's ability to meet those expectations will depend on its fiscal space and administrative capacity and may manifest itself in increased government spending and/or higher state employment. Government spending and state employment have varied over time and across countries, reflecting citizens' preferences. In post-communist economies, the state's

share of employment declined from around 45 per cent in the mid-1990s to 24 per cent in the mid-2010s, but remains around 7 percentage points higher than in comparator economies. The government spending of post-communist economies, meanwhile, is consistent with their peers at around 35 per cent of GDP. Women, older people, highly educated individuals and people who are less tolerant of risks are all more likely to work for the state.

Introduction

When the EBRD published its first *Transition Report* back in 1994, the prevailing consensus was that lower levels of state ownership helped to create more dynamic and prosperous economies. This belief, sometimes referred to as the "Washington Consensus", was supported by the positive impact that liberalisation and the privatisation of large state companies had had in Europe in the 1980s, as well as the fact that central planning had such a poor economic track record.

Today, there is a sense that the state is striking back. And that was true even before the arrival of Covid-19. In advanced economies, more firms were nationalised than privatised in the early years of the 21st century, while economies where state ownership is widespread, such as China and Singapore, have experienced exceptional rates of economic growth.[1] Household surveys reveal significant and rising support for the expansion of state ownership, perhaps as a reflection of rising inequality and the scars of the global financial crisis of 2008-09.

Against that background, this chapter looks at a novel dataset measuring the size of public-sector employment across economies and over time and tracks the size of the state, both on the demand side of the economy (where the state pays for certain goods and services and redistributes income) and on the supply side (where the state provides certain services directly and employs workers in government agencies or state-owned enterprises). This chapter also builds on household surveys such as the Life in Transition Survey (LiTS) and the World Values Survey, as well as various country-level economic and social indicators.

Summary of the key findings of this chapter

This chapter starts by looking at the growth that has been seen in the state's role in the economy over the longer term. On the demand side of the economy, that growth has taken the form of increased government spending on goods and services and income redistribution. On the supply side, meanwhile, the state has become an increasingly important employer and provider of goods and services. At the same time, patterns in terms of the expansion of the state in response to major crises have differed both over time and across economies.

In a well-functioning market economy, the size of the state may vary in response to citizens' preferences. Since the middle of the 19th century, government spending has risen as a share of gross domestic product (GDP), reflecting the increasing importance of education, rising life expectancy, the growing cost of providing education and healthcare, and demand for stronger social safety nets and redistribution on account of technological change.

State employment has also grown over the longer term, peaking in the 1980s. It has since declined somewhat in advanced economies and emerging markets alike on account of privatisation and automation, despite government spending continuing to rise or remaining high. In post-communist economies, the public sector's share of employment declined from around 45 per cent in the mid 1990s to 24 per cent in the mid-2010s. However, state employment in those economies remains around 7 percentage points higher than the levels seen in similar economies with no legacy of central planning. Their government spending, meanwhile, is in line with that of their peers at around 35 per cent of GDP. The state's footprint tends to be larger in older societies, reflecting higher levels of public healthcare, long-term care and state pensions. Public spending also tends to be higher in economies with higher-quality economic institutions.

Even as the public sector's share of employment has declined in recent decades, public support for state ownership has grown. Surveys in post-communist economies suggest that 45 per cent of people favour an increase in public ownership, with views on public ownership tending to be more favourable among individuals with lower levels of education and income. Analysis also shows that women, older people, highly educated individuals and people who are less willing or able to take risks are all more likely to work in the public sector.

As the size of the state increases, it becomes ever more important to ensure that the state represents the broader interests of all citizens. At the same time, many groups (notably the young) appear to be becoming increasingly disillusioned with the way that democracy works, while at the same time being absent at the ballot box – a vicious circle that needs to be broken.

This chapter then looks at the role of the state in the context of the response to the Covid-19 crisis. The response to Covid-19 has been different from the pandemic responses seen in 1918 and 1957, highlighting high levels of demand for the socialisation of the risks faced by individuals (from health

[1] See Megginson (2017).

IN POST-COMMUNIST ECONOMIES, THE PUBLIC SECTOR'S SHARE OF EMPLOYMENT DECLINED FROM AROUND
45%
IN THE MID-1990s TO
24%
IN THE MID-2010s

risks to the risk of becoming unemployed), even if that entails a significant fiscal cost. It has also revealed citizens' growing expectations with regard to the services that the state should provide. That increased demand for the socialisation of risks can, in part, be seen as a response to the fact that economic risks have increasingly been shifted onto those least able to tolerate them – particularly individuals with lower levels of education and income.

The ability of the state to deliver on citizens' expectations, both in response to Covid-19 and in the longer term, will depend on its fiscal space and administrative capacity. Most governments have seen increases in their fiscal space on account of higher revenues and lower interest rates, while administrative capacity varies considerably across countries.

Will public ownership increase? The answer to that will depend on people's preferences (with support for public ownership likely to rise further on the back of Covid-19), the objectives of state ownership and whether the private sector could potentially achieve those objectives more efficiently. This discussion is then picked up in subsequent chapters, which look at state-owned enterprises, state-owned banks and the use of industrial policy to foster a green economy.

THE PUBLIC SECTOR'S SHARE OF EMPLOYMENT IN POST-COMMUNIST ECONOMIES REMAINS AROUND
7
PERCENTAGE POINTS
HIGHER THAN IN OTHER COUNTRIES WITH SIMILAR ECONOMIES

Government spending: a long-term view

The state footprint: demand side versus supply side

In a well-functioning market economy, the size of the state may vary, reflecting the preferences of its citizens. The state plays an important role in the provision of certain goods and services (such as defence or, in many economies, healthcare), as well as adopting regulations underpinning economic activity in the private sector, such as the protection of property rights. In contrast, the private sector tends to have an advantage when it comes to boosting the efficiency of production and innovating.[2] In part, this is because public-sector firms often have soft budget constraints, driven by the state's willingness to provide additional assistance as a shareholder in times of difficulty.[3] In addition, when institutions are weak, the public sector can suffer from high levels of corruption, as well as a high degree of tolerance for underperforming firms.[4]

A larger state footprint in the economy may manifest itself on the demand side, on the supply side, or both. When governments decide to pay new benefits (such as wage subsidies during the Covid-19 crisis), finance the construction of a new bridge or increase payments to defence contractors, they act on the demand side of the economy – to the extent that the goods and services that are purchased using the transferred funds are supplied predominantly by the private sector.

The state may also become an increasingly important direct provider of services and employment – for instance, in education, healthcare, finance or transport, or as a result of state bailouts and partial nationalisations in other sectors (see, for example, Box 1.1 on flag carriers in the airline industry).

Historically, patterns in terms of state expansion have differed across economies. In the United States of America, for example, the state significantly increased spending on healthcare and education in the aftermath of the Second World War, but the private sector remained the primary provider of those services. In Europe, on the other hand, education and healthcare are largely provided by the public sector.

This reflects differing preferences as regards the public or private provision of services such as healthcare and education. Preferences in respect of the magnitude of defence spending or international aid or the desired degree of income redistribution also vary from country to country. Meanwhile, population ageing may lead to an increase in the size of the public sector where the state has primary responsibility for healthcare, pensions, mid-career retraining and other aspects of countries' social safety nets.[5] In addition, the public sector tends to be a more stable source of employment (as discussed in Chapter 2), and preferences regarding the trade-off between stability of employment and income may vary over time, affecting the preferred size of the state.

[2] See Shleifer (1998).
[3] See Kornai (1979).
[4] See Guriev (2017).
[5] See the discussion in EBRD (2018).

Furthermore, the boundaries between the state and the private sector can sometimes become blurred, reflecting mixed ownership of enterprises and active use of industrial policy tools (as discussed later in this chapter, as well as in Chapter 4). The following sections examine changes in the size of the state over time, starting with the demand side of the economy and moving on to state employment.

Government spending has been increasing

Government spending has been on an upward trend in most economies, both over the longer term (see Chart 1.1) and more recently. In the second half of the 19th century, the Swedish, UK and US governments spent, on average, between 6 and 10 per cent of their GDP per year. The ratio of government spending to GDP then rose gradually in the course of the 20th century, averaging more than 40 per cent by the early 1990s. More recently, government spending has been broadly stable in advanced economies and the EBRD regions, whereas it has been rising (while remaining lower overall) in other emerging markets and low-income economies (see Chart 1.2).

In the United Kingdom and the United States of America, both the First and Second World Wars led to major increases in public spending that were only partially reversed subsequently. In Sweden, meanwhile, the welfare state gradually expanded in the 1970s and 1980s, and a major increase in public spending followed the banking and economic crisis of the early 1990s.

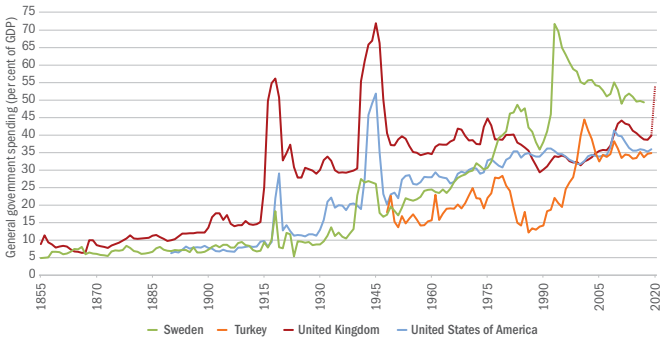
To some extent, that secular increase in public spending reflects the rising importance of the accumulation of skills – and thus education. Increases in life expectancy have also led to higher levels of spending on healthcare and pensions. Moreover, healthcare spending is likely to rise further following the outbreak of Covid-19. At the same time, services such as education and healthcare have become relatively more expensive, owing to the fact that productivity tends to rise more slowly in the "non tradeable" service sectors than it does in tradeable sectors (such as manufacturing and agriculture), while wages are largely determined by productivity in goods that are traded across borders (manufacturing). In fact, in non-tradeable sectors, differences between advanced economies and low-income economies in terms of productivity levels tend to be small relative to the corresponding differences in manufacturing, mining or agriculture.[6] Thus, as manufactured goods have become cheaper, services typically provided by governments (such as education and healthcare) have become relatively more expensive.

In addition, the range of market failures and externalities that government policies seek to address has become wider. Last year's *Transition Report*, for instance, found that in the absence of active government policies, managers of firms were unlikely to pay attention to green issues.[7]

With modern technology polarising employment (as evidenced by the rising numbers of high-skilled and low-skilled jobs) and medium-skilled jobs being particularly vulnerable to automation, the need for income redistribution and stronger social safety nets has risen.[8] Meanwhile, those same types of technology require

CHART 1.1.

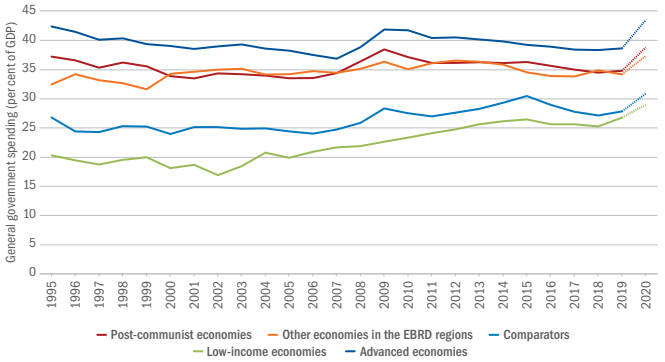
There has been a secular increase in government spending since the middle of the 19th century



Source: National authorities and authors' calculations.
Note: See Box 1.2 for details of data sources. The 2020 forecast for UK government spending is as of July 2020.

CHART 1.2.

Government spending as a share of GDP has been increasing in emerging markets and low-income economies



Source: National authorities, International Monetary Fund (IMF) and authors' calculations.
Note: These data represent unweighted averages. The 2020 forecasts for government spending are based on the IMF's April 2020 *World Economic Outlook*. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

IN THE SECOND HALF OF THE 19TH CENTURY, THE SWEDISH, UK AND US GOVERNMENTS SPENT, ON AVERAGE,

6-10%

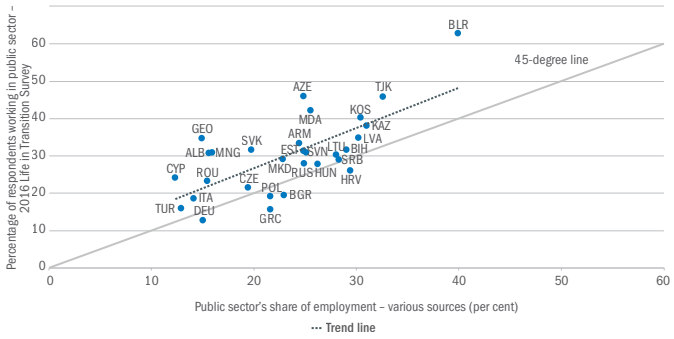
OF GDP

PER YEAR

[6] See, for instance, Herrendorf and Valentinyi (2012).
[7] See EBRD (2019) and Chapter 4 of this report.
[8] See EBRD (2018).

CHART 1.3.

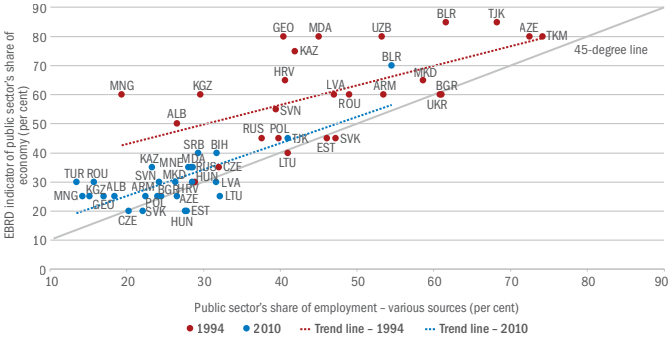
Official estimates of state employment are closely aligned with those derived from the Life in Transition Survey



Source: National authorities, ILO, Life in Transition Survey, other representative household surveys and authors' calculations.
Note: Data relate to 2016 or the closest available year.

CHART 1.4.

There is a close relationship between official estimates of state employment and the EBRD indicator of the public sector's share of the economy



Source: National authorities, ILO, EBRD, representative household surveys and authors' calculations.
Note: Employment data relate to the year shown or the closest available year.

more complex regulations in order to underpin modern markets, with governments footing the bill for creating and enforcing such regulations.

The next section looks at the other side of the coin, examining the state's role in the production of added value on the supply side of the economy.

The state as an employer

A novel dataset on public-sector jobs

State-owned agencies and enterprises are important providers of jobs in many economies, both in areas such as public administration, education or healthcare and at state-owned enterprises and banks. While data on government spending are widely available and have been analysed extensively,[9] systematic data on state employment across economies are relatively scarce. The analysis in this chapter builds on a newly assembled dataset described in Box 1.2.

Data on state employment have been obtained from national authorities, the International Labour Organization (ILO), labour force surveys, reports published by the IMF and the World Bank, and various other sources. Inevitably, however, sources and definitions vary. Efforts have been made to account for employment in small enterprises and rural employment in economies such as China and Russia. As a result, estimates of the public sector's share of employment in Russia (around a quarter of total employment) are lower than alternative estimates derived from official data on employment in large and medium sized enterprises and entities.[10]

Reassuringly, those data are fairly closely aligned with estimates derived from the three rounds of the Life in Transition Survey, a representative household survey that was conducted by the EBRD and the World Bank in 37 economies in 2006, 2010 and 2016 (see Chart 1.3). In each economy, at least 1,000 individuals were randomly selected to participate in the survey. Among other things, survey respondents indicated whether they were employed by the private sector, worked for a state-owned enterprise, had some other kind of government-paid job (in education, healthcare or public administration, for instance) or were not in employment.[11] In the case of Russia, for example, the Life in Transition Survey suggests that the public sector accounts for 28 per cent of total employment.

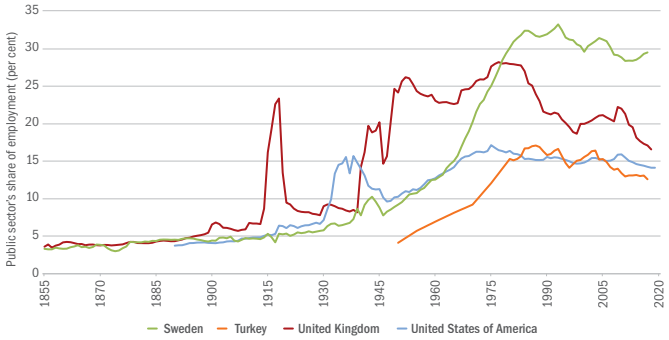
State employment and the EBRD's indicator of public-sector output

The data are also reasonably closely aligned with a rough EBRD estimate of the percentage of value added that is produced by the state (see Chart 1.4).[12] As centrally planned economies were dominated by state ownership, that EBRD indicator, which was published from 1994 to 2010 and was based on expert judgement, is regarded as a useful measure tracking the transition from central planning to market economics.[13] When the EBRD stopped publishing those estimates in 2010, the relationship between that indicator and the official estimates of state employment was a fairly close one.

[9] See, for instance, Barro (1991).
[10] See World Bank (2019).
[11] A small number of respondents employed by banks have been excluded from these calculations on the basis that it is unclear whether their employers are privately or publicly owned.
[12] See EBRD (1994).
[13] See Brada (1996).

CHART 1.5.

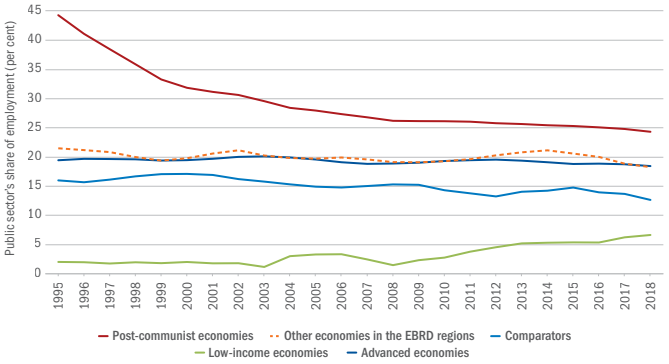
The public sector's share of employment peaked in the early 1980s



Source: National authorities and authors' calculations.
Note: See Box 1.2 for details of data sources.

CHART 1.6.

State employment has declined in the EBRD regions



Source: National authorities, ILO, EBRD, representative household surveys and authors' calculations.
Note: These data represent unweighted three-year moving averages. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

Rising state employment over the longer term

State employment has risen overall over the longer term, much like public spending (see Chart 1.5). This reflects growth in education, healthcare services and regulation, as well as the increasing presence of state-owned enterprises in infrastructure sectors such as energy, transport and telecommunications (with more than four-fifths of the world's infrastructure projects in the transport, energy, water supply and telecommunication sectors being run by state-owned entities or enterprises).[14]

In the second half of the 19th century, the state employed around 4 per cent of people in Sweden, the United Kingdom and the United States of America. Those shares peaked at an average of around 25 per cent in the early 1980s, before privatisation reduced the public sector's share of employment somewhat. Similar trends were observed in many other advanced economies.

State employment has tended to rise somewhat after major upheavals (notably the First and Second World Wars) and major recessions, partially reflecting state bailouts of private companies and banks, as well as lay-offs in the private sector. The 2008-09 financial crisis was no exception in that regard. Most of those increases have since been partially reversed.

Declining state employment in the EBRD regions

In post-communist economies in the EBRD regions, the public sector's share of employment declined from around 45 per cent in the mid-1990s to 24 per cent in the mid-2010s. This trend reflects both privatisation and the growth of entrepreneurship, particularly in the services sector (see Chart 1.6). Similarly, the public sector's share of employment has also been declining in advanced economies and other emerging markets recently. However, in many low-income economies, state employment has been expanding in the wake of the 2008-09 global financial crisis, albeit from a low base.

PUBLIC-SECTOR EMPLOYMENT IN THE UNITED STATES OF AMERICA, THE UNITED KINGDOM AND SWEDEN PEAKED AT AN AVERAGE OF

25%

IN THE EARLY 1980s

In relative terms, state employment remains higher in the EBRD regions than it is in other emerging markets. (Analysis later in this chapter looks at the extent to which this could be explained by various country-level characteristics.) Indeed, the decline in the public sector's share of employment weakened in the EBRD regions in the mid-2010s. What is more, in around a third of all economies in the EBRD regions, the public sector's share of employment was actually higher in 2018 (the latest available reading) than it had been three years earlier, with notable increases being observed in countries such as Armenia, Georgia, Kazakhstan and Mongolia.

[14] See World Bank (2017).

The state as an increasingly important owner of assets

Notwithstanding the public sector's declining share of employment, the state has become an increasingly important owner of assets. Increasingly, state-owned firms feature among the world's largest listed companies, and nationalisations have outnumbered privatisations since the early 2000s.[15] The rise of state ownership among large firms is partly a reflection of the rapid economic development of countries such as China and Singapore, where the state plays a prominent role in the economic model.[16]

In part, this is also a product of the growing economic heft of sovereign wealth funds – particularly in commodity-rich economies, where such funds provide a cushion against the volatility of commodity prices and save wealth for future generations.[17] Related to that is the fact that commodity prices have risen strongly since the late 1990s, leading to much higher valuations for national oil companies and other state-owned commodity exporters (see Chapter 2). At the same time, many large state owned firms operate in capital-intensive sectors that are also exposed to rapid automation.[18] As a result, the fact that state-owned multinationals are increasingly featuring among the world's largest firms is not inconsistent with the public sector's share of employment remaining stable or declining.

Economies vary in terms of government spending and public employment

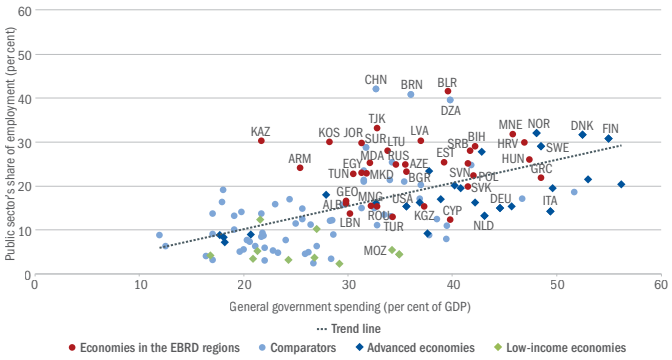
While economies with higher government spending tend to also have higher levels of state employment, this relationship is not perfect (see Chart 1.7). The relationship between the public sector's share of employment and state-owned banks' share of total bank assets is weaker still (see Chart 1.8).

In other words, decisions about the degree of redistribution in the economy and the magnitude of public spending on social services such as education and healthcare are, to a significant extent, independent of decisions about the state's role in actually supplying goods and services (which is discussed in Chapter 2). Moreover, both of them are, in turn, largely independent of decisions about the state's role in allocating finance in the economy (which is discussed in Chapter 3).

In Finland, Norway and other Nordic economies, both government spending and state employment are relatively high. However, in other advanced economies in Europe, including Italy, Germany and the Netherlands, the state plays a major role as a source of demand and a mechanism for redistributing income, but a more limited role on the supply side of the economy. A similar pattern can be observed in some low-income economies, including Mozambique and Liberia, where high levels of government spending have been facilitated by large-scale external borrowing and inflows of aid.

CHART 1.7.

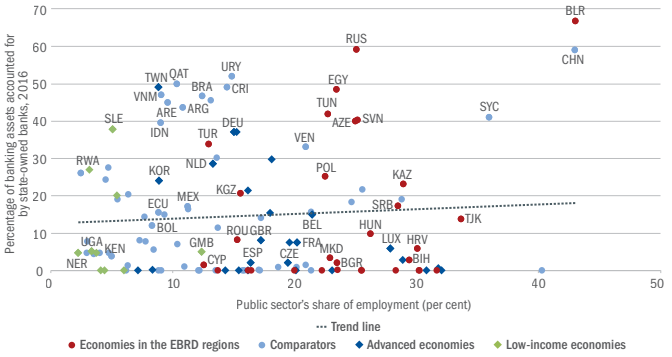
The relationship between government spending and the public sector's share of employment is far from strong



Source: IMF, ILO, national authorities, representative household surveys and authors' calculations.
Note: The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

CHART 1.8.

There is a weak relationship between the state's role in bank finance and its role in the real economy



Source: World Bank, IMF, ILO, national authorities, representative household surveys and authors' calculations.
Note: The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

[15] See Megginson (2017), and Aminadav and Papaioannou (2020).
[16] See Ramírez and Tan (2004) for a discussion of the case of Singapore.
[17] See Megginson and Fotak (2015).
[18] See EBRD (2018) for a discussion of job polarisation.

In contrast, there are other economies (such as Armenia, Brunei, China, Kazakhstan and Suriname) where the state plays a major role on the supply side, but the ratio of government spending to GDP is relatively modest in comparison. In post-communist economies, the public sector's share of employment generally tends to be relatively large, while government spending tends to be broadly in line with that of their peers, something that is corroborated by regression analysis taking account of countries' income per capita and other characteristics. To some extent, the combination of high state employment and relatively modest government spending may reflect the limitations of the data collection exercise. While employment by state-owned enterprises is included in total public employment, their spending on goods and services (procurement) can be sizeable, but is not included in the indicator of the state's role on the demand side of the economy owing to the limited data available.[19]

Lastly, in much of Latin America and sub-Saharan Africa the role of the state is limited on both the supply side and the demand side.

The state expands as populations age

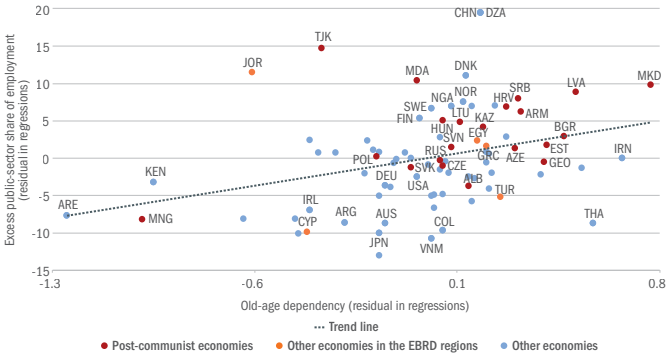
This section asks whether the higher levels of government spending in post-communist economies relative to other emerging markets (see Chart 1.2) and their higher levels of state employment (see Chart 1.6) can be explained by differences in demographics, the nature of their economic institutions or other characteristics of those economies. This analysis uncovers country-level characteristics that are systematically associated with higher levels of state employment and government spending in a sample of 117 economies over the period 1995-2018.

The state tends to be larger, in terms of both public spending and state employment, in ageing economies (those where the ratio of people aged 65 and over to people aged 15 to 64 is higher). In older societies, the provision of public services such as healthcare, disability care and long-term care tends to be more labour-intensive and more expensive (see Chart 1.9). Doubling the old-age dependency ratio (going, for example, from the level seen in Moldova to that observed in Bulgaria) is associated with a 5 percentage point increase in the public sector's share of employment. This holds when other characteristics of the economy (such as income per capita) are taken into account.

The relationship between the size of the state and ageing can also be explored within countries over time. This analysis explains the average level of government spending or state employment over a four-year period using the country's average values for the preceding period (given a high degree of persistence in state employment and government expenditure), as well as various country-level characteristics. In this dynamic panel setting, income per capita, economic and political institutions, openness to trade and the ratio of natural resource rents to output can all be instrumented using their values in previous periods using a version of the Arellano-Bond generalised method of moments (GMM) estimator.[20] This helps to account for the possibility that government spending or state employment could itself affect income per capita or the quality of economic institutions.

CHART 1.9.

Ageing economies employ more workers in the public sector



Source: National authorities and authors' calculations.
Note: These data are based on analysis of 117 economies in 2017. The measure of ageing is the residual derived from regressing the logarithm of the old-age dependency ratio on a large number of country-level characteristics. The measure of the excess public-sector share of employment is the residual derived from regressing the public sector's share of employment on those same variables.

IF THE OLD-AGE DEPENDENCY RATIO DOUBLES, THE PUBLIC SECTOR'S SHARE OF EMPLOYMENT IS ESTIMATED TO INCREASE BY

5 PERCENTAGE POINTS

The results of this analysis suggest that the public sector's share of employment does indeed tend to rise as the population ages (see Table 1.1). Moreover, it also tends to rise as population growth accelerates, since that drives up demand for education. That second correlation may also reflect the difficulty of creating jobs in the private sector in economies where the labour force expands rapidly.

Government spending rises when economic institutions are stronger, but state employment does not

Another finding that emerges from both cross-sectional and time series analysis is the strongly positive correlation between government spending and the quality of economic institutions (measured as the average of the Worldwide Governance Indicators for control of corruption, the rule of law, regulatory quality and government effectiveness).[21] This relationship holds when taking into account the level of income per capita, human capital, the quality of democratic institutions and other

[19] See OECD (2015).
[20] See Arellano and Bond (1991).
[21] See Kaufmann et al. (2009) for a discussion of Worldwide Governance Indicators.

TABLE 1.1.

Determinants of the size of the state

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	State employment (% of total)			Government expenditure (% of GDP)		
Estimation method	Between-effects	GMM	GMM	Between-effects	GMM	GMM
Dependent variable, lag		0.661***	0.647***		0.786***	0.719***
		(0.125)	(0.116)		(0.126)	(0.120)
Old-age dependency	5.312**	6.575**	6.138**	6.086**	-1.879	1.545
(log)	(2.330)	(2.915)	(2.990)	(2.395)	(4.572)	(4.541)
Economic institutions	0.816	4.888	3.505	3.937**	20.43*	17.98**
(Worldwide Governance Indicators)	(1.677)	(6.451)	(3.520)	(1.724)	(12.21)	(8.195)
GDP per capita	4.508**	-2.207	-0.807	1.938	-10.64*	-11.96**
(log, 2011 US$)	(1.747)	(2.549)	(2.016)	(1.796)	(5.884)	(5.458)
Democratic institutions	-0.628***		-0.279	-0.415*		0.432
(Polity 2)	(0.203)		(0.377)	(0.209)		(0.644)
Trade openness	2.298		2.321	2.591		0.346
(ratio of exports plus imports to GDP, log)	(2.165)		(2.189)	(2.225)		(4.950)
Natural resource rents	-0.180		-0.280	-0.477		-3.687**
(log)	(0.638)		(0.983)	(0.656)		(1.752)
Population density	-1.694**	13.50**	15.90**	-1.572**	0.611	0.848
(log)	(0.715)	(5.880)	(6.968)	(0.735)	(4.871)	(5.309)
Urban population	-0.0428	-0.147*	-0.159	0.0274	-0.217	-0.107
(% of total)	(0.0658)	(0.0840)	(0.106)	(0.0676)	(0.199)	(0.220)
Constant	-41.58**	148.4**	164.8**	7.059	128.7**	132.8***
	(16.37)	(69.15)	(73.00)	(16.82)	(53.21)	(47.21)
R^2	0.62			0.64		
Number of observations	1,185	219	219	1,185	391	391
Number of economies	117	83	83	117	144	144
Test for no second-order autocorrelation (p-value)		0.937	0.687		0.771	0.681

Source: National authorities, IMF, ILO, World Bank and authors' calculations.
Note: These data are based on between-effects regressions for 117 economies over the period 2004-18 and dynamic panel GMM estimations for 83 economies over the period 1995-2018, using four-year averages for all variables. The lagged dependent variable, economic institutions, democratic institutions, natural resource rents, openness to trade and income per capita are all treated as endogenous in GMM regressions. Regressions include interactions between post-communist and year dummies and additional control variables. Robust standard errors are reported in parentheses, and *, ** and *** denote values that are statistically significant at the 10, 5 and 1 per cent levels respectively.

characteristics that tend to be closely correlated with institutional development. It reflects the role that administrative capacity plays in enabling governments to raise revenue and deliver high quality services demanded by citizens, as discussed earlier in the chapter. In contrast, there is no evidence of a correlation between the quality of economic institutions and the public sector's share of employment.

More state employment in post-communist economies

Even taking into account their rapidly ageing populations and other characteristics, post-communist economies tend to have higher levels of state employment (as shown, for example, by the fact that their dots tend to lie above the trend line in Chart 1.9). Regression analysis indicates that their public-sector employment levels exceeded those of their peers by an average of 7 percentage points in the period 2014-18, down from 15 percentage points in the period 1995-2004.

In contrast, it appears that there are no longer any systematic differences between post-communist economies and their peers in terms of government spending. In the period 1995-2004, post-communist economies spent, on average, 9 percentage points of GDP more than their peers. Since then, government spending has risen in many emerging markets. Average government spending in post-communist economies (which stood at 35 per cent of GDP in 2019 and is projected to rise towards 40 per cent in 2020) is now in line with the levels seen in other economies once various relevant characteristics are taken into account – notably the rapid population ageing seen in many economies in emerging Europe.

Growing support for state ownership

Although the public sector's share of total employment has declined in recent decades, popular support for public ownership has been rising in advanced economies and emerging markets alike. This probably reflects growing inequality within countries and increased demand for the redistribution of income, whether via taxation or by means of state ownership.[22]

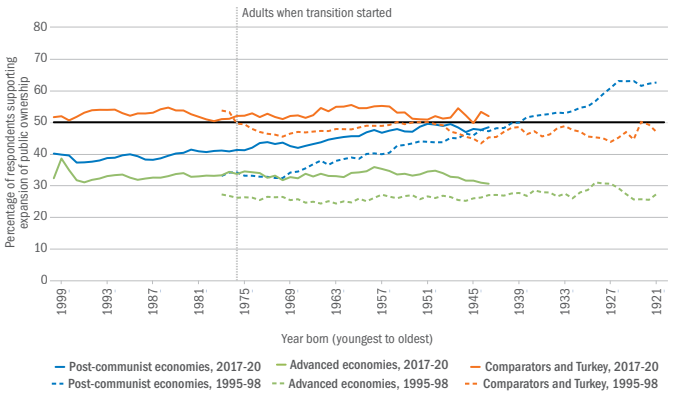
On average, 33 per cent of the respondents who were surveyed in advanced economies between 2017 and 2020 favoured the expansion of public ownership, up from 27 per cent two decades earlier. In post-communist economies, meanwhile, 45 per cent of respondents were in favour of increasing public ownership (see Chart 1.10; all quoted differences are statistically significant at the 1 per cent level). Support for public ownership in post-communist economies has been broadly stable over time – rising slightly, if anything (having stood at 43 per cent in the mid-1990s).

These findings are derived from the World Values Survey, various rounds of which have been conducted worldwide since 1995[23] (with the Life in Transition Surveys conducted in the EBRD regions and a number of comparator economies giving a similar result). In both surveys, respondents are asked to express their views on the ownership of business and industry on a scale of 1 ("completely agree with the statement that private ownership should be increased") to 10 ("completely agree with the statement that government ownership should be increased"). People who give a response of 5 or lower are deemed, on balance, to support private ownership, and those who give a response of 6 or higher are deemed to support public ownership.

Among individuals who reached adulthood after the start of the transition from central planning to market economics (that is to say, those born in the mid-1970s or later), support for state ownership does not depend strongly on the individual's age, a pattern similar to that observed in advanced economies and other emerging markets. Among older individuals, however, support for public ownership is stronger among those who were older at the time of market reforms, possibly reflecting the strong increase in inequality that was seen in the early years of the transition process. Given this pattern, support for public

CHART 1.10.

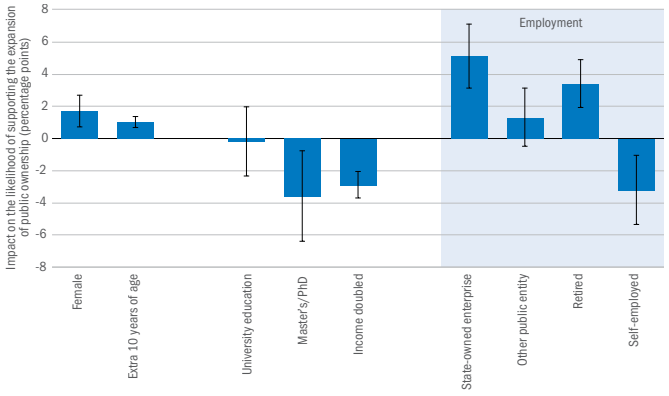
Support for state ownership has risen



Source: World Values Survey and authors' calculations.
Note: Five-year moving averages have been calculated for each year of birth. The figures shown represent the percentage of survey respondents who agreed (that is to say, gave a response of 6 or higher on a scale of 1 to 10) that there should be more state ownership. The data for both time periods are based on the same 45 economies, 20 of which are in the EBRD regions. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

CHART 1.11.

There is greater support for state ownership among the less educated and those working in the public sector



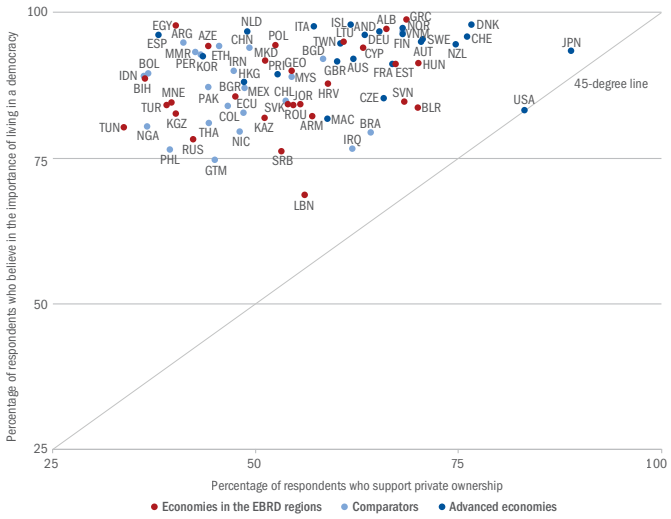
Source: Life in Transition Survey 2016 and authors' calculations. .
Note: These estimates are based on linear probability model regressions that control for country effects and various individual characteristics (such as the size of the household and the respondent's mother tongue). The 90 per cent confidence intervals shown are based on robust standard errors.

GOVERNMENT SPENDING IN POST-COMMUNIST ECONOMIES IS, AT AROUND 35% OF GDP, IN LINE WITH THAT OF COMPARATOR COUNTRIES

[22] See Stiglitz (2015) for a discussion of trends in inequality and politics.
[23] See Inglehart et al. (2014).

CHART 1.12.

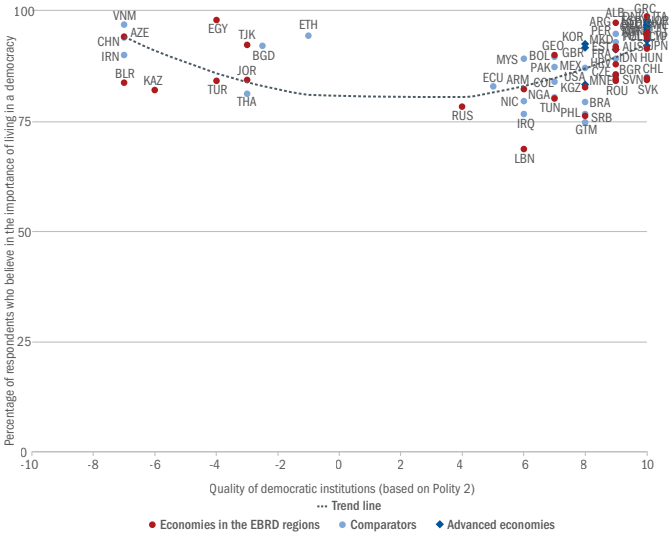
Support for democracy exceeds support for the expansion of private ownership



Source: World Values Survey and authors' calculations.
Note: These results are based on data for the period 2017-20 and show the percentage of respondents who agreed (that is to say, gave a response of 6 or higher on a scale of 1 to 10) that it is important to live in a democratically governed country and the percentage who agreed that there should be more private ownership. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

CHART 1.13.

Support for democracy is strong even where democratic institutions are relatively weak



Source: World Values Survey, Polity IV and authors' calculations.
Note: These results are based on data for the period 2017-20 and show the percentage of respondents who agreed (that is to say, gave a response of 6 or higher on a scale of 1 to 10) that it is important to live in a democratically governed country. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

ownership could be expected to decline over time as people born after the mid-1970s gradually account for a growing percentage of the population. At the same time, however, average support for state ownership among people born in a given year has risen by an average of 6 percentage points, resulting in a slight increase in overall support for the expansion of public ownership.

In comparator economies, support for public ownership as expressed in World Values Surveys increased from 48 per cent in the 1990s to 53 per cent in the late 2010s.

Greater support for state ownership among less educated individuals and public-sector employees

Regression analysis based on the 2016 round of the Life in Transition Survey indicates that support for the expansion of state ownership tends to be stronger among women and among people with lower incomes and fewer years of education (see Chart 1.11). This analysis takes account of respondents' countries of residence, as well as various individual characteristics (such as their mother tongues and their parents' backgrounds), as well as the size of their households. Data derived from the World Values Survey produce similar results.

People who are employed in the public sector or are otherwise reliant on the state for their income (including pensioners) are also more likely to be in favour of expanding state ownership. In contrast, the self-employed are far more likely to favour the expansion of private ownership.

Support for democracy exceeds support for private ownership

Where people support the expansion of the state, they want to have a say in how that larger state is run. As part of the World Values Survey, respondents are also asked whether they agree that democracy is good for their country on a scale of 1 ("strongly disagree") to 10 ("strongly agree").

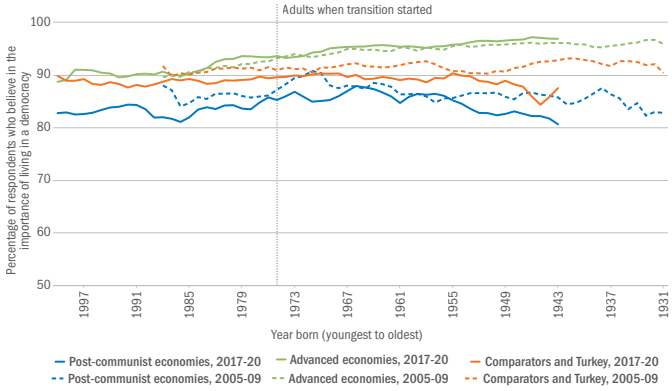
Average support for democracy (calculated as the percentage of people who give a response of 6 or higher) exceeds average support for the expansion of private ownership across all economies (with only the United States of America and Japan coming close to the 45-degree line in Chart 1.12). The same questions are asked in the Life in Transition Survey, with similar results.

Support for democracy is strong even where democratic institutions are relatively weak

Unlike support for the expansion of private ownership, support for democracy always exceeds 70 per cent of the population. Moreover, support for democratic institutions tends to be strong even in countries where existing political institutions are regarded as being relatively weak (for example, on the basis of the Polity 2 measure of democratic institutions; see Chart 1.13).

CHART 1.14.

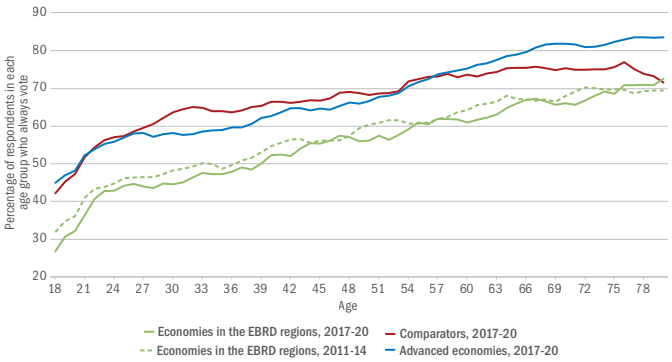
Among those who reached adulthood after the start of the transition process, support for democracy rises with age



Source: World Values Survey and authors' calculations.
Note: Five-year moving averages have been calculated for each year of birth. The figures shown represent the percentage of survey respondents who agreed (that is to say, gave a response of 6 or higher on a scale of 1 to 10) that democracy is good for their country. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

CHART 1.15.

Younger people are much less likely to vote



Source: World Values Survey and authors' calculations.
Note: Five-year moving averages have been calculated for each age cohort. The "comparators" are economies outside the EBRD regions that are not classified as advanced economies by the IMF and had GDP per capita in 2019 (at market exchange rates) which was in excess of that of Tajikistan.

As in the case of support for private ownership, support for democracy in post-communist economies exhibits a complex pattern based on age. Among those who reached adulthood after the start of the transition process, support for democracy rises with age, similar to the trends observed in advanced economies. In contrast, support for democracy declines with age among the older generation in post-communist economies (see Chart 1.14).

Who does the larger state represent?

Given the universally strong support for democracy, regardless of people's views about the merits of public or private ownership, it is important to ensure that the state, in playing an ever greater role in the economy, represents the broad interests of the entire population. Such broad representation is not necessarily a given. For instance, younger people (who have been affected particularly badly by the Covid-19 crisis) tend to vote less frequently (see Chart 1.15). They are also, on average, more disillusioned with the way in which democracy represents their views.

All countries have large gaps between the electoral participation rates of the young and the old (see Box 1.3). In the EBRD regions, this gap has widened further in recent years (see Chart 1.15). This makes it all the more important to break the vicious circle whereby young people and other groups do not participate in elections and feel that the state does not represent their interests. One option, as discussed in Box 1.3, is to reward younger voters financially for taking part in elections.

Who works for the state?

Women, more educated people and older individuals are all more likely to work in the public sector

Using the Life in Transition Survey, this section looks at whether people decide to work in the public or the private sector. Around one-third of survey respondents are employed in the public sector, and half of those work for a state-owned enterprise.

Overall, women, older people and those with university qualifications (particularly postgraduate qualifications such as a Master's degree or a PhD) are more likely to work in the

THE ASIAN FLU EPIDEMIC THAT CLAIMED AN ESTIMATED 2 MILLION LIVES IN 1957 (A SHARE OF THE WORLD'S POPULATION THAT WOULD BE EQUIVALENT TO 6 MILLION PEOPLE TODAY) MAY HAVE REDUCED THE GROWTH RATES OF MAJOR ECONOMIES BY AROUND

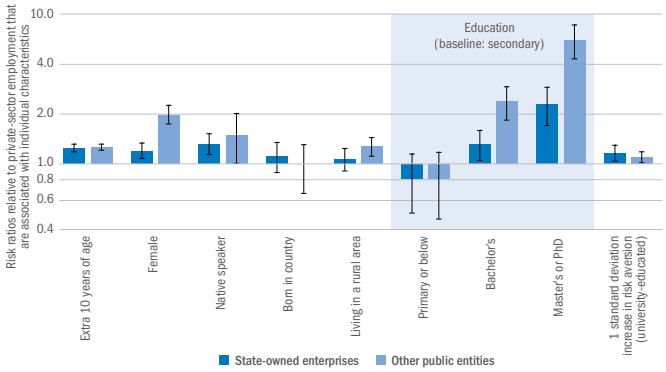
3

PERCENTAGE POINTS

IN THAT YEAR

CHART 1.16.

Women, older individuals, highly educated people, more risk-averse individuals and people living in rural areas are all more likely to work in the public sector



Source: Life in Transition Survey 2016 and authors' calculations.
Note: These estimates are based on multinomial logit regressions of the likelihood of being employed by a state-owned enterprise or another public entity in the EBRD regions with country fixed effects and country clustered standard errors. Risk ratios larger than 1 suggest that a unit increase in the explanatory variable increases the likelihood of being employed in the public sector relative to being employed in the private sector. 90 per cent confidence intervals are shown.

public sector (see Chart 1.16 and Box 1.4). This may, to some extent, reflect the nature of public-sector jobs, since teachers, medics and civil servants require more years of education than the occupants of many private-sector jobs (although holders of postgraduate qualifications are also twice as likely to work for a state-owned enterprise as they are for a private-sector firm).

More public-sector jobs in rural areas

In addition, people living in rural areas are also more likely to work in the public sector. This may reflect a lack of private-sector job opportunities in more remote areas. Parents' education, in contrast, has no significant impact on people's prospects of being employed by the state.

More risk-averse individuals favour public-sector jobs

The Life in Transition Survey also asks people to indicate their willingness to take risks on a scale of 1 (maximum risk aversion) to 10 (maximum tolerance of risk). Analysis shows that individuals who are less willing to take risks are significantly more likely to work in the public sector. This effect is driven by people with university qualifications. In that group, a 1 standard deviation decline in the willingness to take risks (three times the difference between the average attitudes to risk recorded in the Kyrgyz Republic and Croatia) is associated with a 6 percentage point increase in the likelihood of working in the public sector. Overall, these results are consistent with the notion that public sector employment tends to be regarded as being more stable.

Changing expectations as a result of the Covid-19 pandemic

The economics of pandemics past and present

In 1918, Spanish flu swept around the world, claiming the lives of an estimated 2 to 4 per cent of the world's population (more than the First World War, which ended in that year).[24] While some cities in the United States of America, where the pandemic originated, closed retail shops and restricted mass gatherings, others (including Philadelphia) went ahead with major public events such as the Liberty Loan Parade.[25]

More recently, the Asian flu epidemic that claimed an estimated 2 million lives in 1957 (a share of the world's population that would be equivalent to 6 million people today) may have reduced the growth rates of major economies by around 3 percentage points in that year.[26] In the United Kingdom, some factories and mines closed, but those closures were fairly limited.[27] On the basis of those events, pre-2020 studies looking at the likely economic impact of a future pandemic mostly restricted themselves to the impact on tourism and trade, concluding, for example, that "although a pandemic would take a huge toll in human suffering, it would most likely not be a severe threat to the European macroeconomy".[28] Pandemic scenarios with a death toll of close to 15 million were assumed to be compatible with positive economic growth in Europe and the United States of America.[29] Those studies did not factor in widespread social distancing.

When Covid-19 struck, the world had great expectations in terms of the state's ability to minimise the risks posed to individuals' lives, despite the economic costs. Hundreds of thousands of restaurants, retail shops, beauty salons and other businesses, small and large, were ordered to close. The resulting disruption to global economic activity in the medium term is projected to be the largest since the Great Depression and the Second World War.

The contrast with earlier pandemics underscores the extent to which views about the state's role in society have changed. That change has been observed in virtually every corner of the globe, regardless of the political and economic systems in place, and reflects increased demand for the socialisation of risks, even if that may entail weaker average growth.

A different view of the state: socialisation of risks

At the very heart of the private sector-led market economy lies the idea of entrepreneurship – individuals taking calculated risks. From China to Brazil, and from Norway to the United States of America, the Covid-19 crisis has highlighted people's increasing desire for the state to socialise the risks faced by individuals. To some extent, this trend is a response to the fact that uncertainty about future incomes has increasingly been pushed

[24] See Kilbourne (2006).
[25] See Correia et al. (2020).
[26] See McKibbin and Sidorenko (2006).
[27] See Jackson (2009).
[28] See Jonung and Roeger (2006); see also James and Sargent (2006).
[29] See McKibbin and Sidorenko (2006).

onto individuals in the gig economy through self employment, zero-hours contracts and the disappearance of defined benefit pensions.[30]

Indeed, younger individuals and low-income households are likely to be disproportionately affected by the Covid-19 crisis. Recent studies show that the self-employed and workers whose hours vary at their employers' discretion under zero-hours contracts are more likely to have been negatively affected by the downturn.[31] This is because poorer workers are likely to be concentrated in the occupations and sectors that have been most affected by closures (such as retail services) and are least likely to be able to work from home. A recent study estimates that only around a third of US jobs can be performed from home and that those jobs pay an average of around 55 per cent more than others.[32] Thus, the Covid-19 pandemic risks further exacerbating inequality.

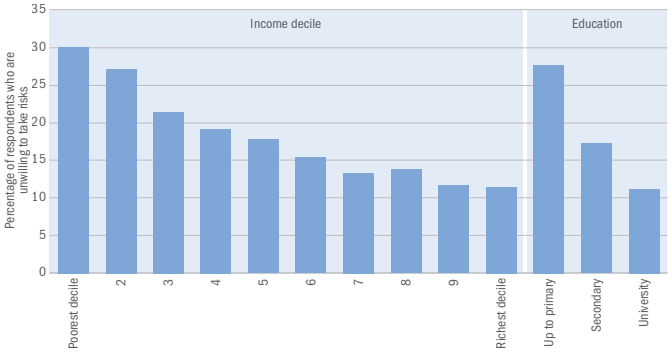
Even before the Covid-19 crisis, economic risks had already been pushed onto the very people who tend to dislike them most – those with lower levels of education and income. That trend comes across strongly in the results of the third round of the Life in Transition Survey, where respondents indicated their willingness to take risks on a scale of 1 (maximum risk aversion) to 10 (maximum tolerance of risk).

The results of that survey indicate that individuals on lower incomes and those with fewer years of education are significantly less willing or able to tolerate risks (see Chart 1.17). That may reflect low levels of savings among individuals on lower incomes or a multitude of other factors (since higher incomes may, for example, come as a result of risky choices in the past). The differences in risk aversion across income deciles and by level of education are even more pronounced in the EBRD regions than they are in the advanced economies covered by the survey (Germany and Italy). One way or another, people who are less able to tolerate risks have seen a significant amount of economic risk being shifted onto them.

What is more, periods of major economic upheaval and conflict have, historically, tended to reduce people's appetite for risk, often leading to greater demand for state intervention. For example, after the Great Depression of the 1930s the state emerged as a major investor (with the New Deal in the United States of America providing for major public investment in transport infrastructure, for instance). Similarly, the Second World War gave rise to the welfare state and a significant expansion in public education and healthcare (with the United Kingdom's National Health Service being established in 1948). Early survey evidence suggests that the Covid-19 pandemic is having a similar effect.[33]

CHART 1.17.

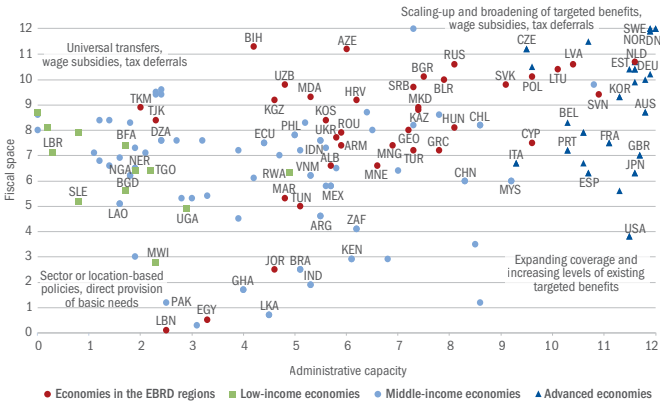
People with lower levels of income and education are less willing or able to tolerate risks



Source: Life in Transition Survey 2016 and authors' calculations.
Note: The data in this chart represent averages across 35 economies.

CHART 1.18.

There is significant variation across countries in terms of governments' fiscal space and administrative capacity



Source: Global Findex Database, IMF, United Nations Department of Economic and Social Affairs (UN DESA), World Bank, national authorities and authors' calculations.
Note: See Box 1.5 for details.

AROUND A THIRD OF US JOBS CAN BE PERFORMED FROM HOME AND THOSE JOBS PAY AN AVERAGE OF AROUND 55% MORE THAN OTHERS

[30] See Hacker (2008).
[31] See Adams-Prassl et al. (2020).
[32] See Dingel and Neiman (2020).
[33] See Bu et al. (2020), who report a significant increase in risk aversion among international students in Wuhan, China, as a result of the Covid-19 pandemic.

How can the state respond?

The extent to which governments are able to support their economies during the Covid-19 crisis is largely shaped by two factors: (i) their ability to pay for the various measures required (the fiscal space available); and (ii) their ability to implement those measures quickly in a targeted fashion (their administrative capacity). Chart 1.18 draws on the discussion in IMF (2020), summarising countries' fiscal space and administrative capacity in two indices (see Box 1.5 for details). The same two factors also shape the state's ability to expand and deliver on citizens' expectations in the longer term.

The fiscal space used in this report takes account of the level of government debt and net government lending/borrowing as a percentage of GDP, the cost of borrowing, and governments' ability to raise revenue as measured by the ratio of government revenue to GDP. The administrative capacity index takes account of a measure of e-government (which looks at the scope and quality of online services, the development of telecommunication infrastructure and inherent human capital),[34] a Worldwide Governance Indicator measuring the effectiveness of government, a Doing Business indicator assessing the distance to the frontier and an indicator measuring the routine use of bank accounts by the country's population.

Increasing fiscal space

While advanced economies enjoy relatively high levels of administrative capacity, their fiscal space varies – largely on account of the high levels of debt and large fiscal deficits that many economies had accumulated before the onset of the Covid-19 crisis. Many middle-income economies (both in the EBRD regions and elsewhere) also have a reasonable amount of fiscal space, as do many low-income countries.

In many countries, the amount of fiscal space has increased over the last two decades (albeit there are a number of notable exceptions, such as Lebanon). This is particularly true of countries where it used to be very limited, with many countries seeing increases in revenue and declines in the cost of servicing public debt, despite higher debt levels.

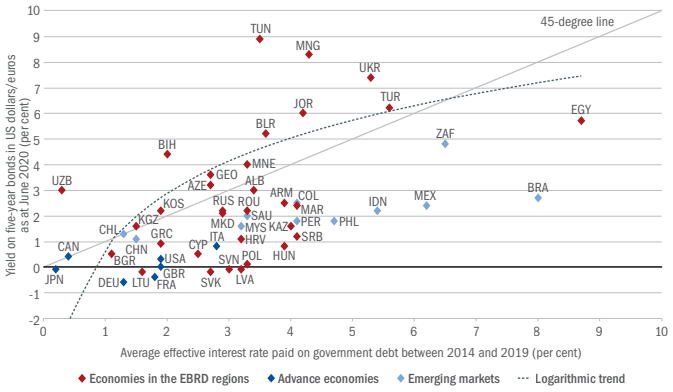
In contrast with many previous economic crises, the cost of financing has remained low for many economies in 2020. In early June 2020, the yields on the debt of many middle-income economies (including most countries in the EBRD regions) were, if anything, below the average cost of servicing those economies' debt over the period 2014-19 (as obtained by dividing government interest expenditure by the stock of debt; see Chart 1.19).

A low-risk, low-return scenario

Ratios of public debt to GDP are widely expected to increase following the Covid-19 crisis, but they can be sustained provided that interest rates remain low. This scenario effectively relies on low levels of investment, as in the long term interest rates reflect a balance between investment and savings. Subdued investment, in turn, implies weak growth – a scenario that could be characterised as a low-risk, low-return economy with a rising state footprint. Were global investment and interest rates to pick up, high levels of debt would present a major source of vulnerability.

CHART 1.19.

Borrowing costs did not increase in the early months of the Covid-19 crisis



Source: Bloomberg, IMF, national authorities and authors' calculations.
Note: See Box 1.5 for details.

Constraints on administrative capacity are more binding

While governments have a considerable ability to increase spending and purchase assets, providing rapid targeted support to vulnerable firms and individuals in a crisis is often a challenge. In many economies, the same is true when it comes to delivering on citizens' expectations of high-quality public services and lower economic risks. During the early months of the Covid-19 crisis, a key precondition for governments' ability to roll out large-scale targeted assistance schemes (such as the wage subsidy scheme that was established in the United Kingdom in response to the pandemic) was their ability to make digital payments to all eligible adults.[35]

Indeed, greater use of digital payments facilitates the targeted and timely administration of public support for individuals and small businesses.

With that in mind, it is worth noting that financial inclusion (as measured by the Findex survey) increased significantly across emerging markets between 2014 (when the survey first included

[34] See UN DESA (2020).

[35] See also Gelb et al. (2020).

the relevant question) and 2017 (see Chart 1.20).[36] In 2014, only around 44 per cent of residents of the EBRD regions aged 15 or over had a bank account and used it to make or receive digital payments at least once a year. By 2017, this had increased to around 57 per cent, although "functional" account penetration rates were still only around one-third in parts of Central Asia, the Caucasus and the southern and eastern Mediterranean. In advanced European economies, more than 90 per cent of the population make or receive regular digital payments (with EU Directive 2014/92/EU giving all legal residents – including refugees and people without a fixed address – the right to hold a bank account).

Large-scale government assistance programmes can, in turn, significantly raise functional financial inclusion, albeit with a lag of a few months or years. Mongolia, for instance, has introduced universal cash handouts based on future copper royalties, with payments being made into individuals' bank accounts. As a result, almost 90 per cent of the Mongolian population now use bank accounts, broadly on a par with the levels seen in Latvia and Estonia.

Policy options dependent on fiscal space and administrative capacity

Countries' policy options, both in the context of the Covid-19 crisis and in the longer term, are largely shaped by their fiscal and administrative constraints. Countries with ample fiscal space and a relatively strong administrative capacity (such as the Baltic states, Poland and Slovenia) have a wider range of options, including the broadening of existing targeted social security schemes, the introduction of wage subsidies or the deferral of tax payments.[37]

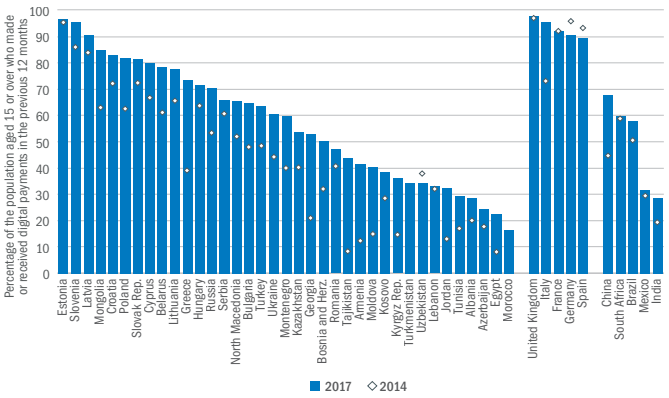
Countries with ample fiscal space but more limited administrative capacity (as is the case, for instance, in parts of the Western Balkans and Central Asia) may need to rely more on one-off universal transfers (as seen, for example, in Kazakhstan, the Kyrgyz Republic, Mongolia, Serbia and Uzbekistan).

Countries with more limited fiscal space but a relatively strong administrative capacity could expand coverage and increase benefit levels under existing targeted support programmes. For instance, Cyprus, Greece and Montenegro have all increased the coverage of existing unemployment benefits and/or enhanced sick leave. Pension increases were one of the most common measures in the early weeks of the Covid-19 crisis in the EBRD regions (being seen in around one-third of those economies), not because pensioners were particularly badly affected by the crisis, but because pension increases could easily be administered at speed.[38]

Lastly, countries with more limited fiscal space and a relatively weak administrative capacity, such as Lebanon or Tajikistan, may need to rely on policies targeting specific sectors or locations and ensure the direct provision of goods and services to satisfy the basic needs of their populations.

CHART 1.20.

Use of digital payments remains far from universal



Source: Global Findex Database.

ONLY AROUND
57%
OF RESIDENTS OF THE EBRD REGIONS AGED 15 OR OVER HAD A BANK ACCOUNT IN 2017 AND USED IT TO MAKE OR RECEIVE DIGITAL PAYMENTS AT LEAST ONCE A YEAR

Should state involvement in the economy increase?

Support for public ownership typically rises in response to a pandemic

Given these trends, will the public sector's share of the economy increase? If history is any guide, support for public ownership may well rise further on the back of the Covid-19 pandemic and the accompanying global recession. Previous pandemics made a large dent in people's trust in the economic and political institutions that underpin the market economy and democracy, while individuals who reach adulthood during major recessions tend to have more positive views on public ownership and the redistribution of income. Moreover, risk aversion in financial markets tends to be higher among individuals who grew up during periods with poor stock market returns.[39]

As Box 1.6 shows, individuals who reach adulthood during a pandemic are also around 2 to 4 percentage points more likely to

[36] See Demirgüç-Kunt et al. (2018) for a discussion of the Findex survey.
[37] See Sanfey et al. (2020) for a summary of the policies that were implemented in the EBRD regions in the early months of the Covid-19 crisis.
[38] See Bircan et al. (2020).
[39] See Aksoy et al. (2020), Giuliano and Spilimbergo (2014), and Malmendier and Nagel (2011).

support the expansion of state ownership. A shift of this magnitude in average support for state ownership could result in support for the expansion of private ownership changing from a majority view to a minority view in many economies. Indeed, in a quarter of the economies that participated in the most recent round of the World Values Survey, support for the expansion of state ownership averaged between 45 and 55 per cent of survey respondents.

Will the public sector's share of the economy increase?

Whether state ownership will increase also depends on the policy objectives underpinning the objectives of public ownership, as discussed in greater detail in subsequent chapters. In addition, policymakers will need to look at whether the private sector could deliver on those objectives in a more efficient manner.

For instance, state ownership may seek to facilitate the redistribution of income from natural resources or other sources of economic rents, both between individuals and across generations. In that case, the state could be limited to a minority stake. It could also be aimed at securing foreign assets in order to achieve greater diversification. Limiting state investment to minority stakes could also be an effective way of encouraging risk-taking and innovation in specific industries or accumulating state assets in order to fund future liabilities (such as liabilities relating to pension benefits or healthcare in a rapidly ageing economy).

When it comes to addressing job displacement in specific regions or industries as a result of technological change, alternatives to state ownership may involve subsidising employment in the private sector, possibly through income tax credits. Such subsidies could also be directed towards specific groups, such as older individuals. The cost of such assistance could be weighed against the cost of inefficiencies at state-owned enterprises or state agencies. If state bailouts are deployed to see major employers through temporary difficulties, structures could be put in place to facilitate the unwinding of state ownership in the future (see Box 1.7).

Private-sector solutions often require support to be provided through targeted policies and state interventions – referred to as "industrial policy" (see Box 1.8). Those measures could, for example, take the form of regulation and monitoring (in the area of the green economy, for instance, as discussed in Chapter 4), the provision of finance to riskier borrowers (as discussed in Chapter 3), the upgrading of infrastructure, efforts to foster exports and investment, or the establishment of vocational training programmes.

If, after weighing up the various policy options, the state opts for majority state ownership, arrangements need to be put in place to strengthen governance at state-owned enterprises, as discussed further in Chapter 2.

Conclusion

The Covid-19 crisis has highlighted citizens' growing expectations regarding the role of the state and the increased demand for the socialisation of risks. The state's ability to deliver on those expectations – both in response to Covid-19 and in the longer term – will depend on its fiscal space and administrative capacity, with the latter appearing to be a more binding constraint at present.

The economic footprint of the state has grown significantly since the mid-19th century, but trends in terms of rising public spending and state employment have varied across countries and over time. That variation reflects differences in citizens' preferences across market economies. The state footprint tends, for example, to be larger in ageing societies, and higher-quality economic institutions are also associated with higher levels of government spending. As the analysis in this chapter shows, women, older people and highly educated individuals are all more likely to work in the public sector, as are the more risk-averse.

State employment has declined in advanced economies and emerging markets alike in recent decades, with more rapid declines being observed in the EBRD regions – at least until the mid-2010s, when state employment started rising again in some economies. At the same time, public support for state ownership has been growing across economies. In post-communist economies and emerging market comparators, close to half of the population favour an increase in public ownership.

This brings us to the question of whether public ownership should keep rising. The answer to that depends on the objectives of state ownership and whether the private sector could deliver on those objectives more efficiently. This discussion is continued in subsequent chapters. Chapter 2 looks at the objectives, operations and governance of state-owned enterprises. Chapter 3 examines the role of state-owned banks, looking at their advantages and inefficiencies. And Chapter 4 revisits the subject of industrial policy in the context of efforts to foster a green economy.

ALMOST
90%
OF THE MONGOLIAN POPULATION NOW USE BANK ACCOUNTS, BROADLY ON A PAR WITH THE LEVELS SEEN IN LATVIA AND ESTONIA

BOX 1.1.

Bailouts in the time of Covid-19: a case study looking at Europe's airlines

Historically, many governments have established state-owned "flag carriers" on account of the high capital cost of setting up airlines and their importance for the economic connectivity of more remote areas. However, the past two decades have seen significant liberalisation of air transport, including the signing of the Open Skies Agreement between the European Union and the United States of America and the privatisation of numerous airlines.

A large percentage of the major airlines in the EBRD regions remain at least partly state-owned. Formal ownership structures vary, with airlines being owned by government ministries (such as the Romanian Ministry of Transport or the Croatian Ministry of State Property), a sovereign wealth fund (Kazakhstan) and a central bank (Lebanon), with some minority stakes being held by airports (Croatia and Romania).

A number of flag carriers have gone bankrupt as a result of the reduction of state support, sometimes after rounds of failed privatisations and re-nationalisations. Examples include Malev in Hungary (which is now largely served by the privately owned Wizz Air) and Cyprus Airways. In both of those cases, bankruptcy was preceded by the European Commission issuing a ruling against the use of state aid. Other examples include Air Armenia, B&H Airlines, Estonian Air, FlyLAL in Lithuania, Slovak Airlines and, as recently as 2019, Adria Airways in Slovenia.

Other carriers, including Air Moldova and Ukraine International Airlines, have been successfully privatised. In Greece, Aegean Airlines bought the previously state-owned Olympic Airlines. Several flag carriers have also turned to foreign partners to help sustain their operations. For instance, Turkish Airlines now owns 49 per cent of Air Albania, while Etihad owns 49 per cent of Air Serbia. Meanwhile, Air Baltic, which has its main hub in Riga, has established secondary hubs in Vilnius and Tallinn, leveraging economies of scale across several relatively small markets.

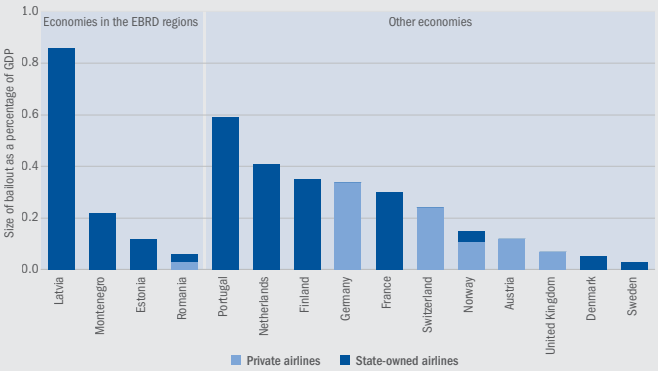
The airline industry is one of the sectors that have been hit hardest by the pandemic, with demand for air travel falling by around 60 per cent in the first half of 2020 relative to the first half of 2019, according to estimates by the International Air Transport Association (IATA). As a result, many airlines (including privately owned carriers) have sought bailouts totalling between 0.1 and 1 per cent of GDP (see Chart 1.1.1), often accompanied by an increase in state ownership.

State aid has taken various different forms, such as loans with favourable terms, the purchase of minority or majority stakes by the state, and the provision of state guarantees. For instance, the German government has taken a 20 per cent stake in Lufthansa (complete with two seats on the airline's supervisory board), the Italian government has decided to acquire full ownership of Alitalia, and the Latvian government has decided to increase its stake in Air Baltic from 80 to 91 per cent. The Romanian government, meanwhile, has promised state aid to both the state-owned Tarom and the privately owned low-cost carrier Blue Air. More bailouts may be on the way, given the highly uncertain future of air travel as of mid-2020.

In a couple of cases, bailouts have been accompanied by environmental conditions. Air France-KLM, for example, is now committed to increasing its use of alternative fuels from 0 per cent to 2 per cent by 2025. Similarly, Austrian Airlines is required to reduce its total emissions to less than 70 per cent of the 2005 level and end all flights that are competing with a train journey of under three hours.[40]

CHART 1.1.1.

Airlines have received large amounts of state aid during the Covid-19 crisis



Source: Bailout Tracker (as at end-June 2020), Ex-YU Aviation, SEE News and authors' calculations.
Note: The estimate for Germany includes a loan to TUI Group, which also has operations outside the aviation sector. The estimate for the United Kingdom includes a bailout for Wizz Air, which is headquartered in Hungary but has a UK-based operating subsidiary. State-owned airlines are defined as companies where the state holds a stake of more than 25 per cent. Air France-KLM is included in the figures for both France and the Netherlands.

[40] See Bannon (2020).

BOX 1.2.

Estimating the public sector's share of employment

This box constructs a measure of state employment. The numerator in the ratio is the total number of employees that work for the state, either in public services (teachers, doctors or civil servants) or at enterprises and banks that are ultimately controlled by the state. The denominator is total employment in the economy.

The data come from (i) national sources (as in the case of Albania (1995-2018), Armenia (1998-2018) and Jordan (2000-17)), (ii) an ILO database (as with Belarus (1997-99), North Macedonia (2000-05) and Lithuania (1995-2018)), (iii) labour force surveys compiled by the ILO (as in the case of Bosnia and Herzegovina (2006-19), Tunisia (2005-15) and Egypt (2005-18)), and (iv) country reports produced by the ILO (as with Russia (1995) and Serbia (2001-10)), the IMF (as in the case of Uzbekistan (1992-99), Ukraine (1994-98) and Tajikistan (1990-96)), the Organisation for Economic Co-operation and Development (OECD) (as with Slovenia (1992-96), Turkey (2008) and the Slovak Republic (2008)) and the World Bank (as in the case of Poland (1994)). Those estimates have been cross-checked against the results of representative international household surveys, notably the Life in Transition Surveys conducted by the World Bank and the EBRD in 2006, 2010 and 2016 and the OECD's Programme for the International Assessment of Adult Competencies (PIAAC).

The estimates in those sources often vary owing to differences in the way that state employment is defined and the way that data are collected. Nonetheless, the correlation between the various available estimates of the public sector's share of employment tends to be high – between 0.7 and 0.9 across economies and over time. Where different sources have been used for different time periods for the same economy, those estimates have been spliced together using official estimates from national authorities where available and applying changes in levels of state employment derived from other sources. Decisions on the use of individual sources were guided by LiTS and PIAAC data.

In addition to IMF data and national sources such as the US Census Bureau, the long-term data on public employment and government expenditure that are used in this chapter also draw on Edvinsson (2005) for Sweden, Thomas and Dimsdale (2017) and Mitchell (2011) for the United Kingdom, Carter et al. (2006) for the United States of America, and Tansel (2001) for Turkey.

BOX 1.3.

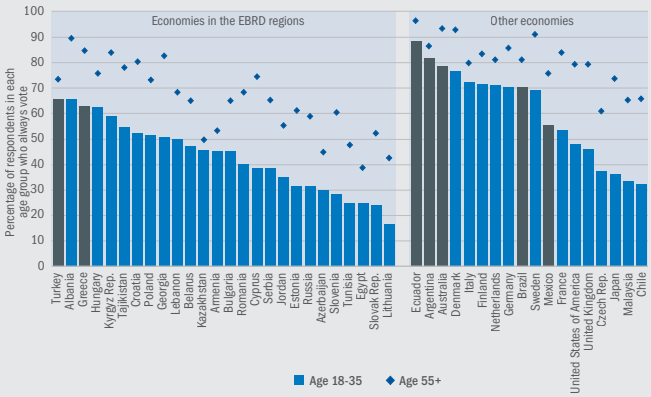
Should the young be paid to vote?

As highlighted in this chapter, the young are universally less likely to vote than their older peers (see Chart 1.3.1). In part, their lack of electoral engagement reflects disillusionment with politics. In a survey in the United Kingdom, for example, 61 per cent of young respondents felt that they had little or no influence on the decisions that were made on their behalf by politicians.[41] The resulting dominance of older voters at the polls further biases decision-making in their favour (assuming, of course, that politicians represent the interests of those who vote for them), leading to a vicious circle whereby younger voters ignore democracy and are, in turn, ignored by it.

What could be done to raise electoral participation among younger voters in rapidly ageing economies? This kind of voting gap can be observed in almost all economies, including countries with high levels of overall voter turnout (such as the Nordic economies), suggesting a lack of easy solutions.

CHART 1.3.1.

The voting gap between the young and the old



Source: World Values Surveys 2017-20 and authors' calculations.
Note: Darker bars denote countries with compulsory voting.

Enforcing compulsory voting raises turnout among marginalised groups

One option is to make voting compulsory and enforce it. In Australia, Belgium and Luxembourg, for example, where compulsory voting is enforced with fines, turnout levels are higher. When six Australian states introduced compulsory voting (at different times), their participation rates jumped up. Conversely, when the Netherlands abandoned compulsory voting in 1970, turnout declined sharply. Meanwhile, in five Latin American countries with compulsory voting, the rules are not enforced for senior citizens, and turnout rates in those countries tend to drop once turnout is no longer required.[42] Ultimately, however, one potential issue with the enforcement of compulsory voting is that it may be seen by disillusioned voters as yet another attempt to tax them.

Rewarding voting by the young

An alternative to punishing non-voters is to reward voters – for instance, by giving a refundable tax credit (or a prepaid debit card) to young adults who vote twice before the age of 30.[43] In fact, at the beginning of the fourth century BC, Athens introduced payments for attending public fora, thereby making it possible for those on lower incomes to forgo their daily wage and participate in democratic institutions.[44]

Several experiments have shown that such incentives can change voting behaviour. In one such experiment in California, for example, voters were chosen at random and given either a reminder to vote or the chance to receive a financial reward for voting. An incentive payment of US$ 25 raised turnout by 5 per cent in municipal elections.[45] Moreover, it has been shown that people who vote in a single election are substantially more likely to vote again.[46] Another option would be to lower the voting age, for instance to 16, as Austria did in 2007.

[41] See Henn and Foard (2012).

[42] See Birch (2009).
[43] See Pozen and Mele (2019).
[44] See Staveley (1972).
[45] See Panagopoulos (2013).
[46] See Gerber et al. (2003).

BOX 1.4.

Women in the public sector: evidence from a survey of Kazakhstan's energy firms

Survey evidence suggests that women are more likely to work for the public sector than men. This box shows that that trend is not universal, within occupations, drawing on a detailed survey looking at employment across 37 private and state-owned energy companies in Kazakhstan, which employ a total of 55,000 people.[47]

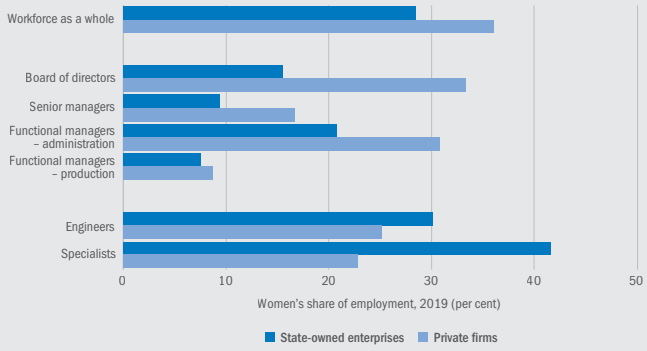
Within Kazakhstan's male-dominated energy sector, state-owned enterprises appear to employ fewer women than private firms – not only overall, but also at management level and at board level (see Chart 1.4.1). Indeed, among workers with a technical or vocational education, the largest group of employees, women's share of employment is around 20 percentage points lower in state-owned enterprises than it is in private firms.

Among engineers and specialists, on the other hand, women's employment shares are higher in state-owned firms, averaging more than 40 per cent for specialists. When it comes to policies on maternity and paternity entitlements, flexible working arrangements or support for care-related responsibilities, no significant differences are observed between the survey responses of public and private-sector firms. State-owned enterprises are, however, less likely to have human resources policies on sexual harassment and gender-based violence.

Overall, the findings of the survey suggest that there is scope for further cooperation between state owned enterprises and vocational institutes with a view to changing perceptions about the types of job that are suitable for women. Change is happening, though. Kazakhstan's Gender Action Plan for 2020-22 aims to continue removing regulatory restrictions on women's employment in specific occupations, including in the energy sector. And building on EBRD assistance, Samruk Energy, the state-owned national power company, has signed up to the UN Women's Empowerment Principles, including the tracking of sex-disaggregated data and the achievement of the GRI-G4 international standard on gender reporting.

CHART 1.4.1.

Compared with private energy firms, women are more likely to be engineers and specialists in state-owned enterprises, but less likely to hold managerial positions



Source: KazEnergy (2020) and authors' calculations.

BOX 1.5.

Indicators of fiscal space and administrative capacity

The indicators of fiscal space and administrative capacity that are used in this chapter range between 0 and 12 and are constructed by adding together four underlying indicators (each of which ranges between 0 and 3), as explained below. Higher values for those indicators correspond to greater fiscal space and better administrative capacity.

Fiscal space index

- Gross general government debt as a share of GDP in 2019 (based on the IMF's World Economic Outlook): 0 if above 100 per cent; 3 if below 30 per cent; rescaled linearly when between 30 and 100 per cent
- Net general government borrowing as a share of GDP in 2019 (based on the IMF's World Economic Outlook): 0 if above 7 per cent; 3 if below 0 per cent; rescaled linearly when between 0 and 7 per cent
- Net interest payments as a share of GDP in 2019 (based on the IMF's World Economic Outlook and national authorities): 0 if above 6 per cent; 3 if below 1 per cent; rescaled linearly if between 1 and 6 per cent
- General government revenue as a share of GDP in 2019 (based on the IMF's World Economic Outlook): 0 if below 20 per cent; 3 if above 50 per cent; rescaled linearly if between 20 and 50 per cent

Administrative capacity index

- e-Government Development Index in UN DESA (2020): 0 if below 0.4; 3 if above 0.9; rescaled linearly if between 0.4 and 0.9
- Percentage of the population aged 15 or over who made or received digital payments in the previous 12 months according to the Global Findex Database (2017): 0 if below 50 per cent; 3 if 100 per cent; rescaled linearly if between 50 and 100 per cent
- Doing Business distance-to-frontier indicator (2020): 0 if below 40; 3 if above 80; rescaled linearly if between 40 and 80
- Worldwide Governance Indicator of government effectiveness (2018): 0 if below -1.4; 3 if above 1.4; rescaled linearly if between -1.4 and 1.4

[47] See KazEnergy (2020).

BOX 1.6.

Will Covid-19 strengthen support for public ownership?

This box studies the effect that past epidemics had on attitudes towards state ownership using data from the World Values Surveys that were conducted between 1989 and 2014 (which covered more than 150,000 individuals across 91 economies) and data on global epidemics since 1970 taken from the EM-DAT International Disasters Database.[48] This analysis builds on work suggesting that people's attitudes, beliefs and values are most strongly influenced by experiences occurring between the ages of 18 and 25.[49]

This regression analysis compares attitudes to private and public ownership across individuals with differing degrees of exposure to epidemics during their formative years while taking into account various individual characteristics (X), such as age, year of birth, gender, employment and income decile, for a given country and year. In particular, the following regression is estimated using a linear probability model:

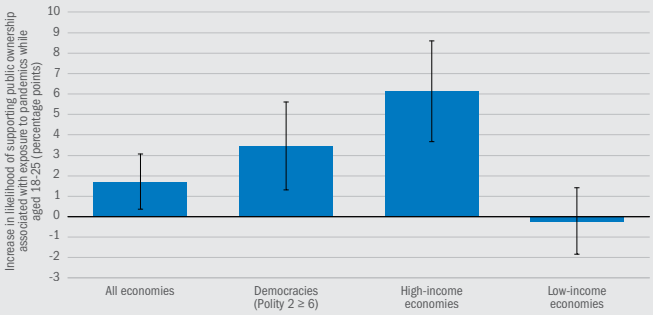
$$Y_{ictb} = \beta_1 Exposure(age\ 18\text{-}25)_{icb} + \beta_2 X_i + \beta_3 Exposure\ (time\ of\ survey)_{ct\text{-}1} + C_c + T_t + \varepsilon_{ictb}\ (1)$$

where Y is a dummy variable capturing whether respondent i in country c, born in year b and interviewed in year t, favours the expansion of state ownership of business over the expansion of private ownership (responses of 6 or higher on a scale of 1 to 10). Exposure to an epidemic while aged between 18 and 25 is measured by the number of individuals affected by an epidemic as a share of the country's population, averaged over the eight-year window. Regressions also control for any exposure to an epidemic in the year preceding the year of the survey. Specifications also control for country of respondents C and year of survey T.

This analysis reveals that an individual with the highest level of exposure to an epidemic during their formative years (as measured by the affected share of a country's population) is, on average, 1.7 percentage points more likely to favour the expansion of public ownership than an individual with no exposure to epidemics (see Chart 1.6.1). This effect is larger in high-income countries and economies with stronger democratic institutions, where respondents may expect to have a greater say in how the state manages its assets.

CHART 1.6.1.

Support for the expansion of state ownership is stronger among individuals who were exposed to epidemics in their formative years



Source: EM-DAT International Disasters Database and authors' calculations.
Note: These estimates are based on a linear probability model which regresses an indicator of support for public ownership on various individual characteristics, survey effects and a measure of the intensity of an individual's exposure to epidemics. The effects shown are for the difference between maximum exposure and no exposure. "High-income economies" are as defined by the World Bank. The 90 per cent confidence intervals shown are based on robust standard errors.

Thus, if history is any guide, the Covid-19 pandemic will lead to a further increase in support for public ownership among people aged between 18 and 25 today – members of what is termed "Generation Z".

[48] This analysis is based primarily on Aksoy et al. (2020).
[49] See Krosnick and Alwin (1989).

BOX 1.7.

Nationalisation during an economic crisis

Governments regularly buy stakes in private companies or take control of them outright.[50] Such instances are particularly common in the aftermath of major economic crises and periods of social upheaval, when many private companies may find themselves in distress, although nationalisation also occurs at other times – for example, when governments take control of assets that are regarded as strategically important or existing state-owned companies acquire private-sector rivals. Evidence of such nationalisation can also be seen in Chart 1.5. The Covid-19 crisis is likely to be no exception in that regard. Indeed, many large service-sector companies (notably airlines) have already found themselves negotiating – and receiving – large bailout packages (see Box 1.1).

While they address an immediate problem, nationalisations also need to take account of longer term considerations, ensuring that the enterprises in question can be run efficiently and that control is able to revert to the private sector in a transparent manner. The ultimate objective is to ensure that state involvement delivers value for the taxpayer.

In this regard, where bailouts target large listed companies, they could involve instruments such as preferred stock with warrants.[51] Unlike common stock, preferred stock does not confer voting rights on the state. In this scenario, therefore, the bailout does not interfere with the running of the company. This feature may be particularly valuable in normally competitive sectors (such as hospitality and transport), where governments may need to bail out multiple players. On the other hand, preferred stock gives the holder a preferential claim on dividends (which could potentially be higher than the dividends on common stock), thereby protecting taxpayers. Warrants – which grant the right to buy common stock at a specified price before a specified date – could provide a further upside for the taxpayer if the bailed out company and its stock price recover. It is also useful to define up front the exit strategy that will be implemented by the state if the industry recovers.

Where nationalisation targets smaller firms, structures similar to private equity funds could be considered, perhaps with private-sector equity funds providing investment in tandem. Such structures may help to ensure that portfolios of smaller companies are run efficiently. The involvement of private-sector co-investors also introduces a market test allowing the implicit or explicit valuation of non-listed firms receiving state aid.

Where nationalisation pursues long-term objectives associated with state ownership, common stock can be used, with a particular focus on the way that state ownership is structured and the enhancement of corporate governance. State asset holdings could benefit from a high degree of operational independence (as enjoyed, for instance, by many sovereign wealth funds). Conditions relating to environmental or social policy objectives need not necessarily be imposed on specific nationalised enterprises that receive assistance, but bailouts may present an opportunity to review regulations and standards in the relevant sectors (as in the case of the air transport industry).

BOX 1.8.

Industrial Policy 2.0

The discussion in this box, which builds on Chapter 5 of the *Transition Report 2008* and Chapter 5 of the *Transition Report 2014*, focuses on several broad guiding principles of industrial policy.[52] In the past, industrial policy used to focus largely on import substitution through tariffs and non-tariff barriers at the border. As that kind of approach gradually went out of fashion, new types of industrial policy emerged, reflecting the greater importance that is attributed to network effects and knowledge in the modern economy. Today, industrial policy typically responds to markets' failure to ensure coordination across various market participants – be it buyers, producers or workers. Such failures may become particularly acute in the face of crises (such as the Covid-19 crisis, the Syrian refugee crisis or the climate change emergency).

For example, an economy may benefit from people being able to work remotely and pupils being able to study online. However, such solutions only work if most individuals and businesses have reliable broadband access – a good example of a network effect. If broadband providers charge high fees for access in remote areas, it may be that few individuals are willing to pay for that service. That combination of a high price and low demand represents a coordination failure, with social costs far exceeding the cost of providing a reliable internet connection. Likewise, the electric car industry will only take off if consumers can easily charge their cars wherever they go. But at the same time, a private network of charging points can only be established if there are enough consumers. In that case, of course, the coordination failure entails not only significant social costs, but also considerable environmental costs.

Solutions may vary depending on the circumstances. Governments may, for example, compensate service providers directly for any public service obligations that are imposed on them, or they may ask service providers to average the cost of provision across all consumers, thus cross-subsidising some users at the expense of others. Some countries opt for state ownership as a means of delivering on such public service obligations (see Chapter 2).

Another increasingly important area is investment in education and basic research. A person's private returns to education (which are reflected in a worker's productivity) are dependent on market opportunities, and they, in turn, are dependent on other people's educations – a coordination failure that governments are well placed to address. In a virtuous circle, educated workforces help to attract a diversified universe of productive firms. In addition, close partnerships between the scientific community and the private sector foster innovation (with basic research being publicly funded for the most part).

Furthermore, unlike investment in physical capital, knowledge that is developed by one private firm can easily be copied by another for a fraction of the cost of developing it. As a result, the private sector may supply too little knowledge in the absence of government intervention.

▶

[50] See Megginson and Fotak (2020).
[51] The discussion here is based on Megginson and Fotak (2020).
[52] See EBRD (2008, 2014), as well as WTO (2020).

Traditionally, a distinction has been drawn between horizontal and vertical industrial policies. In some areas, it is possible, as an alternative to focusing "vertically" on specific firms and industries, to implement a "horizontal" package of measures which seeks to facilitate access to finance for high risk ventures, provide small grants to entrepreneurs on the basis of the competition of ideas, reduce the fixed cost of entry into markets (such as the cost of licensing and permissions), lower information barriers, or leverage companies' efforts to find new export markets.

In other cases, the lines between horizontal and vertical policies are increasingly becoming blurred. Indeed, any company could, in principle, benefit from the public provision of infrastructure (such as a government-supported network of electric charging points). In practice, however, such measures often benefit specific investors (in this instance, an incumbent developer of electric vehicles). Meanwhile, in the case of vocational training, successful initiatives often involve partnerships with specific private sector investors (as seen, for instance, with efforts to establish a large automotive cluster in Morocco). If the policy package is successful, its benefits may be enjoyed indirectly by the wider region through a pick-up in economic activity, but if it fails, taxpayers will have to pick up the bill.

As such policies target specific technologies or firms (be it explicitly or implicitly), the question of how to ensure that taxpayers get value for money is a matter of constant debate. In some instances, governments may be better than the markets when it comes to predicting future winners, but there is no evidence that they are able to do so consistently. Indeed, market failures may actually be exacerbated by government failures.[53]

In broad terms, policies targeting specific industries need to be based on a careful assessment of local skill-sets and the quality of economic institutions. For instance, attempts to deepen local supply chains are often pursued by requiring a certain percentage of the inputs used in the manufacturing of, say, a car or a wind turbine to be supplied locally. Such requirements may incentivise companies to reach out to existing or new local suppliers, and they, in turn, may be in a position to adopt the latest technologies, leveraging the scale of the new market open to them and benefiting from training provided by large off-takers. That was the case in Norway, for example, following the discovery of offshore oil and gas. However, if the right skills and incentives are not present, such requirements may also create excess profits for firms supplying substandard products at inflated prices and limit imports of the latest technologies, thus undermining the development of the very industries that the local content requirements were intended to support.[54]

Calibrating such requirements and gradually phasing them out as local producers become internationally competitive relies on industry regulators being highly independent and highly professional. Thus, governments with significant administrative capacity have far more policy options than those with more limited capacity, as discussed earlier in this chapter. Where administrative capacity is more limited, policy solutions involving state ownership tend to be more common, as discussed in Chapter 2.

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[53] See Rodrik (2005).
[54] See Klueh et al. (2009).

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2 STATE-OWNED ENTERPRISES

State-owned enterprises have historically played an important role across the EBRD regions. Today, they account for almost half of all public-sector employment. In many economies, state enterprises have more or less disappeared from the manufacturing sector over the last 20 years or so. However, they remain important providers of energy and (often subsidised) services such as railway transport and municipal utilities. They are often tasked with providing such services to poorer and more remote sections of the population, especially in countries with limited capacity to involve the private sector in the provision of public services. State enterprises can also act as automatic stabilisers when faced with adverse economic and technological shocks, providing more stable sources of employment during downturns and in economically disadvantaged regions. However, significant challenges remain when it comes to improving the corporate governance of such enterprises.


STOP

Introduction

State-owned enterprises have historically played an important role in the EBRD regions, both in post-communist economies and in the southern and eastern Mediterranean (see Box 2.1). While state enterprises still account for almost half of all state employment in those economies (with the other half comprising employment in the broader public sector – including education, healthcare and public administration), their role has changed considerably since the 1990s.

This chapter starts with a brief discussion of the rationale for state ownership, before presenting a snapshot of what a typical state enterprise in the EBRD regions looks like today. Thirty years after the start of the transition process, such enterprises continue to play an important role in the manufacturing sectors of lower-income economies. However, in many other economies in the EBRD regions they have more or less disappeared from competitive sectors such as manufacturing. These days, state enterprises tend to be more concentrated in network industries (such as utilities), natural monopolies (such as the railway sector) and commodities.

There is a large body of literature comparing the performance of state-owned enterprises and similar private firms and raising concerns about inefficiencies at state enterprises. Such enterprises have often been found to employ too many workers relative to their output, with privatisation typically being found to improve firms' performance.[1] Similar trends have been observed for state-owned banks (see Chapter 3).

STATE ENTERPRISES ACCOUNT FOR ALMOST HALF OF ALL PUBLIC-SECTOR EMPLOYMENT IN THE EBRD REGIONS

State enterprises' low levels of productivity and profitability may, to some extent, reflect the non-financial objectives of such entities, which go beyond the maximisation of profits and include things like the provision of subsidised services, support for economic activity in disadvantaged regions or in the face of economic and technological shocks, or the protection of the environment. These are all discussed in this chapter. State ownership is often also considered to be important in sectors of strategic interest, such as defence.

The inefficiencies of state enterprises also reflect weak governance, with recent studies finding that the performance gap between state and private enterprises tends to be narrower in economies with better governance and well-defined institutional arrangements.[2] The last section of this chapter provides in-depth analysis of the governance of state enterprises. Drawing on a comprehensive new review of the country-level legal frameworks governing state enterprises in the EBRD regions, as well as firm-level practices and lessons from the EBRD's work with state-owned clients, that section makes practical recommendations with a view to improving state enterprises' governance.

The rationale for state ownership

State intervention to address externalities

There are various reasons why a government might want to establish and maintain state ownership.[3] A state presence is often justified, for example, by the need to address market failures – for instance, in natural monopoly scenarios and network industries, where a privately provided service could be incomplete or inadequate, or on account of significant externalities.

In the context of natural monopolies (industries with infinite economies of scale, such as water supply and sewerage), the initial cost of building the necessary infrastructure may be so large that private firms are reluctant to enter the market or unable to achieve efficiencies of scale. Many of these are also network industries (as in the case of the transmission and distribution of electricity). These sectors require fixed infrastructure and a high degree of standardisation in order to serve customers efficiently. At the same time, providing network services (such as train services or access to broadband) in sparsely populated areas may not be profitable from the service provider's perspective, but may be crucial for regional development and ensuring equality of opportunity among citizens. State intervention is also necessary where markets fail to internalise externalities such as pollution.

[1] See Megginson (2000, 2016), Estrin et al. (2009), and Estrin and Pelletier (2018). See also Matuszak and Szarzec (2019), Borkovic and Tabak (2020), and IMF (2019) for recent evidence from the EBRD regions.
[2] See Mühlenkamp (2013), Estrin et al. (2020) and Szarzec et al. (2019).
[3] See OECD (2005, 2015) and World Bank (2006).

State ownership can also be used to lean against rising regional disparities by providing employment in areas that have been affected by adverse economic or technological shocks, or where private-sector employment is scarce, preventing a vicious circle of rising unemployment, emigration and further economic decline.

Alternatives to state ownership

In most of these cases, state intervention need not necessarily take the form of state ownership of enterprises. Services such as rail transport or broadband can be provided by private companies, with government subsidies and public service obligations ensuring universal coverage. Poor households facing large utility bills can receive targeted means-tested benefits. The state can lean against rising regional disparities through fiscal transfers, targeted investment and other industrial policy measures (see Chapter 1). Well-designed social safety nets can act as automatic stabilisers in the face of economic and technological shocks. And environmental objectives can be pursued through regulation and taxation.

Each of these policy alternatives involves costs and trade-offs. State-owned enterprises face unique governance challenges as a result of the multitude of objectives that they may have to pursue at the behest of the state, with those objectives often lacking clear definition. The state is typically able to maintain a tight grip on its state-owned enterprises – often doing so with multiple hands. However, lines of influence and accountability may be complex and blurred owing to the complexity of governments' administrative structures, with numerous government ministries and agencies exerting influence simultaneously. State support may be extensive, but not transparent, and politicians may interfere with state enterprises' appointments and operations. This may result in soft budget constraints, ineffective supervisory boards, weak management and poor performance. While these issues have been documented extensively in previous studies, the second half of this chapter revisits the question of state enterprises' corporate governance, drawing on a comprehensive new review of the country-level legal frameworks governing state enterprises in the EBRD regions.

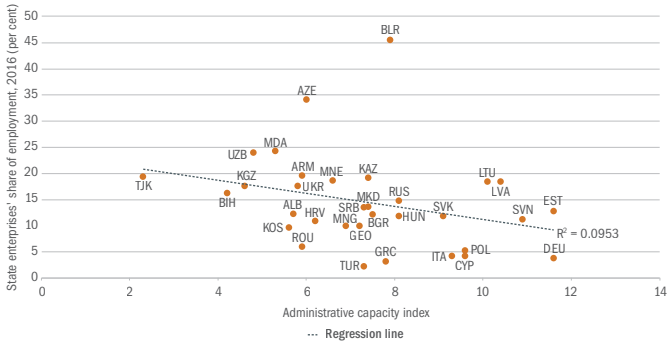
Alternative solutions involving the private provision of services under a public service obligation require a certain level of administrative capacity in order to set up such schemes and monitor their implementation. The same is true of targeted means-tested benefits providing support for the poorest households in society, as well as social safety nets aimed at tackling the adverse effects of economic and technological shocks at both household and regional level.

State enterprises are more prevalent where administrative capacity is lower

For these reasons, state-owned enterprises tend to play a somewhat greater role in countries with more limited administrative capacity (see Chart 2.1). In countries with sufficient administrative capacity, alternative policies such as targeted social safety nets and public service obligations are often preferred, given the concerns about the inefficiencies and weak governance of such enterprises. Where administrative capacity is lacking, state enterprises may be seen as a suitable second-best policy choice. For instance, while low-productivity employment in the public sector may be costly for the taxpayer and the economy, an alternative that involves persistently high unemployment in a region that is lagging behind economically may be associated with even greater long-term costs. Those costs extend beyond the direct impact on individual households and include long-term externality costs caused by rising inequality and the erosion of social cohesion and trust. As noted in Chapter 1, differences in citizens' preferences across societies may also help to shape the landscape in terms of the role that state-owned enterprises play in the economy.

CHART 2.1.

State enterprises tend to step in where administrative capacity is more limited



Source: Global Findex Database, UN DESA, World Bank and authors' calculations.
Note: The administrative capacity index takes account of a measure of e-government (which looks at the scope and quality of online services, the development of telecommunication infrastructure and inherent human capital), a Worldwide Governance Indicator measuring the effectiveness of government, a Doing Business indicator assessing the distance to the frontier and an indicator measuring the routine use of bank accounts by the country's population. See Box 1.5 for details.

State-owned enterprises: a portrait

In the mid-2010s, the state accounted, on average, for about a quarter of total employment in the EBRD regions (see Chapter 1), of which around 44 per cent was accounted for by state-owned enterprises (based on the results of the 2016 round of the Life in Transition Survey). The contribution made by state enterprises was particularly large in Azerbaijan and Belarus, whereas the broader public sector (areas such as education, healthcare and public administration) accounted for the bulk of state employment in Turkey, Cyprus, Greece and the southern and eastern Mediterranean (see Chart 2.2).

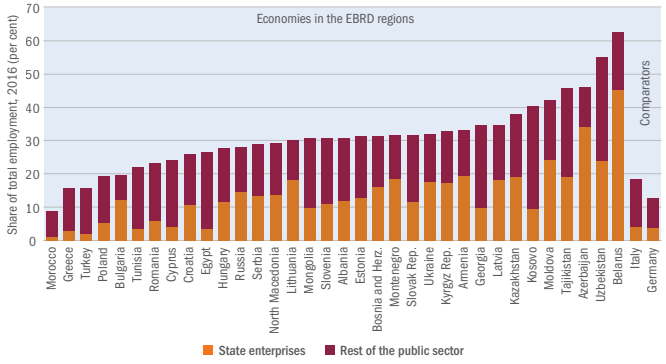
State-owned enterprises are typically larger than private firms, with the private sector being dominated by small companies: over a third of state enterprises in the EBRD regions have more than 100 employees, while 45 per cent of private firms have 10 employees or fewer (see Chart 2.3). A similar pattern can be observed in advanced economies. As discussed in the following sections, a single state enterprise (such as a railway company, a coal-mining firm or an oil company) can employ tens of thousands of people and dominate the labour market of an entire municipality, city or region.

State-owned enterprises are concentrated in the transport and utility sectors

While sectoral data for the early years of the transition process are scarce, state enterprises in the early 1990s were typically manufacturers (operating large plants in heavy industries, for instance). This picture has changed significantly, with many of those manufacturing firms being privatised or going bankrupt. Analysis based on a unique OECD dataset examining the sectoral composition of state-owned enterprises suggests that by 2015 those enterprises were concentrated in the transport and public utility sectors, often being owned locally rather than centrally (see Chart 2.4).[4] In the eight EBRD economies covered by the OECD database (Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Slovenia and Turkey), transport, electricity, gas and other utilities account for a combined total of 69 per cent of employment by state enterprises. This is similar to the picture observed in a sample of advanced economies. In comparator emerging markets (Argentina, Brazil, China, Colombia, Costa Rica, India and Mexico), state enterprises continue to play a more important role in primary sectors and manufacturing. This suggests that state enterprises' shares of competitive sectors – those where concerns about the unfair advantages of state ownership distorting the level playing field are the strongest – may be falling.

CHART 2.2.

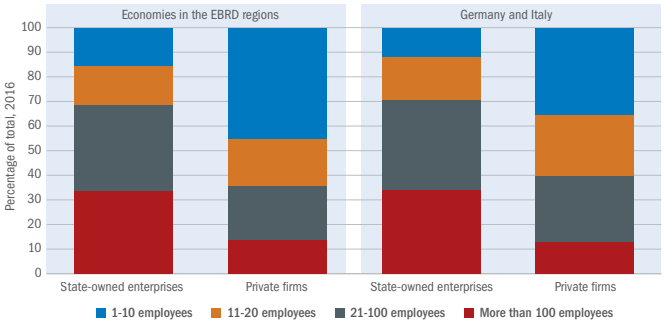
State-owned enterprises account for around 44 per cent of public-sector employment



Source: Life in Transition Survey 2016, ILO, OECD and authors' calculations.
Note: These estimates are based on the answers of primary respondents in the Life in Transition Survey (except in the case of Egypt, Morocco and Tunisia, where estimates are based on ILO and OECD data).

CHART 2.3.

State enterprises are typically larger than private firms



Source: Life in Transition Survey 2016 and authors' calculations.
Note: These estimates are based on the answers of primary respondents in the Life in Transition Survey.

STATE-OWNED ENTERPRISES ACCOUNT FOR LESS THAN

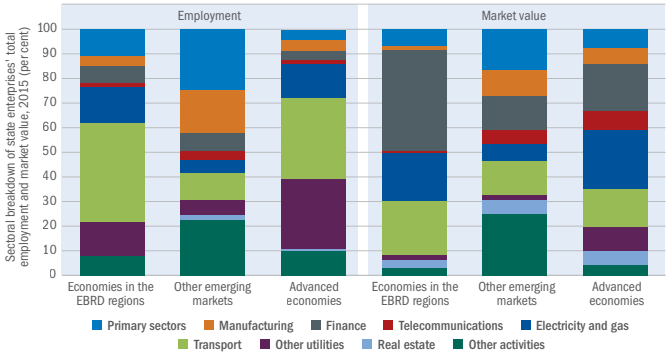
10%

OF MANUFACTURING EMPLOYMENT IN MOST OF CENTRAL EUROPE AND THE BALTIC STATES

[4] See also European Commission (2018), IMF (2019), and Matuszak and Szarzec (2019).

CHART 2.4.

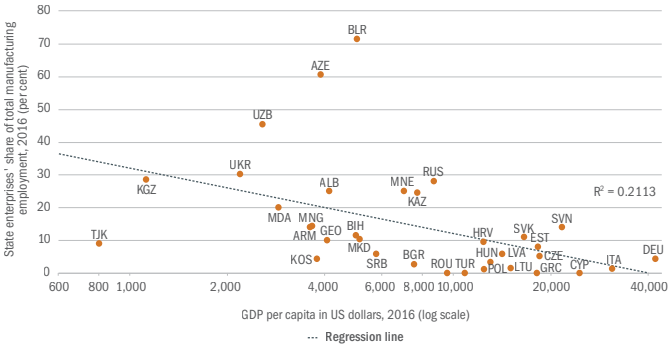
In the EBRD regions, state enterprises are concentrated in the transport and public utility sectors



Source: OECD and authors' calculations.
Note: These estimates are based on an OECD dataset on the size and sectoral composition of countries' state-owned enterprise sectors in 2015. "EBRD regions" refers to Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Slovenia and Turkey. "Other emerging markets" refers to Argentina, Brazil, China, Colombia, Costa Rica, India and Mexico. These estimates only include enterprises that are engaged in economic activities in the marketplace, excluding entities that primarily perform a public policy or administrative function. "Market value" is defined as market equity for listed state enterprises and book equity for unlisted enterprises.

CHART 2.5.

State enterprises play a more important role in manufacturing in poorer economies



Source: Life in Transition Survey 2016 and authors' calculations.

More state-owned manufacturers in lower-income economies

That being said, notable exceptions remain, with state enterprises remaining present in competitive sectors in some higher-income economies in the EBRD regions (such as the Hungarian, Polish and Slovenian chemical and pharmaceutical sectors). Meanwhile, the results of the Life in Transition Survey indicate that state enterprises are also still playing an important role in the manufacturing sectors of poorer countries (see Chart 2.5). Indeed, in Azerbaijan, Belarus and some countries in Central Asia, state enterprises account for 30 to 70 per cent of total employment in manufacturing, compared with less than 10 per cent in most of central Europe and the Baltic states (an estimate that is consistent across both OECD and LiTS data).

The rise of state-owned multinationals

Increasingly, state enterprises are also playing an important role at international level. National oil and gas companies, for instance (such as Rosneft and Gazprom in Russia), are often listed on major stock exchanges and operate internationally in ways that are similar to their private-sector counterparts.

Data from the United Nations Conference on Trade and Development (UNCTAD) indicate that there are around 1,500 large state-owned multinationals in the world, which represent just 1.5 per cent of all multinational enterprises but own about 10 per cent of all foreign affiliates and account for around 10 per cent of global greenfield investment.[5] In contrast with their private-sector counterparts, state-owned multinationals are heavily concentrated in natural resources and financial services (with the EBRD regions being no exception in that regard). In the EBRD regions, their ranks also include construction and engineering firms, as well as chemical firms and manufacturers of fertilisers.

IN AZERBAIJAN, BELARUS AND SOME COUNTRIES IN CENTRAL ASIA, STATE-OWNED ENTERPRISES STILL ACCOUNT FOR

30-70%

OF ALL MANUFACTURING EMPLOYMENT

Universal provision of affordable services

State enterprises pursue a wide range of objectives besides the maximisation of profits, with particular emphasis being placed on the universal provision of services at affordable rates. In a recent IMF survey, 90 per cent of governments in central, eastern and south-eastern Europe reported that their state enterprises had objectives relating to the provision of specific

[5] See UNCTAD (2017).

public goods and services.[6] Similarly, state-owned banks may pursue non-commercial objectives, such as increasing financial inclusion or improving access to finance for specific groups of customers (as discussed in detail in Chapter 3). This section looks at state enterprises providing transport services, utilities and broadband.

Railway companies: maintaining a service on unprofitable lines

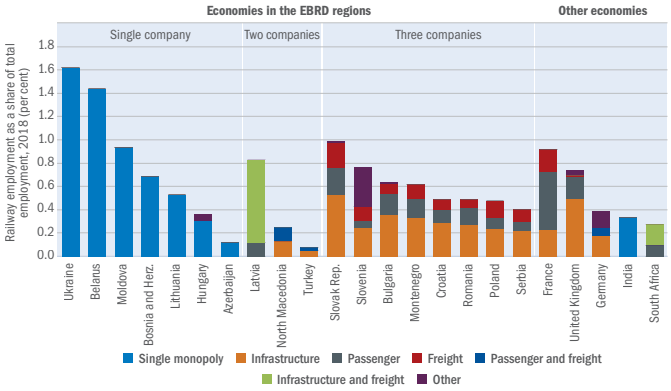
In most countries, railways have traditionally been run by monolithic vertically integrated entities, with those entities providing infrastructure, passenger and freight transport, and various related services. However, demand for reform has increased over the years, with a view to improving railways' efficiency and financial sustainability, reducing the burden on government budgets and increasing the competitiveness of rail travel relative to other modes of transport.

Over the past 30 years, the European Union has encouraged the vertical unbundling of incumbent national railway companies, calling for (i) the establishment of separate providers responsible for passenger and freight transport and infrastructure, (ii) regulated access to the track for third parties, and (iii) policies to support competition. Such unbundling is intended to increase the transparency of the government support provided to railways. It also aims to boost competition between the railways and other modes of transport (although railways' market shares have not generally increased following such reforms, and have declined in some cases).[7] In the western hemisphere, meanwhile, reforms have focused on ensuring horizontal competition between vertically integrated private railway companies combining infrastructure, freight and passenger transport, with such companies often operating parallel services on routes with strong demand. In Japan, the privatisation of Japan National Railways has resulted in a system where passenger rail services are provided by vertically integrated regional companies. While the state-owned freight operator has access to their tracks, private freight companies can only enter the market by building their own infrastructure.[8] Many countries in the EBRD regions (including most EU member states, some of the Western Balkans, Kazakhstan and Russia) have unbundled their state-owned railways into passenger, freight and infrastructure companies under the EU blueprint.

STATE-OWNED RAILWAY COMPANIES CAN ACCOUNT FOR UP TO 1.5% OF TOTAL EMPLOYMENT IN SOME COUNTRIES IN THE EBRD REGIONS

CHART 2.6.

Railway companies are large employers, particularly as national monopolies



Source: ILO, companies' annual reports, national regulatory bodies and authors' calculations.
Note: All data in this chart relate to state-owned railway companies and joint ventures (with the exception of data for the United Kingdom and Germany). Data for the United Kingdom relate to 2019, rather than 2018. Hungary and Lithuania also have independent train path allocation and infrastructure-charging bodies (not included here). As of 2019, Lithuania has a holding structure with limited guarantees of independence.

IN SOME EBRD ECONOMIES IN THE EU, ONLY ABOUT A FIFTH OF RAILWAY COSTS ARE RECOVERED THROUGH PASSENGER FARES

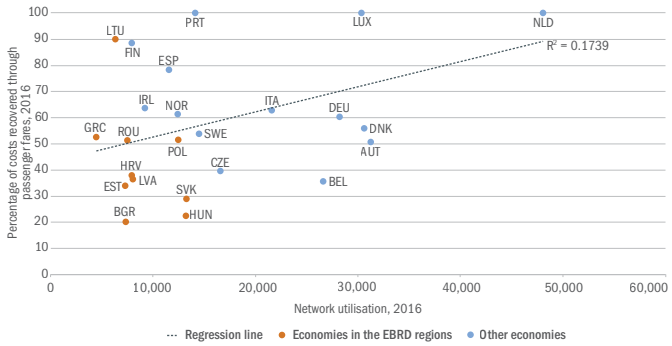
Railway companies, which are still overwhelmingly state-owned in the EBRD regions, remain very large employers. Indeed, a single company can account for up to 1.5 per cent of national employment (with more than 260,000 people working for Ukrainian Railways, for example; see Chart 2.6). At the same time, unbundling often involves substantial job losses. In Serbia, for instance, 42 per cent of railway jobs were lost as a result of such reforms.[9]

Railway companies in the EBRD regions remain highly dependent on government subsidies (as do their counterparts in most advanced economies). Monopoly companies, in particular, often benefit from a range of direct and indirect subsidies (such as reduced fuel prices or tax breaks), which are often negotiated retrospectively. The writing-off of debts to banks and other state-owned enterprises supplying services (such as electricity companies) remains common. For example, Greece's infrastructure management company and train operator benefited from debt cancellations totalling 7 per cent of GDP in 2011. And in 2016, prior to its unbundling, Serbian Railways had its debt to the state-owned electricity provider written off, with that debt totalling 0.1 per cent of GDP. By 2019, however, Serbian Railway Infrastructure, one of its unbundled successors,

[6] See IMF (2019) and OECD (2018a).
[7] See, for instance, Laabsch and Sanner (2012), Mizutani (2019), Tomeš (2017), Van de Velde et al. (2012) and World Bank (2017).
[8] See Working Party on Rail Transport (2012).
[9] See IMF (2017).

CHART 2.7.

Network utilisation and cost recovery rates are low in EBRD economies



Source: European Commission.
Note: The vertical axis measures the percentage of the costs arising from public service obligations that are recovered through passenger fares. The horizontal axis measures network utilisation as the total number of kilometres travelled by trains for every kilometre of track. There are no data on cost recovery for France or Slovenia.

PEOPLE IN THE POOREST INCOME DECILE IN THE EBRD REGIONS SPEND MORE THAN A FIFTH OF THEIR INCOME ON UTILITY BILLS

was again one of the largest debtors to the state electricity company.

Such subsidies typically aim to ensure the universal provision of affordable railway services. Information collected by the European Commission as part of its Rail Market Monitoring Survey reveals that few advanced European economies are able to recover all costs through passenger fares. This only tends to be the case in densely populated countries where rail networks are used intensively (such as Luxembourg and the Netherlands; see Chart 2.7). In sharp contrast, the EBRD regions are generally characterised by relatively low population density, low levels of network utilisation, and thus low recovery rates, resulting in a continued need for large subsidies. In some economies in central and south-eastern Europe, only about a fifth of costs are recovered through passenger fares.

Private competition remains limited in the EBRD regions' railway sectors. Where private operators exist, they tend to concentrate on the most frequently used and profitable lines, or on freight transport. Operating on less profitable and less frequently used routes, on the other hand, requires government subsidies or cross-subsidisation using the fares charged on other routes. In France, for instance, a group of regional lines account for 15 per cent of costs, but only 2 per cent of total users, and a similar pattern can be observed in the United Kingdom.[10]

While rail services are, in general, primarily used by the more highly educated and the better off, people with lower levels of education and income may be more likely to use regional routes. Indeed, they may often have few alternative travel options if such routes are cut. Where other options exist, commuting by rail tends to be more environmentally friendly than commuting by car.

State ownership is just one way of providing an affordable service with universal coverage. As an alternative, universal provision can also be ensured by giving subsidies to private providers operating under public service obligations, and low-income households can be given targeted means-tested benefits to cover the cost of rail travel or utilities. However, these alternative approaches rely on the public sector having sufficient implementation capacity and entail their own costs. For example, ensuring universal provision through public service obligations requires clearly defined geographical areas, the careful calibration of payments, and the regulation and monitoring of providers.

Municipally owned utilities: targeting universally affordable services

Many municipal services in the EBRD regions are provided through state enterprises, which are often owned by local governments. As in the railway sector, universal access to affordable services is seen as an important economic policy objective, with lower-income households spending a larger percentage of their income on utilities. Evidence from the latest round of the Life in Transition Survey suggests that people in the poorest income decile in the EBRD regions spend more than a fifth of their income on utility bills – a significantly higher percentage than their counterparts in advanced economies.

As a result, utility prices are often set below the level that is required to recover costs. This leads to excessive consumption of energy with adverse environmental effects (see Chapter 4), and economic gains accrue primarily to the rich, who consume more electricity, gas and water. At the same time, however, increases in utility prices would have a disproportionate impact on the livelihoods of low income households unless such increases were offset by targeted means-tested benefits.

In countries with stronger economic institutions, state-owned utilities have the potential to be transparent and well-run. Indeed, a number of advanced economies have recently seen a wave of utility companies returning to

[10] See Spinetta (2018) and Office of Rail and Road (2019).

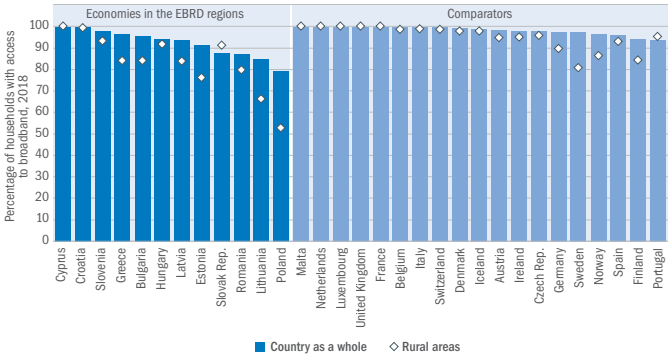
municipal ownership (as witnessed, for instance, in the French water sector, the German energy services industry and the Norwegian waste collection sector) with the aim of increasing accountability.[11]

In contrast, in countries with weaker economic institutions, subsidies tend to be larger and less transparent where utilities are provided by state-owned companies.[12] Large, non-transparent utility subsidies tend to go hand in hand with weak social safety nets, particularly in Central Asia and parts of the Western Balkans, suggesting that the two approaches are substitutes. Many EBRD economies with more limited administrative capacity have used price controls and utility subsidies as part of their economic response to the Covid-19 pandemic on account of their ease of implementation, despite such measures being a fairly imprecise way of channelling support to the individuals who need it most (see Chapter 1).

In countries with weaker economic institutions, well-defined private-sector participation may help to clarify contractual relationships between governments and service providers and increase the transparency of state support for municipally owned companies. By way of example, Box 2.2 discusses Romania's experience of introducing private-sector participation in the area of district heating.

CHART 2.8.

In many countries, rural broadband coverage lags far behind that seen in other areas



Source: European Commission.

State intervention to ensure universal broadband services

In most economies, the quality of broadband coverage in rural areas lags behind that seen in urban areas. In the EU, for example, only 88 per cent of rural households had access to broadband in 2018, compared with an average of 97 per cent across all households. That gap was more pronounced in central and south-eastern Europe. For instance, while 80 per cent of all Polish households had fixed broadband coverage in 2018, the figure for the country's rural households was only just over half (see Chart 2.8). Such gaps have become even more problematic in the context of remote schooling and remote working during the Covid-19 pandemic, as discussed in Chapter 1.

WHILE 80% OF ALL POLISH HOUSEHOLDS HAVE FIXED BROADBAND COVERAGE, THE FIGURE FOR THE COUNTRY'S RURAL HOUSEHOLDS IS ONLY JUST OVER HALF

In many countries, regional and municipal governments have stepped in to bridge this digital divide, offering affordable high-speed internet services in small towns and rural areas where low population density renders investment unprofitable for private telecommunication companies. Meanwhile, in the United Kingdom's 2019 general election, the Labour Party manifesto even went as far as promising to provide free universal broadband through a partially nationalised British Telecom.

State intervention to ensure the universal provision of affordable broadband services has taken many different forms. Most EU countries use an operator subsidy model, whereby the state subsidises a network provider with the aim of establishing or upgrading the country's network, extending coverage to areas with low population density. In contrast, some regions (including parts of Croatia, Latvia and Lithuania) have a fully public network model, whereby a public authority builds and owns the network and may provide services directly. In some cases, new municipal and inter-municipal partnerships have been set up to provide broadband services, with significant financial support coming from the central government. In Germany, for example, this model is used in more than 200 rural municipalities. In other economies, the state builds the network and remains its ultimate owner, but leases it to a private network operator on the condition that service providers enjoy fair and non-discriminatory open access.[13]

In South Korea, meanwhile, universal service obligations were crucial to ensure the construction of broadband infrastructure in rural areas following the privatisation of Korea Telecom, with state support covering half of all investment costs through a matching fund. In contrast, the universal service obligation framework in Uzbekistan does not currently

[11] See Kishimoto et al. (2019).
[12] See Foster and Rana (2019).
[13] See Kishimoto et al. (2019) and BEREC (2017).

guarantee the provision of services at affordable rates for all consumers.[14]

Thus, there are various different models that can successfully be used to ensure the universal provision of broadband services, ranging from full state ownership to no state ownership, but they all tend to require state intervention in one form or another.

Other objectives: leaning against rising regional disparities

Technological changes have been reshaping the geography of production and the skill-sets that are demanded in labour markets. In that context, the economic importance of large cities has been increasing even faster than their share of the population. Conversely, many smaller cities, particularly those that are far from other urban agglomerations, have seen their local economies shrink and their populations decline. This has led to rising income disparities across regions within individual economies.[15]

Governments can use a range of tools to address rising regional disparities. These include direct fiscal transfers to support disadvantaged regions, investment in infrastructure, and incentive schemes (such as tax breaks) that encourage companies to locate themselves in particular regions. At the same time, measures aimed at improving the local business environment can help to attract domestic and foreign private investment.[16]

State employment as a way of supporting disadvantaged regions

State employment can also be used as a way of supporting economically disadvantaged regions. In the United Kingdom, for example, HM Revenue and Customs has opened offices in Liverpool, the Department for Work and Pensions has offices in Newcastle, the Office for National Statistics has offices in Newport, and parts of the BBC – a state-owned broadcaster – moved to Salford in Greater Manchester. Similarly, the German government moved various public bodies east after reunification. More recently, the German state of Bavaria launched a large regional development programme, with more than 50 public bodies either moving to rural parts of the state or being established from scratch in those areas. Meanwhile, Denmark has moved thousands of government jobs to scores of different cities; Norway has moved its competition authority to Bergen, moved the Norwegian Polar Institute to Tromsø in the far north, and moved the Norwegian peace corps (Norec) to the small town of Førde; and South Korea has moved two-thirds of its government agencies away from Seoul (many of them to the newly built Sejong City). And in 2012 Georgia moved its parliament to Kutaisi, although that move has since been reversed.

The distribution of state employment across regions can have a significant impact on the location of private-sector activity. The effects of such relocation are likely to be larger where the relocated jobs are more highly skilled and where spending by employees and procurement by public bodies will generate greater demand for goods and services supplied by the private sector. Those effects can, in turn, be further enhanced by improvements to the business environment and transport links.[17]

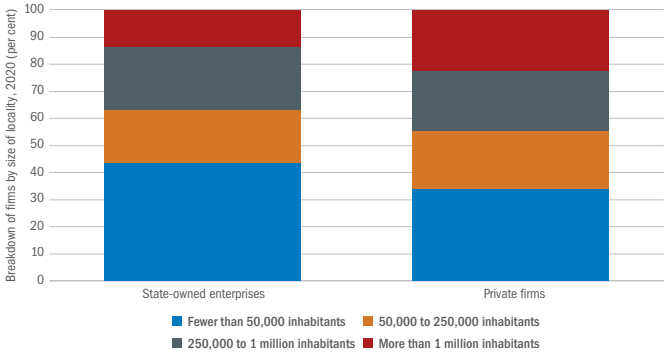
Against that background, this section looks at whether state-owned enterprises can help to support economic activity in disadvantaged regions. That analysis examines the spatial distribution of state enterprises using the latest round of Enterprise Surveys, which were conducted in 2018-20 by the EBRD, the European Investment Bank (EIB) and the World Bank Group and covered more than 25,000 randomly selected firms across the EBRD regions.

More state employment in smaller towns and rural areas

The results indicate that state enterprises are more likely to be located in smaller cities than private firms (see Chart 2.9). In the EBRD regions, 44 per cent of state-owned enterprises

CHART 2.9.

In the EBRD regions, state enterprises are more likely to be located in smaller cities than private firms



Source: Enterprise Surveys and authors' calculations.
Note: The Enterprise Surveys do not cover firms that are 100 per cent state-owned. In this chart, "state-owned" is defined as a firm where the state owns more than 50 per cent. These data represent simple averages. Very similar patterns are observed when using median eligibility sampling weights.

44%
OF STATE ENTERPRISES IN THE EBRD REGIONS ARE IN TOWNS WITH FEWER THAN 50,000 INHABITANTS

[14] See Salience Consulting (2020).
[15] See AfDB et al. (2019) and EBRD (2018a).
[16] See EBRD (2019).
[17] See Alesina et al. (2001), Becker et al. (2018), Faggio (2014), Faggio and Overman (2014), Institute for Government (2020), Schluter (2014), and Swinney and Piazza (2017).

are located in towns with fewer than 50,000 inhabitants, while only 13 per cent are found in cities of over a million. In contrast, only about a third of private firms are found in towns with populations below 50,000, while 22 per cent are located in cities of over a million. This pattern could, in part, reflect a legacy of central planning, under which secondary cities were consciously promoted and some state enterprises were sited without due regard for transport costs, as well as the fact that private investment is concentrated in large cities, benefiting from the presence of a large pool of highly skilled workers and a diverse range of customers and suppliers.

Disaggregated data on employment by type of ownership and sector for 380 Polish *powiats* (roughly equivalent to UK counties) allows for more detailed analysis of the spatial distribution of state employment (see Box 2.3). That analysis shows that the regions with higher unemployment in northern, eastern and south western Poland are also the ones with higher percentages of state employment (see Chart 2.10). Moreover, regression analysis can be used to link state employment (as a percentage of total employment) to the unemployment rate (unemployment as a percentage of the labour force) and various county-level characteristics (such as the sectoral composition of employment, the ratio of the working-age population to the total population, population density and NUTS 2-level regional fixed effects). That analysis reveals that a 1 percentage point increase in the county-level unemployment rate is associated with a 0.5 percentage point increase in state employment as a percentage of total employment. That relationship is not by construction to the extent that the two ratios have different denominators.

In regions with fewer private-sector employers, state employment (be it in public administration, education or healthcare, or in municipal utility companies, railway companies or post offices) becomes relatively more important as a source of local employment. In this sense, public-sector employment acts as an automatic stabiliser when regions experience adverse economic or technological shocks. Similarly, state-owned banks tend to be more important lenders in rural areas (see Chapter 3). Evidence from the latest round of the Life in Transition Survey confirms these findings. Residents of rural areas are more likely to work for a state enterprise or another public entity, even when taking into account individual characteristics such as their age, education or sector of employment.

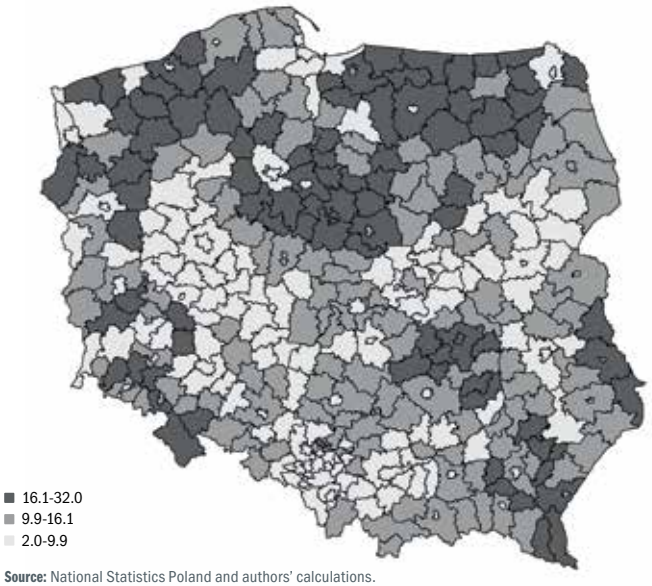
Residents of rural areas are more likely to regard the state as having primary responsibility for the creation of jobs

In line with those patterns, residents of rural areas also expect more from the state in terms of job creation. A survey conducted by the Austrian National Bank (OeNB) in 10 countries (nine of which are in the EBRD regions) asked respondents who they thought had primary responsibility

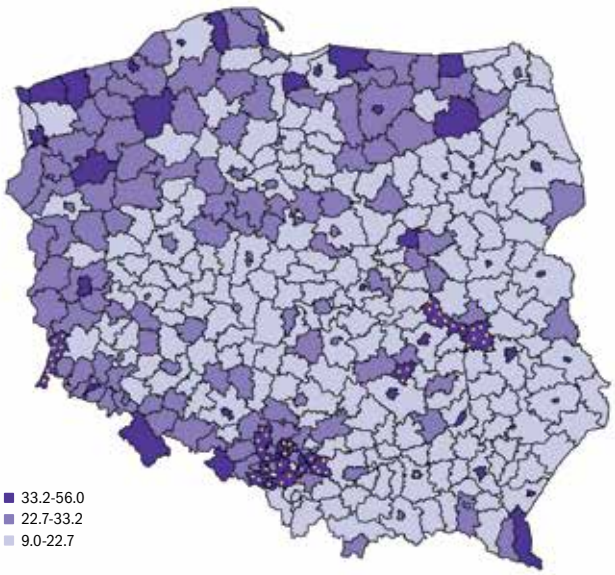
CHART 2.10.

State employment is higher in Polish regions with high unemployment

Average unemployment rate, per cent, 2012-18



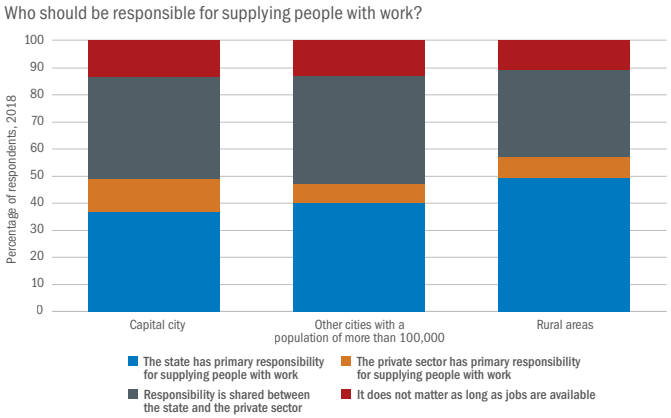
State employment as a percentage of total employment, per cent, 2018



Source: National Statistics Poland and authors' calculations.
Note: In the right-hand panel of this chart, "state employment" is defined as employment by a public-sector entity that is more than 50 per cent state-owned. Dots denote *powiats* in which industry accounts for a high percentage of employment.

CHART 2.11.

Residents of rural areas are more likely to regard the state as having primary responsibility for creating jobs



Source: OeNB Euro Survey and authors' calculations.
Note: Shares are weighted using census population statistics for age, gender, region, education and ethnicity (by country), before calculating simple averages across Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Poland, Romania, North Macedonia and Serbia. Respondents who replied "don't know" or declined to answer are excluded.

ALMOST HALF OF ALL EURO SURVEY RESPONDENTS LIVING IN RURAL AREAS OF EBRD ECONOMIES THINK THAT THE STATE SHOULD HAVE PRIMARY RESPONSIBILITY FOR PROVIDING EMPLOYMENT, COMPARED WITH ONLY 37% OF THOSE LIVING IN CAPITAL CITIES

for providing people with work. In the nine EBRD economies, almost half of all respondents living in rural areas thought the state should have primary responsibility for providing employment, compared with only 37 per cent of those living in capital cities. That difference remains statistically significant when controlling for individual characteristics such as age or education (see Chart 2.11 and Box 2.4).

Public-sector employment as an automatic stabiliser

Over the longer term, as discussed in Chapter 1, there has been an increasing tendency for the state to take on the role of insurance provider, establishing a safety net to protect against things like unemployment, ill health and disability. Recently, however, technological changes have been shifting some risks back onto individuals, with fewer permanent contracts, more subcontracting, the rise of the gig economy and more zero-hours contracts. The people who have been most affected by these developments are actually those who are least willing or able to tolerate risks – those with lower levels of income and education. Partly as a reflection of this trend, support for the expansion of public ownership has been rising, as public-sector employment is commonly regarded as a less risky choice, with more risk-averse individuals being more likely to work in the public sector.

Public-sector employment responds less to the business cycle

There is a large body of literature showing that the investment and employment levels of state enterprises are typically less responsive to changing external conditions than those of private firms.[18] Similarly, Chapter 3 shows that state-owned banks tend to be more stable lenders during crises. During the global financial crisis, for example, job losses and wage cuts at state-owned firms were smaller than they were at private firms.[19] The EBRD's new survey of the legal frameworks governing state enterprises, which is discussed in the last part of this chapter, reveals that as many as a quarter of all economies in the EBRD regions explicitly restrict the dismissal of state enterprises' employees, over and above the job protection rules applicable to the private sector.

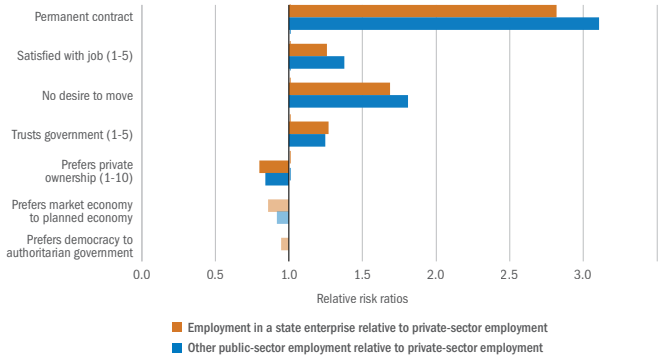
Public-sector employees less affected by the global financial crisis

Evidence from the Life in Transition Survey further corroborates these findings. Only 65 per cent of survey respondents who work for private firms in the EBRD regions have permanent contracts, compared with 82 per cent of people working for state enterprises (see Chart 2.12). Moreover, the crisis module in the 2010 round of the Life in Transition Survey also showed that public-sector employees were less likely to lose their job or experience delays in the payment of wages during the global financial crisis. These differences remain statistically significant when account is taken of individual characteristics such as age or gender, the size of the firm, and the sector and country of employment.[20] The employees of state enterprises

[18] See Boeing-Reicher and Caponi (2016), Chen et al. (2017), Clark and Postel-Vinay (2009), Jaslowitzer et al. (2016) and O'Toole et al. (2016).
[19] See IMF (2019), Jaslowitzer et al. (2016), Telegdy (2016) and Vladisavljević (2020).
[20] As one might expect, wage delays are determined primarily by the country and sector of employment, rather than individual characteristics.

CHART 2.12.

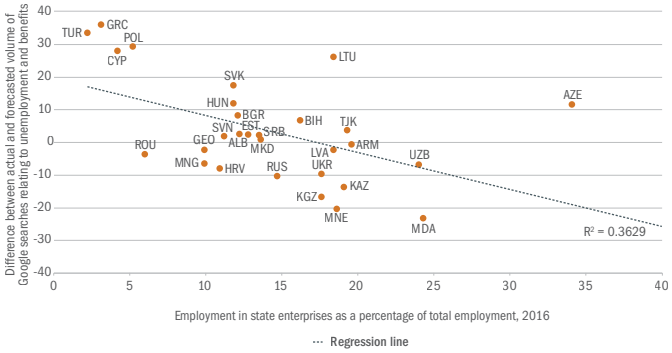
Public-sector employees are more likely to have a permanent contract



Source: Life in Transition Survey 2016 and authors' calculations.
Note: These estimates are derived from logit or ordered logit models with country fixed effects and country clustered standard errors. The sample is restricted to the EBRD regions. A coefficient larger than 1 suggests that being employed by a state enterprise or another public-sector entity increases the likelihood of the listed outcome relative to being employed in the private sector. Darker colours denote effects that are significant at the 5 per cent level. Regressions control for age, gender, marital status, urban/rural location, education and father's education.

CHART 2.13.

Thus far, people employed by the state have also been more shielded from the effects of the current crisis



Source: Life in Transition Survey 2016, Google trends and authors' calculations.
Note: The vertical axis measures changes in the volume of Google searches over the 18 weeks starting on 22 March 2020 relative to forecasts based on previous trends. State enterprises' share of total employment is estimated on the basis of the answers given by primary respondents in the Life in Transition Survey.

and other public entities are also more likely to be satisfied with their jobs and less likely to want to move, even after controlling for household income, and they also trust the government more.

Public-sector employees less affected by the Covid-19 crisis

Early evidence also seems to suggest that, so far, people employed by the state have been more shielded from economic hardship during the Covid-19 crisis.

In August 2020, the EBRD and the ifo Institute (an economic think-tank) conducted a representative survey of 40,000 adults in 14 countries (Belarus, Egypt, France, Germany, Greece, Hungary, Italy, the Netherlands, Poland, Serbia, Spain, Sweden, Turkey and Ukraine) in order to track the impact that the Covid-19 crisis was having on people in the EBRD regions. As many as 72 per cent of respondents in the EBRD regions reported being personally impacted by the economic crisis, compared with 41 per cent in advanced economies. The burden of the crisis in terms of job losses, furlough arrangements, unpaid leave, reduced hours and pay cuts is being borne disproportionately by younger people and those with lower levels of education and income.

People employed by private-sector firms are significantly more likely to have been negatively affected by the crisis than employees of state enterprises or other public-sector entities. Those differences remain statistically significant when account is taken of various individual characteristics.

Furthermore, Google searches relating to unemployment and benefits have increased less in economies where state enterprises account for a larger percentage of employment (see Chart 2.13).

82%
OF PEOPLE WORKING FOR STATE ENTERPRISES IN THE EBRD REGIONS HAVE PERMANENT CONTRACTS, COMPARED WITH
65%
OF THOSE WORKING FOR PRIVATE FIRMS

Over time, public-sector employees also appear to be able to accumulate larger savings buffers. Evidence from the latest edition of the Global Findex Database suggests that the percentage of respondents who say they can come up with emergency funds (equivalent to 5 per cent of gross national income per capita) over the next month is higher in countries with larger public sectors (see Chart 2.14). The more stable income streams that are associated with public-sector jobs may enhance an individual's ability to save, and this effect appears to outweigh the smaller need for precautionary savings among individuals with more stable sources of income. Individual-level evidence from the Life in Transition Survey confirms that people who are employed in the public sector are more likely to be able to come up with emergency funds than similar individuals (in terms of educational background, level of risk aversion and other characteristics) who work in the private sector, although the differences are smaller when household income is taken into account.

Trade-off between risk and growth

Thus, state enterprises can act as automatic stabilisers in the face of adverse economic shocks, providing more stable employment and income. To the extent that various well-documented inefficiencies in state enterprises lead to lower levels of innovation and weaker productivity growth, this points to a trade-off between risk and growth.

State enterprises innovate less

Evidence from the latest round of Enterprise Surveys confirms that state enterprises are indeed less likely to adopt new products and processes or invest in research and development (R&D) than similar private-sector firms (see Chart 2.15).[21] These effects are large, with state enterprises only about half as likely to innovate as comparable private-sector firms. Similarly, Chapter 3 shows that enterprises that borrow from state-owned banks are less likely to innovate than those borrowing from private sector banks. While the state has a major role to play in supporting innovation,[22] majority state ownership of enterprises and banks may not be an effective instrument for providing such assistance. Innovation can instead be supported by providing subsidies and grants for R&D, funding basic research, promoting effective links between public research institutions and the private sector, facilitating the supply of specialised skills and specialised finance and supplying high-quality information and communication technology infrastructure.

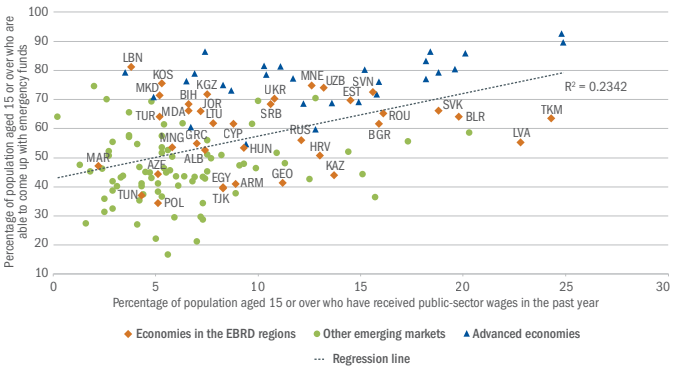
State ownership as a climate policy tool?

Some of the world's largest public companies are state-owned energy firms. This is increasingly giving rise to the question of whether state-owned enterprises could be used directly to support the transition to a green economy. Indirectly, the prevalence of state energy firms could potentially make it easier to overcome opposition to environmental regulations on the part of powerful (private) lobbies. At the same time, a few recent studies have highlighted state enterprises' greater environmental engagement in certain contexts and their importance for investment in renewable energy.[23]

Thus far, state enterprises have not been used as an explicit environmental policy tool in the EBRD regions. A new review of the legal frameworks that govern state enterprises across the economies of the EBRD regions reveals that only 15 per cent of countries have legal frameworks that refer to board responsibilities relating to environmental and social objectives (and in some cases, those responsibilities are only applicable to listed companies).

CHART 2.14.

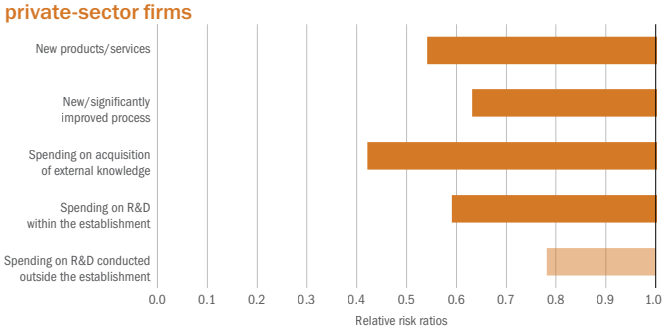
More households have buffers in countries with more state employment



Source: Global Findex Database 2017 and authors' calculations.
Note: The required amount of emergency funds varies depending on the economy's income per capita, ranging from US$ 50 in Tajikistan to US$ 1,100 in Slovenia.

CHART 2.15.

State enterprises in the EBRD regions are less likely to innovate than private-sector firms



Source: Enterprise Surveys and authors' calculations.
Note: The Enterprise Surveys do not cover firms that are 100 per cent state-owned. In this chart, "state-owned" is defined as a firm where the state owns more than 50 per cent. However, the results are also robust to defining state-owned enterprises as firms where the state owns more than 25 per cent. Relative risk ratios are based on logit regressions, controlling for the logarithm of firm age, the logarithm of employment, city size, sector and country fixed effects, and whether the firm has a board or a business strategy. These estimates are derived from unweighted regressions, with similar results being obtained when using median eligibility sampling weights. A coefficient smaller than 1 suggests that state-owned enterprises are less likely to adopt the relevant measure than a private-sector firm. Darker bars denote effects that are significant at the 5 per cent level on the basis of country clustered standard errors.

ONLY
15%
OF ECONOMIES IN THE EBRD REGIONS HAVE LEGAL FRAMEWORKS GOVERNING STATE ENTERPRISES THAT REFER TO BOARD RESPONSIBILITIES RELATING TO ENVIRONMENTAL AND SOCIAL OBJECTIVES

[21] See also Bortolotti et al. (2019), and Kou and Kroll (2018).
[22] See Mazzucato (2013).
[23] See, for example, Barnes (2019), Bergsager and Korppoo (2013), Hsu et al. (2017), Pan et al. (2020) and Prag et al. (2018).

Evidence from the Enterprise Surveys also suggests that while state enterprises are more likely to monitor emissions and have emissions-related targets, they are no more likely to engage in green investment than similar private firms. They are, for example, significantly less likely to invest in the upgrading of machinery, even when taking into account firms' sector, size and other characteristics. State enterprises also tend to consume more electricity, and more energy, per unit of output.

Detailed analysis of investment proposals submitted to the EBRD since 2010 corroborates these findings, suggesting that state-owned enterprises are no more likely to pursue environmental and social objectives than private-sector firms – and in many cases, less likely (see Box 2.5). It is clear, therefore, that if state ownership is to become a climate policy tool, policy action is required on the part of state enterprises' owners – national governments.

Winding down sunset industries: the example of coal

National governments and state enterprises are major players in fossil fuel markets. A few years ago, it was estimated that governments and state entities owned roughly 70 per cent of global oil and gas production assets, and around 60 per cent of the world's coal mines and coal power plants.[24] Moreover, the International Energy Agency (IEA) recently estimated that a group of 50 state enterprises in the power, oil and gas, iron and steel, and cement industries accounted for a combined total of more than 4 gigatonnes of greenhouse gas emissions in 2013 (CO_2 equivalent) – more than the national greenhouse gas emissions of all countries except the United States of America and China.[25] Against that background, this section looks specifically at state enterprises in the coal sector.

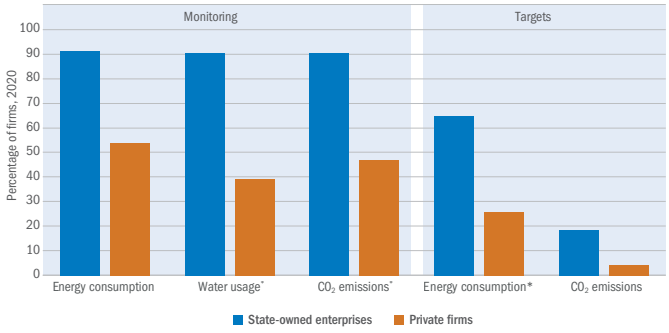
Coal still accounts for more than a third of global electricity generation and remains the second-largest fuel in the global energy mix after oil and the second-most-traded bulk commodity after iron ore.[26] In the EBRD regions, coal accounts for more than 80 per cent of electricity generation in Kosovo, Mongolia and Poland (see Chart 2.17). In countries which are both large consumers and large producers of coal (such as Kazakhstan, Poland and Turkey), coal is regarded as being important for energy security. Moreover, some countries in the EBRD regions (such as Mongolia and Russia) are major coal exporters.

Despite being a major polluter, the coal sector continues to receive large subsidies in many countries. When account is taken of subsidies relating to tax treatment, as well as damage to public health and the environment, total subsidies can exceed 30 per cent of GDP (see Chart 2.18).

State enterprises can play an important role in the winding-down of sunset industries, where privatising firms may be difficult. In most EU member states, there has already been a clear shift away from coal as a result of the implementation of stricter emission standards, the rising price of emissions under the EU Emissions Trading System (EU ETS; see Chapter 4), and growing competition from renewables and, in some

CHART 2.16.

In the EBRD regions, state enterprises are more likely to monitor emissions and have emissions-related targets



Source: Enterprise Surveys and authors' calculations.
Note: The Enterprise Surveys do not cover firms that are 100 per cent state-owned. In this chart, "state-owned" is defined as a firm where the state owns more than 50 per cent. Asterisks denote differences that are significant at the 5 per cent level in logit models controlling for the logarithm of firm age, the logarithm of employment, city size, sector and country fixed effects, and whether the firm has a board or a business strategy. These estimates are derived from unweighted regressions, with similar results being obtained when using median eligibility sampling weights.

GOVERNMENTS AND STATE ENTERPRISES OWN ROUGHLY
70%
OF GLOBAL OIL AND GAS PRODUCTION ASSETS, AND AROUND
60%
OF THE WORLD'S COAL MINES AND COAL POWER PLANTS

COAL ACCOUNTS FOR MORE THAN
80%
OF ELECTRICITY GENERATION IN SOME EBRD ECONOMIES

[24] See CPI (2014).
[25] See IEA (2016).
[26] See IEA (2020).

THE COAL SECTOR ACCOUNTS FOR UP TO 2.5% OF TOTAL EMPLOYMENT IN SOME EBRD ECONOMIES

cases, natural gas. Meeting national decarbonisation targets in 2030 will require 80 per cent of coal power capacity to be retired – with the higher quality bituminous coal and anthracite produced in Kazakhstan, Poland and Ukraine (which is also used in industrial processes) being less affected, given the challenges of phasing out coal in processes such as steel making.[27] In addition, an increasing number of banks and institutional investors are placing restrictions on investment in coal.[28]

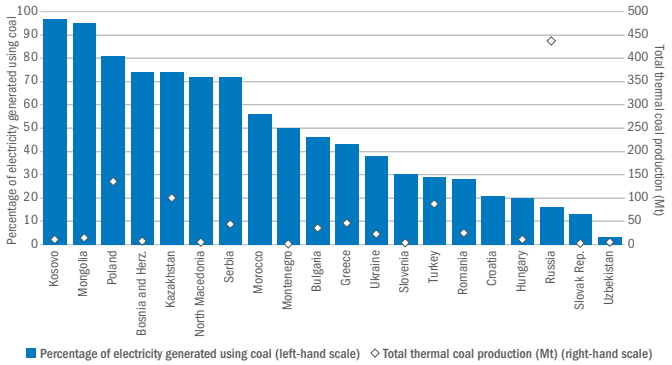
The fact that the Western Balkans countries and Ukraine are members of Europe's Energy Community means that they are legally obliged to implement adapted versions of the EU's energy and environmental legislation. While those economies' implementation of environmental standards is not as advanced as it is in the EU, a number of existing mines have been closed, and plans to build new lignite plants have been cancelled, as these will cease to be profitable as soon as the EU's Emissions Trading System is introduced.

As a result, the private sector is moving out of coal and other sunset industries, where state ownership often dominates. Thus, the state is left with the task of winding down large "stranded" assets and managing the decline in employment. Globally, companies with no state ownership own 14 per cent of operational coal power capacity, but account for only 3 per cent of the coal power investment pipeline.[29] Today, the coal sector is predominantly state-owned in most of central and south-eastern Europe. At the same time, significant private involvement in the coal sector can still be found in economies where environmental regulations remain less stringent, making operations more profitable (including countries such as Kazakhstan, Mongolia, Russia and Turkey).

The coal sector has traditionally been an important employer, both directly and indirectly, accounting for up to 2.5 per cent of total employment in economies such as Bosnia and Herzegovina and Kosovo. Furthermore, employment in the coal sector is also highly concentrated: it accounts for between 10 and 20 per cent of total employment in south-eastern Bulgaria and the region of Western Macedonia in Greece (see also Box 2.3 on employment in the mining industry in Polish counties).

CHART 2.17.

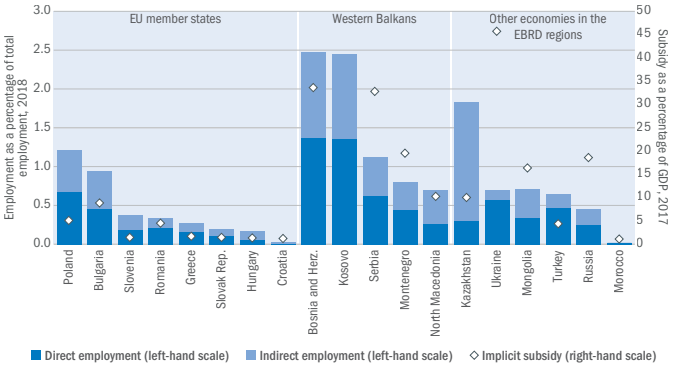
Coal plays an important role in the energy systems of many EBRD economies



Source: EBRD (2020).

CHART 2.18.

The heavily subsidised coal industry remains a major employer in many economies in the EBRD regions



Source: EBRD (2020), ILO, IMF Energy Subsidies Template, national authorities and authors' calculations.
Note: "Direct employment" refers to employees working at power plants and mines, as well as on-site contractors. "Indirect employment" includes off-site contractors, suppliers and their workers, and jobs created through the distribution of mining products (such as transport and accommodation for mine workers). These estimates do not include induced employment resulting from consumption by direct and indirect employees. Implicit subsidies exceed direct fiscal support and comprise both consumption and production-related subsidies (including damage to public health and the environment that is not reflected in the price of coal).

Active state policies can help to deal with the legacy of coal mining. In the Netherlands, for instance, state-owned mines were successfully turned into a diversified petrochemicals multinational in the 1970s. In Germany, meanwhile, public-sector jobs are being created at new agencies in coal-mining areas in the east of the country to compensate for concentrated job losses. Against that background, Chapter 4 looks at the EBRD's "just transition initiative" in the EBRD regions.

[27] See EBRD (2020).
[28] See IEA (2019, 2020).
[29] See Prag et al. (2018).

State enterprises as energy giants: the example of national oil companies

National oil companies (NOCs) produce approximately 55 per cent of the world's oil and gas and control up to 90 per cent of global oil and gas reserves.[30] They manage multi-billion-dollar portfolios of public assets, account for large percentages of government revenue, employ tens or even hundreds of thousands of people and make large investments in infrastructure (see Chart 2.19). A single NOC can account for more than 1 per cent of a country's total employment. In some cases (such as SOCAR in Azerbaijan), their revenues even exceed the country's GDP. Transfers from NOCs to national governments in the EBRD regions range from 2 to 18 per cent of total general government revenue (see Chart 2.20). In some cases, NOCs are also tasked with achieving public policy objectives (with Ukraine's Naftogaz, for example, providing subsidised energy to households).[31]

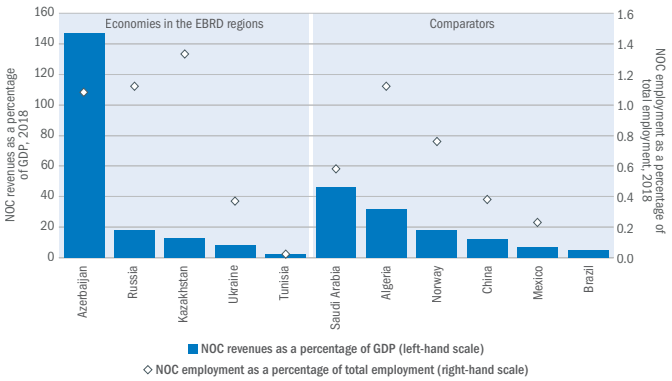
At the same time, some NOCs are highly indebted. Their long-term liabilities can be as high as 49 per cent of GDP in the EBRD regions (see Chart 2.20). NOC debt can take various different forms, such as corporate bonds, loans from banks, oil-backed loans from other NOCs or traders (as in the case of KazMunayGas, Kazakhstan's state-owned oil and gas company), or loans from a government entity. While their debts may not formally be guaranteed by the government, they are likely to be considered "too big to fail".[32] Indeed, several NOCs have received large government bailouts in recent years. The bailout of KazMunayGas in 2015 (which had a total value equivalent to 2.2 per cent of Kazakhstan's GDP) had no bearing on the country's credit rating, consistent with pre-existing market perceptions of implicit state support for national oil companies.

Almost two-thirds of NOCs exhibit "weak" to "failing" performance in the area of public transparency, as measured by the Resource Governance Index. Disclosure is weakest in countries with weaker country-level governance and in the areas of employment and spending.[33] Transparency and accountability can be increased through initiatives such as the Extractive Industries Transparency Initiative (EITI), which seeks to strengthen the disclosure of information about transactions throughout the extractive industry value chain – from the awarding of extraction rights to the transferring of revenues to the government – as well as information about how transactions benefit the public. This is important, as NOCs' choices in respect of the management of climate-related financial risks have a significant bearing on their countries' economic resilience and levels of ambition under the Paris Agreement.[34]

There have been a few examples of NOCs proactively integrating climate policy in their operations – for instance, through green procurement regulations and the mitigation of upstream emissions. This is often driven by commercial imperatives (including access to carbon finance), particularly where companies have minority private shareholdings. Meanwhile, NOCs in countries as diverse as Colombia, Nigeria and Saudi Arabia have turned their attention to investment in renewable energy. NOCs could further leverage their experience of managing complicated projects in cooperation with international partners in order to help foster the transition to a green economy. However, NOCs' strong reliance on fossil fuel rents (the difference between the international price of oil and gas and the cost of production) may make them reluctant supporters of alternative sources of energy.[35]

CHART 2.19.

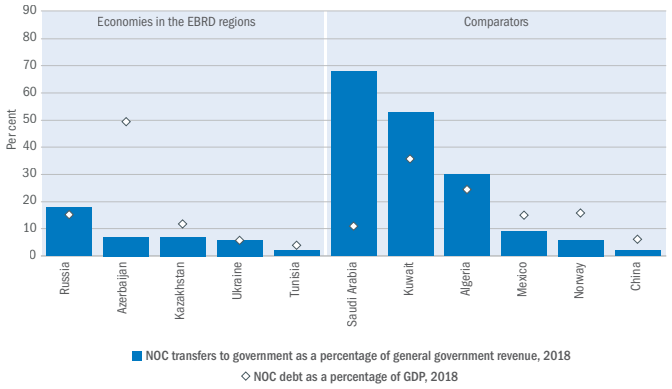
NOCs are typically very large



Source: ILO, National Oil Company Database and authors' calculations.
Note: Employment data for Azerbaijan and Mexico relate to 2016 and 2017 respectively.

CHART 2.20.

NOCs are important sources of government revenue, but can also be highly indebted



Source: National Oil Company Database and authors' calculations.

[30] See World Bank (2011).
[31] See Natural Resource Governance Institute (2019).
[32] See Manley et al. (2019).
[33] See Natural Resource Governance Institute (2019).
[34] See Bradley (2020), Bradley et al. (2018), and Heller and Mihalyi (2019).
[35] See Manley et al. (2019).

NATIONAL OIL COMPANIES PRODUCE APPROXIMATELY

55%

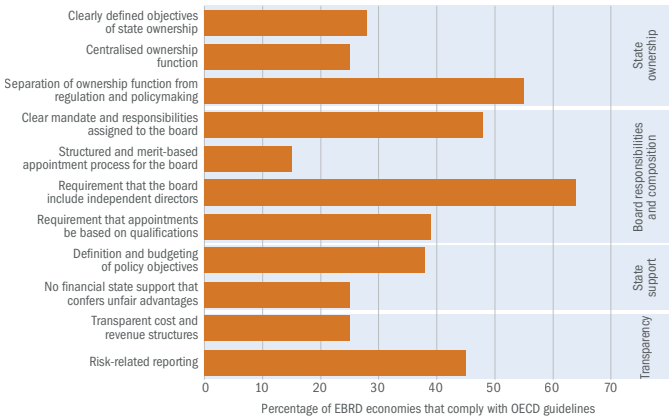
OF THE WORLD'S OIL AND GAS AND CONTROL UP TO

90%

OF GLOBAL OIL AND GAS RESERVES

CHART 2.21.

Few economies in the EBRD regions comply with the OECD Guidelines on Corporate Governance of State-Owned Enterprises



Source: EBRD and authors' calculations.
Note: These data are based on a review of the country-level legal frameworks that govern state enterprises in 36 economies in the EBRD regions. The assessment of compliance for the purposes of this chart is loosely based on key recommendations set out in the OECD guidelines, and was prepared after the aggregation of findings across multiple components within each jurisdiction.

Improving state enterprises' governance

As previous sections have shown, governments often struggle to manage state enterprises effectively. While market competition and exposure to capital markets have triggered improvements in some cases, poorly run state enterprises still have the potential to pose significant risks to government budgets, divert labour and capital resources away from more efficient uses, and become conduits for corruption. Improvements in governance are key to ensuring that state enterprises are able to deliver value to their ultimate beneficiaries – the taxpayers.

This section presents detailed analysis of state enterprises' governance, examining the existing governance frameworks in the EBRD regions and highlighting areas for improvement (see also the Structural Reform section). This analysis draws on a comprehensive new review of the country-level legal frameworks that govern state-owned enterprises in 36 economies in the EBRD regions. It is complemented by an in-depth examination of state enterprises' compliance with corporate governance rules, drawing on a review of the corporate governance disclosures of more than 100 state enterprises in 23 economies in the EBRD regions. Lastly, this section looks specifically at the lessons that have been learnt from the EBRD's work with state enterprises.

Unique governance challenges

State enterprises face unique governance challenges as a result of the array of financial and non financial objectives that states seek to achieve through their operations – a situation that is further compounded by the complexity of states' administrative structures. As a shareholder, the state aims to run its enterprises in the interests of society as a whole. In so doing, it should act as an "informed and active owner", setting high-level objectives and giving state enterprises a clear framework to operate within, while also giving enterprises sufficient autonomy to draw up their own business strategies and pursue those objectives in their preferred manner.[36]

THE LONG-TERM LIABILITIES OF NATIONAL OIL COMPANIES IN THE EBRD REGIONS CAN BE AS HIGH AS

49%

OF GDP

State ownership policies remain uncommon

The OECD Guidelines on Corporate Governance of State-Owned Enterprises encourage countries to draw up state ownership policies that set out, among other things, the rationale for state ownership and the state's overall objectives as an owner. In general, however, the objectives of state ownership are not clearly defined in the economies of the EBRD regions (see Chart 2.21), with the state's ownership often simply a legacy of central planning. Less than a third of all economies in the EBRD regions have formal documents, policies or laws specifying the overarching objectives of state ownership, very few of which qualify as a state ownership policy as such (see also Box 2.6, which looks at the development of a state ownership policy in Uzbekistan).

[36] See OECD (2015).

Lack of transparency around public service obligations

The OECD guidelines also call for public service obligations to be clearly mandated and disclosed. Costs relating to their performance should be funded by the state and subject to high levels of transparency in terms of cost and revenue structures. Such public service obligations are very common, being observed in around 90 per cent of the economies in the EBRD regions. They typically involve providing a universal service (such as postal or railway services) for less than the total cost of delivering it, providing services to specific categories of client at artificially low prices (for instance, supplying electricity or gas to households on the basis of regulated tariffs), or providing subsidised services in specific regions (such as transport services in remote areas). It is typically the case, however, that public service obligations are not clearly defined in regulations and are not explicitly budgeted for. This is true (with exceptions relating to specific enterprises, sectors and services) of almost two-thirds of the economies in the EBRD regions. At firm level, more than 85 per cent of state enterprises do not explicitly disclose the existence of public service obligations or associated budgeting.

Weak or ad hoc budgetary governance creates fiscal risks and cycles of dependence between state enterprises and governments: state-owned enterprises are used to provide subsidies, but they incur losses, accumulate debt and need to be bailed out.[37] Subsidies and grants to state enterprises can be observed in almost all EBRD economies (being subject to EU rules on state aid in EU member states). What is more, such subsidies are typically calculated after losses have been incurred. Determining the level of subsidies in advance on the basis of objective measures capturing public service obligations (for instance, per end-user of the service) could strengthen accountability and increase incentives to improve the operational efficiency of state enterprises. Subsidised or targeted loans to state enterprises are slightly less common – and where they are used, they tend to be channelled through state-owned banks or development banks (see Chapter 3).

IN ALMOST
45%
OF ECONOMIES IN THE EBRD REGIONS, ENTITIES EXERCISING OWNERSHIP DUTIES ARE ALSO RESPONSIBLE FOR SECTORAL POLICY DECISIONS

Tax exemptions and tax benefits are rare, being observed in only 22 per cent of the economies in the EBRD regions. The majority of the economies in the EBRD regions do not normally allow state guarantees to be provided, although more than 65 per cent allow exceptions subject to parliamentary legislation or government approval.

Strengthening the disclosure of information

In more than a quarter of all economies in the EBRD regions, information on the loans, grants, subsidies and guarantees that are received by state enterprises is not publicly disclosed in any way. Even in situations where disclosure is legally required, disclosed information is often limited and difficult to access. Corporate governance disclosures are only very limited in 63 per cent of state enterprises in the EBRD regions, and are especially limited in municipally owned companies. Many state enterprises (especially fully state-owned or unlisted enterprises) have no clear audience for this information, so disclosure needs to be a legal requirement. Box 2.7 looks at the successful introduction of a public disclosure system in South Korea, where public institutions are obliged to disclose a range of financial and non-financial information on a regular basis.

Multiple agencies representing the state as owner

In general, the state keeps a firm grip on state enterprises, frequently doing so with multiple hands. The centralised state ownership function that is recommended by the OECD as a best practice – whereby all or most state enterprises are overseen by a single entity – exists in only a quarter of all economies in the EBRD regions. A centralised ownership function can contribute to the streamlining of oversight efforts in the event of multiple state enterprises and can help to draw a clear distinction between the state's ownership of the enterprise in question and its policymaking and regulatory functions.

Even in the economies where a centralised ownership function exists, that entity often lacks the powers that are necessary to adequately scrutinise state enterprises. In 36 per cent of economies ownership is exercised by means of a dual model, whereby responsibilities are shared between two authorities, such as the line ministry and the government, or the line ministry and the ministry of finance. The remaining economies operate a decentralised model, whereby multiple authorities (mainly line ministries) supervise state enterprises in their own respective areas of competence. In practice, state-owned enterprises are heavily influenced by line ministries. Indeed, in almost half of all economies in the EBRD regions, line ministries hold shares in at least some – and in some cases, all – state-owned enterprises. Moreover, firm-level analysis confirms that most key state enterprises are owned by line ministries. Municipal or regional authorities, ministries of finance and economic affairs, national holding companies or funds, other state enterprises and the cabinet or parliament can also play a role when it comes to exercising ownership functions.

[37] See IDB (2019).

MORE THAN HALF
OF ALL STATE ENTERPRISES IN THE EBRD REGIONS HAVE BOARDS THAT DO NOT HAVE THE AUTHORITY TO APPROVE THEIR ENTERPRISES' STRATEGIES OR BUDGETS

Separating ownership and regulatory duties

Conflicts of interest are widespread. The ownership function needs to be adequately separated from the state's regulatory and policymaking functions in order to ensure a level playing field and avoid undue interference in the operations of state enterprises. However, in almost 45 per cent of economies in the EBRD regions, entities exercising ownership duties are also responsible for deciding on industrial and regulatory policy. Meanwhile, in 19 per cent of countries there are state enterprises that have their own regulatory powers (in the electricity and gas sectors, for instance).

In line with the low-risk, low-return model discussed earlier in the chapter, the management of state enterprises often focuses mainly on compliance. State enterprises are often governed by very detailed legal frameworks, with only limited autonomy to make decisions. Indeed, they can often be thought of as operating in an environment where "everything is prohibited unless it is explicitly allowed", as opposed to "everything is allowed unless it is explicitly prohibited".

Strengthening the role of state enterprises' boards

Less than half of the economies in the EBRD regions confer extensive responsibilities on the boards of state enterprises. Strikingly, almost 50 per cent of all state-owned enterprises in the EBRD regions have boards that do not have the authority to approve their enterprises' strategies or budgets. Boards often lack independence, and it is frequently the case that the composition of boards is not adequate to ensure effective and independent supervision of state enterprises. Moreover, as many as 70 per cent of the economies in the EBRD regions allow high-level and elected officials to sit on the boards of their state enterprises, in contravention of OECD guidelines. It is often the case, too, that the process of appointing people to the board is inconsistent and lacks transparency, with only 15 per cent of the economies in the EBRD regions having a requirement for a nomination policy. While 64 per cent of economies require boards to include independent directors, only 39 per cent have specific requirements relating to the composition of boards which cover all state enterprises, and even these are typically insufficient to ensure balance and diversity of qualifications and backgrounds.

State enterprises also conduct very little risk analysis. Their strategies are rarely assessed from a risk perspective, with specific risks and mitigating measures not generally being set out in budgets. Most state enterprises reviewed in the study have no risk department, so there is no organisational framework for acting on external risk analysis, and more than 50 per cent of the economies in the EBRD regions do not impose any risk-related reporting requirements. Those that do only require the disclosure of general risk factors in the context of annual reports, rather than obliging state enterprises to report on the way that they deal with the risks they face in their operations.

The way forward

The EBRD's work with clients in the context of corporate governance action plans provides some indication of how state enterprises' governance can be improved. Clear state ownership policies should be established at country level, while state enterprises need assistance in order to develop strategies that (i) are anchored to their budgets and any public service obligations, (ii) explicitly incorporate potential risks and (iii) can be monitored using measurable key performance indicators (KPIs). Board responsibilities should be strengthened, with boards being granted the authority to carry out strategic planning and oversight, as well as being given control over the use of resources. And the composition of boards should be improved, with greater transparency regarding appointments, disclosure of qualifications and selection processes, and measures to ensure the independence of board members. (Against that background, Box 2.8 looks at how connections affect the effectiveness of both state enterprises and private firms.) Internal control functions should also be improved, with a focus on the reporting of risks to the board.

Fiscal risks need to be managed by making state support more transparent and requiring analysis of the key risks faced by state companies. Transfers to state enterprises (in relation to public service obligations, for instance) should be based on concrete formulae. And state enterprises' budgets should include sensitivity analysis, using a variety of macroeconomic and operational scenarios and stress tests to inform estimates of contingent liabilities for the government (particularly in the context of large capital projects). More generally, governments need to track the financial performance of state-owned enterprises, both with and without government transfers, and perform risk analysis in respect of such enterprises' liabilities (including adverse scenarios involving declines in output prices or increases in input prices).[38]

AS MANY AS
70%
OF ECONOMIES IN THE EBRD REGIONS ALLOW HIGH-LEVEL AND ELECTED OFFICIALS TO SIT ON THE BOARDS OF THEIR STATE ENTERPRISES

[38] See IDB (2019).

Conclusion

State-owned enterprises account for about half of total state employment in the EBRD regions. They dominate the energy and transport sectors, where they are important providers of services such as railway transport and municipal utilities, which are often subsidised to ensure that services are affordable for people living in remote areas and low-income households. While the private sector is able to provide such services under public service obligations with the support of various compensation schemes, countries often rely on the direct provision of services through state enterprises, particularly where their administrative capacity limits their options in terms of the delivery of services.

State enterprises can also act as automatic stabilisers, providing more stable sources of employment during downturns and in disadvantaged regions. For example, the results of a representative household survey conducted by the EBRD and the ifo Institute in August 2020 suggest that employees of state-owned firms were less likely to lose their job or see their income reduced in the early months of the Covid-19 crisis, in line with the developments seen in the aftermath of the 2008-09 global financial crisis. Against that background, public-sector employment tends to play a more important role in regions with higher unemployment rates. More stable employment in the face of adverse economic and technological shocks can help to reduce negative externalities associated with rising inequality and the erosion of social cohesion and trust. Moreover, state enterprises can also play an important role in the winding down of stranded assets in sunset industries such as coal, mitigating the highly localised adverse shocks to employment that result from such developments.

On the other hand, however, governments often struggle to manage state enterprises effectively. For instance, survey evidence suggests that state-owned firms are only half as likely to innovate as equivalent private firms. Moreover, the objectives of state ownership are often not clearly defined in the EBRD regions, and responsibilities relating to state ownership may be spread across multiple state entities with conflicting interests. At the same time, the management of state enterprises is often seen as an exercise in compliance, with little attention being devoted to strategy or risk management. Meanwhile, the fact that the extensive state support provided to such enterprises is not transparent reduces their accountability. And as far as environmental objectives are concerned, there is little evidence that state-run firms are more environmentally friendly than private companies with similar characteristics.

A country's broader institutional context also matters. Where economic institutions are weak, private firms may become heavily embedded in the networks of state enterprises and politicians, giving rise to rent-seeking behaviour and inefficient allocation of resources. Where economic institutions are strong, however, state companies can be run efficiently while delivering on public service obligations and other non-financial objectives.

As discussed in Chapter 1, the Covid-19 crisis may boost demand for state involvement in the economy and increase support for the expansion of state ownership. This will make it even more important to improve countries' institutional frameworks and the governance of state enterprises – particularly in terms of setting out the objectives of state ownership, clarifying the ownership responsibilities of state agencies, separating ownership and regulatory functions, and strengthening the independence of state enterprises' boards.

BOX 2.1.

State-owned enterprises in the southern and eastern Mediterranean

State-owned enterprises in the southern and eastern Mediterranean region are a legacy of the inward looking socialist policies that were adopted in those economies in the early years following independence. Those enterprises played an important role in the formation of the state, being set up to support industrial and social development in the late 1950s and the 1960s. Firms in the natural resources sector and other strategic sectors were nationalised, with major investment in infrastructure, education and healthcare supporting industrialisation and growth.

As a result of the expansion of social services, the public sector has become the dominant employer in many of those economies.[39] While state-owned enterprises only account for around 17 per cent of total state employment in the economies of the southern and eastern Mediterranean, compared with an average of 44 per cent in the EBRD regions as a whole, over-employment in state-owned enterprises has, nonetheless, been widely documented.

Macroeconomic difficulties resulting from falling oil prices, high levels of government debt, weak private investment and inefficiencies at state-owned enterprises triggered a wave of market liberalisation, deregulation and privatisation in the late 1980s and the 1990s. While that privatisation process generated significant revenue in some countries (such as Egypt, Morocco and Tunisia), it also encountered administrative challenges and popular resistance, culminating in demonstrations and strikes. Institutions' weaknesses created space for widespread corruption, and people with political connections benefited disproportionately from privatisation.[40]

Today, state enterprises in the southern and eastern Mediterranean continue to play a major role in primary sectors (such as phosphate mining), certain branches of manufacturing (such as chemicals, but also consumer goods), finance and real estate. Some have monopoly rights in sectors that could otherwise be competitive, often operating using regulated tariffs – as is the case, for instance, in the cereal, olive oil, meat and sugar sectors in Tunisia.[41]

State enterprises and the broader public sector remain important elements of the social contract in those economies, being viewed as a source of jobs, part of the social safety net and a vehicle for public investment. When the state enterprise sector was downsized in Egypt, it resulted in the culling of unproductive but relatively well-paid employment, but was not accompanied by sufficient strengthening of the social safety net or job creation in the private sector. That was arguably one of the factors that contributed to the unrest seen in 2011.[42]

State-owned enterprises remain important providers of subsidised services. In Egypt, for instance, the military has historically used state-owned enterprises to build affordable housing for the country's security forces, and that mandate has recently been expanded to include the provision of social housing more generally. In Morocco, meanwhile, the national electricity company has implemented a 15-year electrification programme, and the national highway construction company has been busy building new rural roads.[43] However, compensation for such non-financial objectives does not tend to be transparent and is typically only regulated in a few sectors. In some cases, such payments constitute a significant drag on countries' budgets.[44]

The governance challenges discussed in this chapter are a significant issue in the southern and eastern Mediterranean. With the exception of Egypt, which has set out broad objectives governing state ownership, no country in the region has a state ownership policy. Most of the region's economies have complex decentralised ownership arrangements, with managerial responsibilities being undertaken primarily by line ministries. Jordan, the West Bank and Gaza, and Morocco have elements of a dual system, with the ministry of finance playing a key role, while in Egypt, Tunisia and Lebanon there is some limited coordination by central bodies. In many cases, entities exercising ownership responsibilities also have regulatory powers or are responsible for sectoral policies, although in some cases independent regulators have been set up (notably in the telecommunication, transport and electricity sectors) with the aim of introducing competition in previously monopolised markets.

The boards of state-owned enterprises only have strategic responsibilities in half of the region's economies. Moreover, there are limited regulatory requirements ensuring that boards have an appropriate composition. Most countries have rules requiring the publication of information on state enterprises' ownership, their performance (in the form of annual reports, for example) and the regulatory arrangements governing things like state assistance. However, such rules are not always followed in practice – neither by the companies themselves nor by regulators. Even if information is collected, it is not generally aggregated or made easily accessible to the public, thereby reducing transparency and accountability.

[39] See OECD (2013), OECD (2018b) and World Bank (2015).
[40] See World Bank (2015).
[41] See Morsy et al. (2018) and OECD (2018b).
[42] See OECD (2013).
[43] See OECD (2013).
[44] See OECD (2013) and Morsy et al. (2018).

BOX 2.2.

Private-sector involvement in district heating in Romania

In socialist times, district heating was provided as a public service and treated as a natural monopoly for regulatory purposes. That remains the case in many of the economies in the EBRD regions, although some central European countries (such as Poland) have substantially deregulated their district heating sectors. Unlike water or electricity, district heating can potentially face some degree of competition from alternative heat sources (such as individual gas boilers, electric heating or individual stoves fuelled by coal or biomass). Customers can, in theory, opt out of district heating, reducing the revenues of service providers and potentially resulting in inefficient distribution networks.

District heating services are relatively costly and can account for a significant percentage of a household's income during the heating season, making the removal of heating subsidies politically difficult. Indeed, the results of the latest round of the Life in Transition Survey indicate that around 30 per cent of households in the EBRD regions' poorest income decile are unable to afford adequate heating of their home. This could help to explain why district heating is more likely to be state-owned than other utilities.

At the same time, investment needs in the area of district heating are particularly large in the EBRD regions following years of under-investment. Those economies' distribution systems were not designed for individual metering or user control, making the introduction of consumption-based billing costly and difficult. In addition, many secondary cities in the EBRD regions have falling populations and industries that are in decline. In the past, for instance, industrial plants were often major consumers of heat, surrounded by residential neighbourhoods. In such circumstances, heating networks and production facilities may need to be re-scaled and re-routed, as oversized systems are unable to operate economically.

Tariffs are typically set below cost-recovery levels to ensure universal access. Thus, while the poor spend a larger percentage of their income on utilities, larger percentages of subsidies accrue to richer households who consume more energy. Under-pricing also results in excess consumption of heating and under-investment in energy-efficient buildings, with adverse implications for the environment.

From a service provider's perspective, municipal subsidies often lack predictability. In Romania, for instance, municipal subsidies are common in the district heating sector, while the water sector only receives investment grants. At the same time, however, the revenue stream is often uncertain, hindering long-term investment planning and encouraging utility companies to spend time lobbying city authorities rather than focusing on providing a high-quality service for users.

Many district heating utilities in the EBRD regions are effectively in a downward spiral of managed decline. Those downward spirals typically start with a heating utility struggling with a legacy of under investment and poor maintenance, which results in heating being provided at unpredictable temperatures. As dissatisfied customers disconnect, revenues fall and unit costs increase as the distribution network becomes oversized, exacerbating under-investment and further undermining the quality of the service. In many cases, this results in the service being withdrawn entirely. In Romania, for example, the total number of district heating systems has fallen from 315 in 1989 to just 43 today.

Most remaining district heating utilities struggle with their cash flow, despite public subsidies. They often accumulate debts to their energy suppliers, unpaid tax bills or other forms of debt and end up receiving government bailouts. Such soft budget constraints – which are prevalent in the district heating sector, but not the water sector – hamper the planning of investment, as well as the management of government budgets. Over time, they may also foster an implicit acceptance of the notion that state enterprises do not need to honour contractual agreements.

It is not impossible for state-owned district heating utilities to be financially sound and well-run, with positive examples typically being found in countries with mature commercial and governance frameworks, such as the Nordic countries. In countries with weaker public governance frameworks, well-defined private-sector participation in the form of public-private partnerships or management contracts may help to clarify contractual arrangements, achieve an arm's-length relationship between the utility's management and local authorities and do away with soft budget constraints. The district heating utility in the Romanian city of Iaşi experienced most of the challenges described above, including a persistent failure to pay key suppliers. When it filed for bankruptcy in April 2012, the city signed a 20-year concession contract with a private operator, Dalkia Termo Iaşi. District heating remains subsidised and significant investment is still needed, but transfers from the city budget have become predictable. The accumulation of debt has slowed and the disconnection rate has fallen, reflecting improvements in the quality of service – a major step towards breaking the vicious circle of persistent underfunding and a shrinking customer base.

BOX 2.3.

Regional distribution of state employment in Poland

This box examines the spatial distribution of state employment in Poland using disaggregated data on employment by type of ownership and sector for 380 Polish *powiats* (units of local government that are roughly equivalent to UK counties). State employment accounted for about 21 per cent of total employment in Poland in 2018, with that share ranging from about 10 per cent in counties in the regions of Lódzkie (in central Poland) and Mazowieckie (around Warsaw) to 55 per cent in some counties in the coal-mining region of Śląskie.

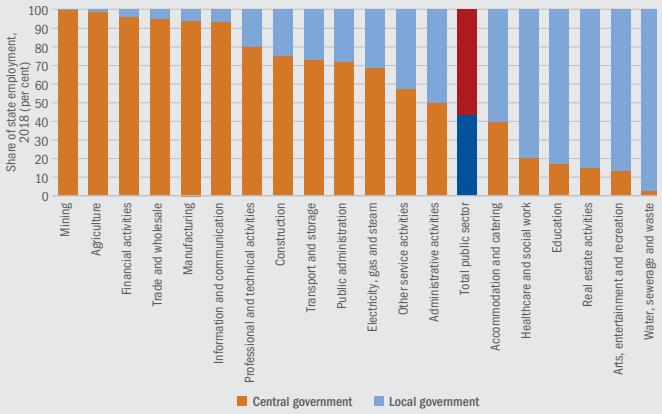
Much of that employment is in public services, including public administration, education, healthcare, social work, utilities (water supply, sewerage and waste, as well as electricity, gas and steam), transport and storage. The public sector also accounts for around three-fifths of all employment in the mining sector, which primarily involves the extraction of coal. While mining only accounts for around 1 per cent of total employment in Poland, that employment is highly concentrated. In the southern regions of Śląskie and Małopolskie, for example, it accounts for 3 per cent of total employment, and 85 per cent of the mining employment in those regions is in the public sector.

Almost half of all state employment in Poland is in entities that are run or owned by local governments (see Chart 2.3.1), including most public-sector employment in the areas of education, healthcare, social work, water supply, sewerage and waste. In contrast, state employment in sectors such as mining, agriculture and manufacturing is overwhelmingly in entities that are owned or run by the central government.

State employment tends to be higher in disadvantaged regions, where unemployment rates are higher (for instance, in northern, eastern and parts of south-western Poland). Indeed, the public sector's share of employment is, on average, 3 percentage points higher in counties with unemployment rates of around 20 per cent (the 90th percentile of the distribution of unemployment across counties) relative to counties where unemployment is around 6 per cent (the 10th percentile). Those differences are even more pronounced when account is taken of other county-level characteristics, such as demographics, the sectoral composition of the economy or regional effects. Overall, a 1 percentage point increase in a county's unemployment rate is associated with a 0.5 percentage point increase in the public sector's share of employment.

CHART 2.3.1.

Almost half of all state employment in Poland is in entities that are owned or run by local governments



Source: National Statistics Poland.
Note: "State employment" is defined here as employment by an entity that is more than 50 per cent state-owned.

STATE EMPLOYMENT AT LOCAL/MUNICIPAL GOVERNMENT LEVEL ACCOUNTS FOR AROUND HALF OF TOTAL PUBLIC-SECTOR EMPLOYMENT IN POLAND

That relationship is driven by the fact that the public sector accounts for a larger percentage of total employment in "non-business services" such as public administration, education or healthcare. In counties with less private-sector employment, post offices, train stations, municipal utility companies, hospitals and schools become more important as local sources of employment. Thus, public-sector employment is able to act as an automatic stabiliser in regions that experience adverse technological and economic shocks.

BOX 2.4.

Demand for state-led job creation in economically disadvantaged regions

This box looks at people's views on whether employment creation is primarily the responsibility of the state or the private sector and the ways in which those views vary across regions within individual countries. It is based on the results of the 2018 Euro Survey conducted by the Austrian National Bank, which covered 1,000 randomly selected adults in each of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, North Macedonia, Poland, Romania and Serbia.[45]

Those respondents were asked whether responsibility for providing people with work should fall primarily to the state, be shared between the state and the private sector, or fall primarily to the private sector, or whether it does not matter as long as jobs are available. Around 46 per cent of respondents across those nine economies believe that the state should have primary responsibility for providing jobs.

Views vary substantially within individual countries. While only about 37 per cent of those living in capital cities think that the state should have primary responsibility for providing jobs, that rises to around 49 per cent in rural areas (with the difference between the two being statistically significant). Support for state-led job creation in rural areas is particularly strong in Albania, Bosnia and Herzegovina, North Macedonia and Romania, with shares of between 54 and 66 per cent. Regression analysis taking account of various individual-level characteristics (such as age or gender) confirms that people living outside capital cities are more likely to think that the state should have primary responsibility for job creation.[46] People living in rural areas are also more likely to think that the state should have primary responsibility for providing education and medical services, building roads and organising the collection of waste.

People in poorer regions are also more likely to think that the state should have primary responsibility for job creation – both when looking at regional GDP per capita and when data on the intensity of night-time lights (which are available at a more disaggregated level) are used instead. That effect remains statistically significant when controlling for a range of household-level characteristics and the country of residence.

That effect could be driven by the fact that there are fewer alternative (private) employment opportunities in disadvantaged areas, as well as demand for the state to get involved in the local economy to help it catch up with the country's more prosperous regions. Personal exposure to public-sector jobs may also play a role, since (as shown in Chapter 1) people in rural areas are more likely to work in the public sector.

As noted elsewhere in this chapter, the direct provision of employment is just one of various ways that the state can support disadvantaged regions. In line with that, demand for state-led job creation in rural areas appears to be lower in EU member states, which benefit from EU structural and cohesion funds earmarked for low-income regions within countries. Conversely, the percentage of respondents who favour increased state spending on regional economic development is significantly higher in the Western Balkans economies (at an average of 64 per cent) than it is in the EU member states in the sample (where it averages 53 per cent).

[45] For country-level results based on this survey, see Box 3.2 in EBRD (2019).
[46] See Eller and Scheiber (2020) for details.

BOX 2.5.

ESG objectives of state-owned and private firms: evidence from project proposals submitted to the EBRD

This box analyses the key features of investment proposals submitted to the EBRD in the period 2010-19, with a particular focus on firms' environmental, social and governance (ESG) objectives. It examines the frequency with which ESG objectives featured in investment proposals, comparing private and public-sector clients,[47] with objectives being identified on the basis of textual analysis of economists' reviews of investment proposals presented to the EBRD's investment committee.

Data on proposed investment projects

Green energy and energy efficiency are both considered to be environmental objectives. These have been identified on the basis of official statements on the percentage of investment targeting green objectives.[48] Social objectives include work aimed at fostering skills and economic inclusion, as well as work on deepening supply chain linkages (typically involving smaller companies). Developing domestic supply chains is a commonly cited objective of industrial policy.[49] Large state enterprises, in turn, tend to be important consumers of products and services supplied by other firms or important suppliers of key production inputs. Governance objectives include work on corporate governance and initiatives targeting governance at sector or country level (legislation governing private-public partnerships or tariff reforms, for instance). Social and governance objectives have been identified on the basis of manual coding of a subsample of investment proposals and software-based textual analysis.

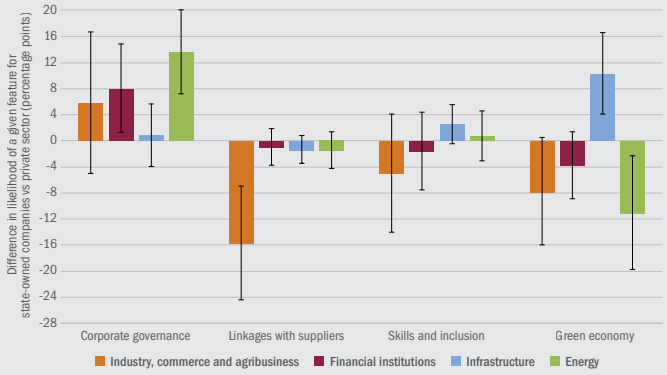
This analysis looks at the expected characteristics of an investment project when it is first reviewed by the EBRD's investment committee. Such snapshots, taken before in-depth due diligence has been conducted, are a good indicator of the client's initial interest in the various ESG objectives (as distinct from the final features of the project, which are a product of joint work by the EBRD project team and the client). For instance, at the concept stage, environmental elements are expected, on average, to account for 20 per cent of the funding invested, compared with an average of 39 per cent when projects are finally agreed. The analysis also takes account of various project-level characteristics, including the country, the industry, the expected amount of financing and a measure of the commercial risk involved in the transaction.

State-owned clients are more likely to target corporate governance objectives

First of all, this analysis shows that proposed work with public-sector counterparts is more likely to target corporate governance.[50] This difference is statistically significant at the 5 per cent level (see Chart 2.5.1). This is also true of sector and country-level governance, as private-sector clients and their owners have more limited scope to engage with sector-level issues. It is worth noting, however, that these findings on governance related objectives are based only on domestic state-owned companies, not those with cross-border state ownership.

CHART 2.5.1.

Project proposals involving public-sector clients are more likely to target corporate governance, less likely to focus on linkages with suppliers and off-takers, and less likely to focus on the green economy



Source: EBRD and authors' calculations.
Note: Based on 2,935 project proposals considered by the EBRD in the period 2010-19. All regressions are estimated using ordinary least squares and control for the country, the sector and various project-level characteristics. The 90 per cent confidence intervals shown are based on robust standard errors.

Mixed evidence on environmental and social objectives

Second, state enterprises are significantly less likely to explore issues relating to linkages with their suppliers and off-takers. Projects with those kinds of objective typically seek to train small and medium-sized suppliers, work on quality assurance and standards, or broaden supply chains using smaller local companies. Intuitively, the largest differences between state and private enterprises in this regard can be observed in the industrial and service sectors, and they can be observed for both companies with domestic state ownership and those owned by foreign states. There are no significant differences between state and private enterprises when it comes to issues relating to skills and inclusion (for instance, training programmes, human resources policies or inclusive procurement).

Third, state enterprises also appear to be less likely to want to engage with environmental issues, particularly in the energy and financial sectors. In the area of municipal infrastructure, on the other hand, state-owned companies are significantly more likely to explore green issues.

In conclusion, therefore, there is little evidence that state ownership necessarily makes enterprises more likely to target policy objectives in the area of the green economy or develop local supply chains and skills. State-owned companies are no more likely than private companies to actively engage in these areas (and in some instances, they are less likely to do so). Using state enterprises as an ESG policy tool will therefore require more action on the part of their owners – national governments.

[47] This analysis is based on the background work reported in Gamtkitsulashvili et al. (2020).
[48] See EBRD (2018b) for a discussion of how the Bank determines which percentage of a proposed investment will support the transition to a green economy.
[49] See, for instance, Rodrik (2005).
[50] See also Hsu et al. (2017).

BOX 2.6.

Developing a state ownership policy in Uzbekistan

State-owned enterprises play an important role in the Uzbek economy, with 100 per cent state-owned firms accounting for 19 per cent of GDP. At the same time, establishing effective governance structures and privatising state firms are seen as key objectives in Uzbekistan's economic reform programme. A new strategy drawn up by the country's State Assets Management Agency – a government body with a mandate to manage state-owned assets and execute privatisations – sets out the main principles governing the management of state assets, in line with the OECD Guidelines on Corporate Governance of State-Owned Enterprises, and is expected to become law.

That strategy stipulates that state ownership of enterprises is only appropriate for (i) natural monopolies, (ii) the provision of essential infrastructure services or public services that are not commercially viable, and (iii) areas of strategic interest such as defence and other specific industries (including precious metals and nuclear power plants). Other enterprises should be earmarked for either privatisation, liquidation or conversion into government agencies.

State-owned firms are also expected to set out their commercial and non-commercial objectives (in their company charters and annual business plans, for example). This is expected to lead to increased transparency when it comes to the provision of government subsidies, which are widely used to compensate state enterprises for delivering on their non-commercial objectives.

The strategy also aims to reduce conflicts of interest by separating the state's ownership and regulatory functions by 2023, since it is often the case that government bodies both own and regulate state firms. At present, Uzbekistan's Cabinet of Ministers is the central decision-making body as regards state enterprises. It represents state interests at annual meetings, decides on restructuring and privatisation, appoints the members of supervisory boards, and approves the appointment of senior managers. The strategy essentially intends to transfer those powers to a stronger State Assets Management Agency, adopting a more decentralised approach to state ownership. In order to create a level playing field, state unitary enterprises – which are not subject to bankruptcy procedures – will be converted into either joint-stock companies or limited liability companies.

Currently, supervisory boards often consist of civil servants representing the various government bodies that regulate the relevant sectors. The strategy aims to improve state firms' overall governance structures, with an objective of having independent members make up at least 30 per cent of state enterprises' supervisory boards by 2025, as well as establishing audit, appointment and remuneration committees, and introducing appropriate risk management and internal control systems. Moreover, civil servants will no longer be able to serve as the chief executives of state firms.

The strategy also aims to introduce transparency and disclosure obligations for state enterprises. While many state firms have websites, these typically contain little information. State enterprises will be required to publish their company charters, their organisational structures, quarterly business plans, annual financial reports (with the aim of reporting in line with the International Financial Reporting Standards (IFRS) by 2024), risk reports and information on large transactions with affiliates, as well as details of the CVs and remuneration of supervisory and executive board members. The website of the State Assets Management Agency will, in turn, provide annual reports on the performance of state enterprises.

STATE-OWNED ENTERPRISES PLAY AN IMPORTANT ROLE IN THE UZBEK ECONOMY, WITH 100% STATE-OWNED FIRMS ACCOUNTING FOR

19%

OF GDP

BOX 2.7.

Increasing transparency at state enterprises: the experience of South Korea

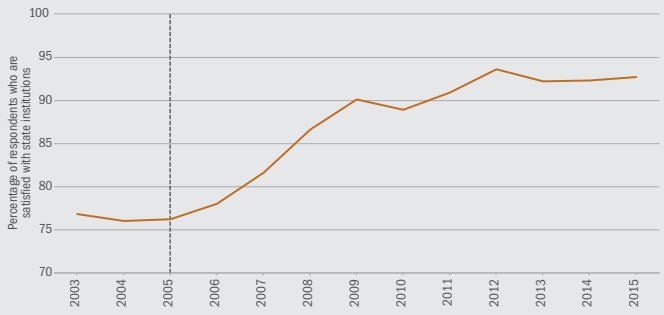
In 2005, the South Korean government established a public disclosure system – subsequently branded ALIO (All Public Information In-One) – whereby public institutions are obliged to disclose a range of financial and non-financial information on a quarterly or annual basis. By 2019, the initiative had been expanded to cover a total of 339 public corporations, quasi-governmental institutions and other public institutions, with those organisations having a combined budget of around 34 per cent of GDP and accounting for around 1.5 per cent of the country's total employment. Disclosed data for the last five years are available online at www.alio.go.kr.

This disclosure system was established in response to concerns that public institutions were inefficiently managed and insufficiently accountable, gave excessive bonuses to executives and lacked transparency when it came to major appointments. By 2018, there were 42 separate items that were subject to disclosure requirements, including standard financial information, the minutes of company boards' weekly meetings, information on purchases of gifts with a value above the recommended threshold, international business travel, the hiring of retired staff, and recommendations by the Board of Audit and Inspection. Moreover, this information is highly disaggregated (making it possible, for example, to trace the corporate credit card usage of individual employees). ALIO also provides comprehensive information on procurement contracts and suppliers, including details of the duration and value of each contract, the contracting entity, the contract type (direct selection or competitive selection, for instance), the purpose of the contract, and the law that governs it. The Ministry of the Economy and Finance, which is responsible for overseeing the ALIO system, can issue penalties for failing to disclose information correctly. Meanwhile, the public disclosure of organisations' environmental performance is managed separately by the Ministry of the Environment.

Public satisfaction with state institutions has increased strongly following the establishment of ALIO, indicating that the initiative has been a success (see Chart 2.7.1).

CHART 2.7.1.

Public satisfaction with state institutions has increased since the establishment of the public disclosure system in 2005



Source: Ministry of the Economy and Finance (2020).

BOX 2.8.

Well-connected firms

When governments adopt explicit industrial policies, state-owned enterprises often play a major role, especially when those policies target particular sectors or areas of activity. However, in many emerging economies, public policy – including industrial policies – may proceed more stealthily, being shaped by connections between *private* businesses and the political sphere. Chosen firms thrive by virtue of their close links to power, politicians or political parties. Such links secure privileges for them, whether in terms of finance, assets or resources, or market power. Moreover, a nexus of private companies closely connected to power may work in tandem with large and politicised state-owned enterprises to extract benefits and contracts, including in ways that are tendentiously touted as furthering public interests. Consequently, a simple distinction between private and state firms can be misleading.

Connections are complex in nature and have a strong network dimension. Connections between politicians, political parties and firms are typically assessed on a binary basis, involving a judgement as to whether two entities or people are connected or not. However, *where* a firm or individual is located in a network will affect how privileges are acquired and, potentially, the scale of those privileges. Although networks are ubiquitous in social and economic life, their role in providing access to assets, markets, finance, public contracts and other resources has been difficult to document thus far.

The analysis in this box demonstrates a novel way of measuring complex connections, using a detailed dataset (PEPData) which contains publicly available information assembled by major commercial providers of business intelligence on politically exposed persons (PEPs) in each country, the connections among them, and links between PEPs and political parties and firms.[51] In order to identify links between firms and PEPs, that information has been combined with data taken from Bureau van Dijk's Orbis database, which provides information on firms' ownership and shareholders, as well as financial and balance sheet information.

Networks differ substantially depending on the relevant country's political system and associated institutions (see, for example, the network maps for Russia and Romania in Chart 2.8.1). The nodes in those network maps are firms (either private or state-owned), individuals, political parties and politicians; the links between them denote their connections. Russia's network has relatively few political parties, but many state-owned and private companies. Further analysis shows that state enterprises – unlike politicians and other individuals – consistently occupy strategic or central positions in that network.

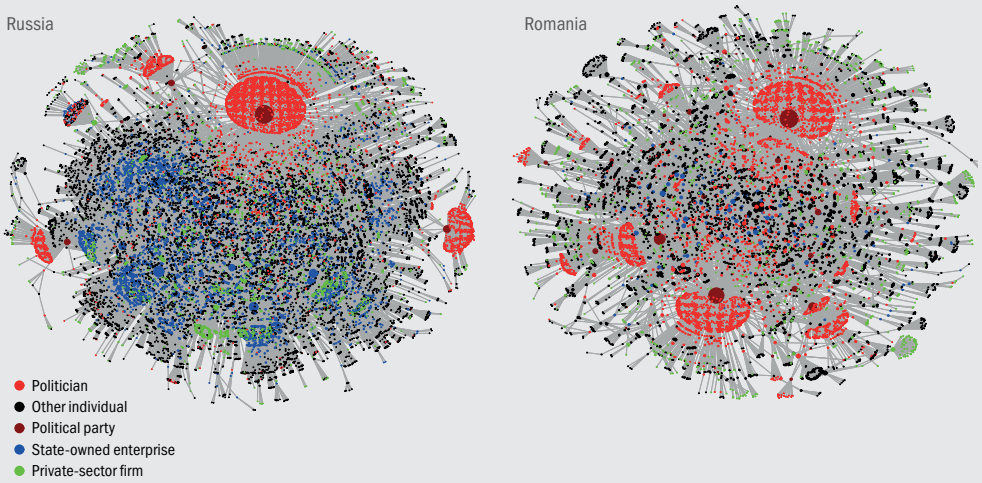
Romania's network has a rather different composition and shape, being characterised by a multiplicity of political parties and their associated clusters. In addition, state and private firms are both less likely to occupy central locations than politicians and political parties.

As regards political systems, democracies consistently have far more integrated networks. In countries with weaker democratic

[51] See Bussolo et al. (2018) for details.

CHART 2.8.1.

The networks in Russia and Romania differ substantially



Source: Bussolo et al. (2018), using PEPData.

institutions, the formation of networks is often impeded so as to ensure that the political sphere – and thus potential opposition – is fragmented. As a result, power tends to be concentrated in clusters, and network connections mostly run to and from those clusters.[52]

What are the consequences of these networks of connections? Connected firms, including state-owned ones, are unequivocally larger than non-connected firms, whether in terms of revenue or employment. This difference tends to be even greater if they have a more central position in the network. Although connections may provide access to cheap finance or preferential contracts, and may even increase market power, they may also dilute incentives to invest and raise productivity. Indeed, when looking at firms' performance, as measured by the return on the assets or capital employed, connected firms perform relatively poorly. This is true of both state-owned and private firms, and the finding holds when a binary approach is used instead of one where network features are included. This effect is even stronger when looking specifically at the firms with the most connections. Where firms have large numbers of connections – including a connection with a politician – their return on capital is around 85 per cent lower than that of a non-connected firm. In this case, the difference is substantially smaller if it is measured on a binary basis that does not take account of network features.

Such networks of connections have proven to be highly resilient, despite major changes to the political and economic regimes of transition countries in recent decades. State-owned enterprises continue to occupy prominent positions in most networks, with a high degree of centrality but poor performance. When combined with the presence of newer – but highly potent – politically connected private firms, this raises concerns not only about productive inefficiencies, but also, more generally, about inequality and the integrity of political and institutional frameworks.

[52] See Commander and Poupakis (2020).

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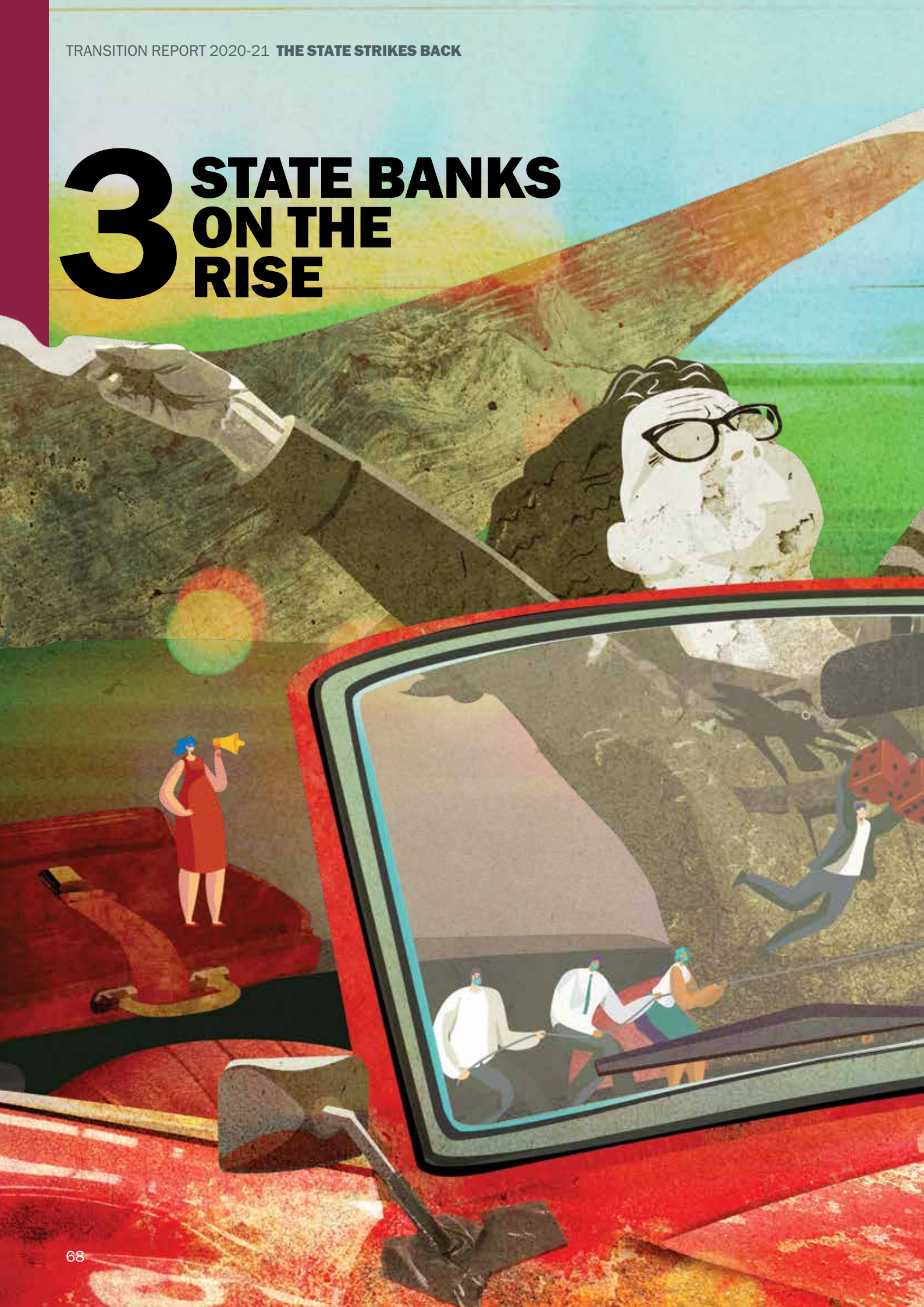
3 STATE BANKS ON THE RISE



State-owned banks have grown in importance across the EBRD regions over the last decade. They have become serious competitors for privately owned lenders, expanding both their assets and their branch networks. Many state banks apply less stringent lending standards, operate with smaller net interest margins and accept higher levels of non-performing loans. This greater appetite for risk allows them to soften the impact that economic shocks have on households, small businesses and entire regions. At the same time, while state banks may help to reduce economic fluctuations, their growing importance may come at a cost, resulting in a decline in firm-level innovation and lower aggregate productivity. This partly reflects state banks' susceptibility to political interference, which can result in credit flowing to less productive firms. Improving the corporate governance of state banks can reduce the risk of such distortions somewhat.

Introduction

The regions where the EBRD invests have traditionally had strong state-owned financial institutions.[1] Central Europe and the economies of the former Soviet Union began the 1990s with banking sectors that were dominated by state banks – a legacy of the large monobank systems that had been in place prior to the fall of the Berlin Wall. While many of those state lenders were soon privatised, often ending up in the hands of foreign strategic investors, a number of large banks have remained in state ownership (either in full or in part). Examples of such banks include Sberbank and VTB in Russia, NLB in Slovenia and PKO in Poland. Moreover, in the wake of the global financial crisis, some private banks were (at least temporarily) brought back into state hands, with such developments being observed in countries such as Poland, Hungary and Ukraine. At the same time, entrenched state banks such as National Bank of Egypt and Ziraat Bank have remained powerful players in the southern and eastern Mediterranean (SEMED) region and Turkey. Meanwhile, a number of state banks have recently expanded their operations abroad, with prominent examples including Russian-owned VTB's operations in Ukraine, Dubai-owned Denizbank in Turkey (which was previously owned by Russian state bank Sberbank), and Sberbank's ownership of Volksbank, which operates across much of central and eastern Europe.

In many of the economies of the former Soviet Union, state banks accounted for more than half of all banking assets in 2016 (the last year for which comprehensive data are available), with figures of 67 per cent in Belarus, 59 per cent in Russia and 53 per cent in Ukraine, for instance (see Chart 3.1). Levels of state ownership in the banking sector are also high in China (59 per cent), Ethiopia (61 per cent), India (67 per cent) and Syria (71 per cent). In some large Latin American countries, such as Brazil and Argentina, more than 40 per cent of banking assets remain in state hands. And in Turkey, three large state banks account for a third of the banking system. While state banks used to play a minimal role in most high-income countries, bailouts and nationalisations in the wake of the global financial crisis have also increased the level of state ownership in countries such as Iceland (66 per cent) and Portugal (37 per cent). In Germany, too, state banks account for 37 per cent of total banking assets, as regional *Landesbanken* continue to play a major and heavily debated role in the economy.[2]

This chapter describes the rise of state banks over the last decade and analyses the state's growing role in the area of financial intermediation. There are, broadly speaking, two main dominant views on the economic role of state banks. The first highlights the role that governments play in addressing credit market failures, fostering financial inclusion and industrial innovation, and maintaining financial stability. According to this positive perspective, state banks are able to fund projects that create beneficial externalities but are either too opaque, not profitable enough or too long-term in nature for private banks to finance.[3] Moreover, state banks can also act as economic shock absorbers, stepping in when information asymmetries widen in times of crisis and private banks increase their rationing of credit for riskier firms.[4]

The second, negative, perspective argues that politicians often pressure state banks to provide employment, subsidies and other benefits to their supporters, in the hope that they will return the favour in the form of votes, political contributions or bribes. To the extent that lending by state banks is indeed driven by political motivations, state banks will distort the allocation of capital, with adverse implications for the productivity of firms and the economy as a whole.[5] This chapter ends with a discussion about how countries can reduce the inherent risks that are associated with state banks (other than through privatisation).

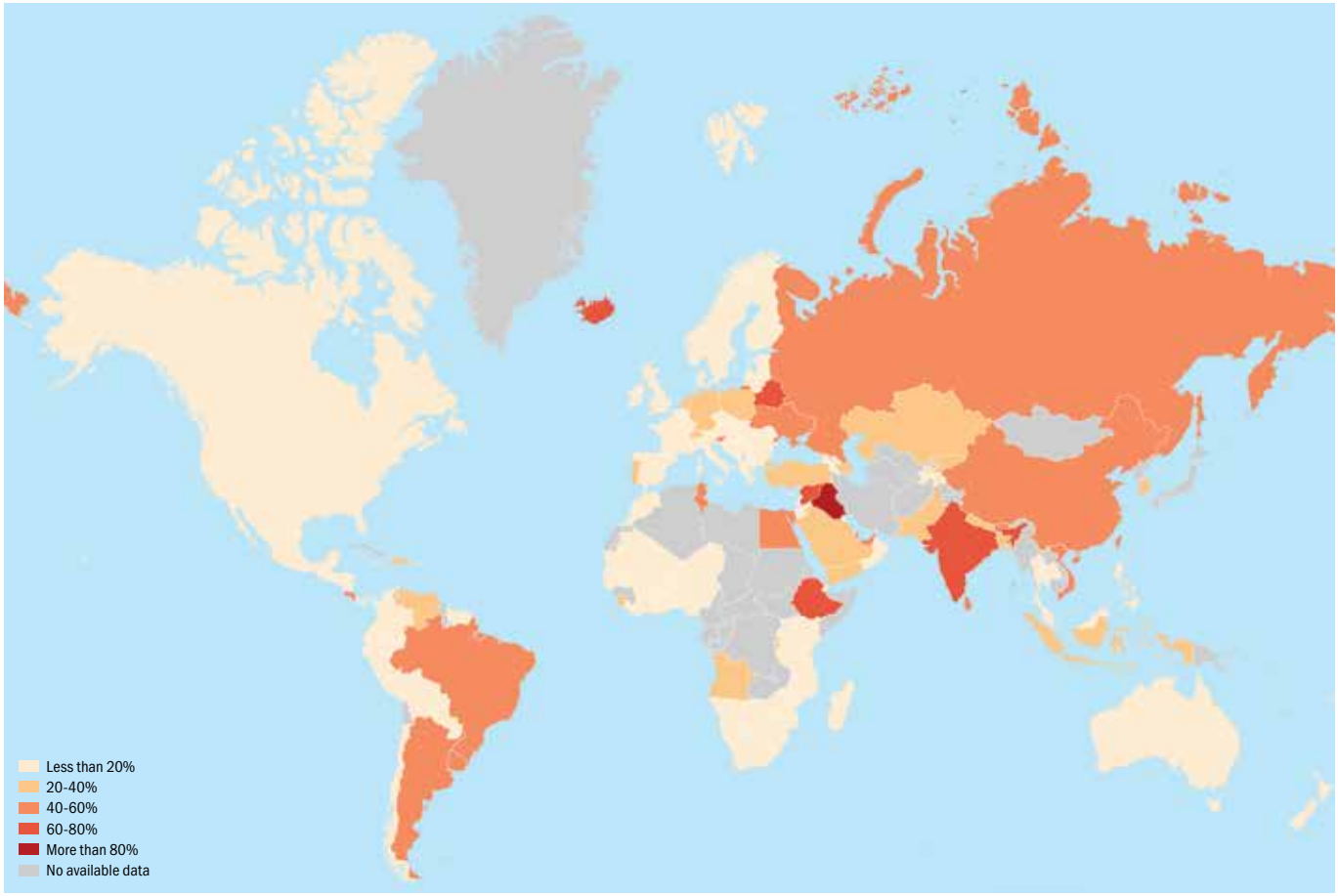
STATE BANKS OWN MORE THAN HALF OF ALL BANKING ASSETS IN BELARUS, CHINA, INDIA, RUSSIA AND UKRAINE

[1] State-owned banks are defined here as banks where the state owns at least 50 per cent of all shares. The empirical results set out in this chapter do not change significantly if state banks are defined instead as banks with at least 25 per cent state ownership.

[2] See, for instance, Englmaier and Stowasser (2017), and Koetter and Popov (2020).
[3] See Stiglitz (1993) and Mazzucato (2018).
[4] See Tirole (2012), and Brei and Schclarek (2013).
[5] See, for example, Shleifer and Vishny (1994), Shleifer (1998), La Porta et al. (2002), Sapienza (2004), Bonin et al. (2005), and Khwaja and Mian (2005).

CHART 3.1.

State banks continue to play a major role in many economies



Source: World Bank (Bank Regulation and Supervision Survey) and authors' calculations.
Note: This map shows the percentage of total banking assets that were owned by state banks in 2016. This map is used for data visualisation purposes only and does not imply any position on the legal status of any territory.

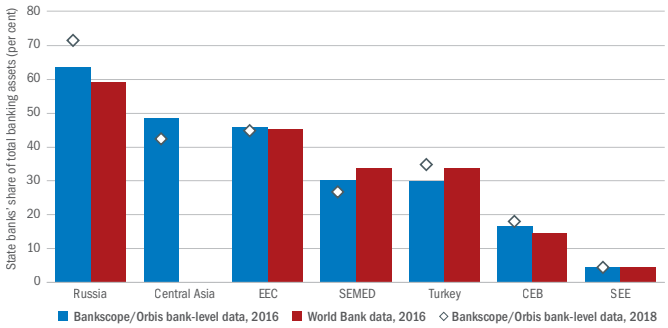
State banks as competitors

The growth of state banks

In Russia, state banks (especially Sberbank and VTB) owned more than 60 per cent of all banking assets in 2016-18 (see Chart 3.2, which combines estimates from the World Bank's Bank Regulation and Supervision Survey with estimates obtained by aggregating bank-level data from Bankscope and Orbis for 2016 and 2018), with somewhat lower levels being observed in eastern Europe and the Caucasus (EEC). In the SEMED region and Turkey, around a third of banking assets remain in state hands, with much lower percentages being observed in central Europe and the Baltic states (CEB) and south-eastern Europe (SEE). In central and south-eastern Europe, governments privatised most state banks in the early 1990s (with the exception of a handful of large banks in a few countries) and sold them to foreign strategic investors.

CHART 3.2.

State banks' role in the economy varies strongly across the EBRD regions



Source: World Bank (Bank Regulation and Supervision Survey and World Development Indicators), Bureau van Dijk (Bankscope and Orbis databases) and authors' calculations.
Note: This chart shows the percentage of total banking assets that are owned by domestic state banks, weighted by GDP. The bar showing 2016 World Bank data for Central Asia has been omitted owing to a lack of available information. The presence of state banks as captured by World Bank data and Bankscope/Orbis data may differ as a result of small differences in coverage and definitions.

The EBRD regions now have the second-highest percentage of state-owned banking assets in the world (after Asia), having overtaken Latin America following the global financial crisis (see Chart 3.3). This owes much to the high levels seen in some of the largest countries in the EBRD regions (such as Egypt, Russia, Turkey and Ukraine). While state-owned banks can also be found in Africa and western Europe, they play a less important role than private banks in those regions.

The assets of state-owned banks and private banks increased in tandem until the onset of the global financial crisis in 2008 (see Chart 3.4). In that year, private banks saw a sharp decline in their access to cross border wholesale funding, including syndicated borrowing.[6] At the same time, foreign-owned private banks' access to parent bank funding was also sharply curtailed, forcing them to start a decade long de-leveraging process.[7] In contrast, many state-owned banks had been less reliant on relatively volatile wholesale funding, instead funding more of their assets using more stable customer deposits. Moreover, various governments used state banks as vehicles for the swift distribution of public funds to the real economy. In Russia, for instance, the government gave state banks capital injections and preferential loans on favourable terms, as well as long-term deposits.[8] Thus, state banks at least partially filled the credit gap left by de-leveraging private banks and were able to increase their assets much faster than their private counterparts.

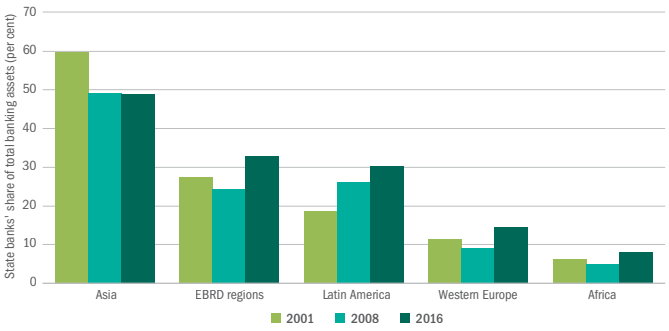
Academic evidence points to the importance of geographical proximity in lending relationships between banks and firms.[9] For instance, a recent study of relationship lending in Italy during the global financial crisis found that credit was cheaper and more stable for firms that were located closer to their banks.[10] Thus, banks' ability to lend to households and firms (especially smaller companies) remains strongly dependent on the geographical scope of their branch networks. Many state banks have expanded their branch networks over the last decade as their assets have grown, particularly in Turkey, Central Asia and the CEB and SEE regions (see Chart 3.5; note that 2020 data are not yet available for Russia or the SEMED region). In contrast, state banks' share of total branches shrank across the EBRD regions between 2000 and 2010, with the exception of the SEMED and SEE regions. The expansion of state banks' branch networks in the decade following the global financial crisis reflects both stronger organic growth in the branch networks of state banks relative to private banks and changes to the ownership of existing branches following nationalisations in countries such as Hungary, Poland and Ukraine.

Banks' perception of state banks as competitors

The rapid expansion of state banks' assets and branches in the wake of the global financial crisis has probably solidified their position as strong competitors in the credit market. In order to assess the extent to which state banks have indeed become stronger competitors, this chapter uses data derived from the second round of the EBRD's Banking Environment and Performance Survey (BEPS II). As part of BEPS II, face-to-face

CHART 3.3.

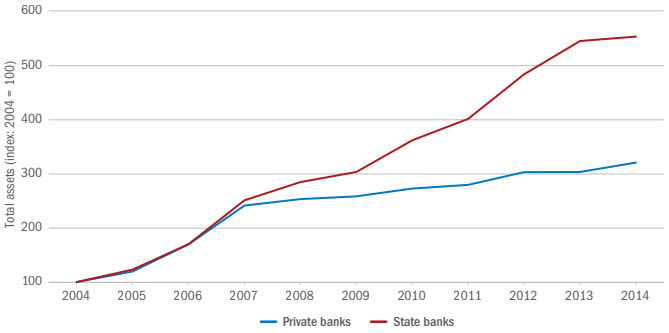
The EBRD regions now have the second-highest percentage of state-owned banking assets in the world, after Asia



Source: World Bank (Bank Regulation and Supervision Survey and World Development Indicators) and authors' calculations.
Note: This chart shows the percentage of total banking assets that are owned by domestic state banks, weighted by GDP. The sample is restricted to a set of countries for which data are available for 2001, 2008 and 2016.

CHART 3.4.

State banks' assets have grown more strongly than those of private banks since the global financial crisis



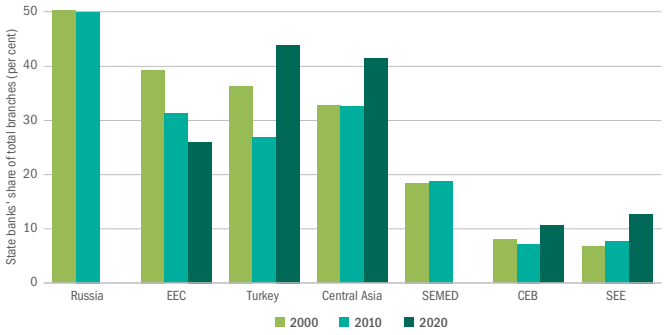
Source: Bureau van Dijk (Bankscope and Orbis databases) and authors' calculations.
Note: This sample is restricted to banks with at least 10 years of data on total assets over the period 2004-14.

IN 2020,
44%
OF ALL BANK BRANCHES IN TURKEY,
42%
OF BRANCHES IN CENTRAL ASIA, AND
26%
OF BRANCHES IN EASTERN EUROPE AND THE CAUCASUS BELONGED TO STATE BANKS

[6] See De Haas and Van Horen (2013).
[7] See De Haas and Van Lelyveld (2014), and De Haas et al. (2015). See also Box 3.3 for details of the challenges faced by correspondent banking and the role of state banks in that market segment.
[8] See Davydov (2018).
[9] See Degryse and Ongena (2005), and Qi et al. (2018).
[10] See Sette and Gobbi (2015).

CHART 3.5.

State banks' branch networks have grown in recent years

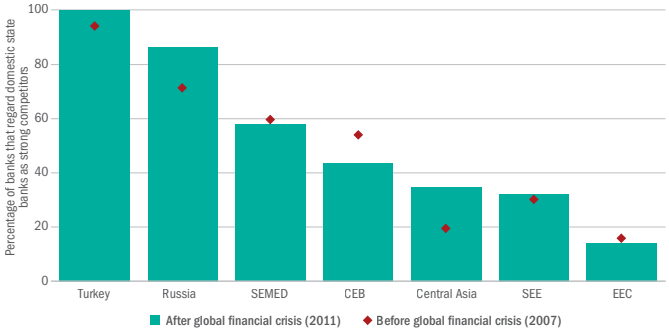


Source: BEPS II, BEPS III and authors' calculations.
Note: Data for 2020 are not yet available for Russia or the SEMED region. SEE data do not include Cyprus, Greece or Kosovo, and SEMED data do not include Lebanon or the West Bank and Gaza.

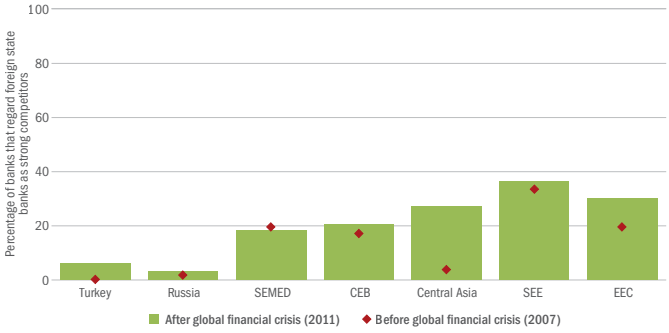
CHART 3.6.

State banks are regarded as strong competitors in the SME lending markets of certain economies

Panel A: Domestic state banks



Panel B: Foreign state banks



Source: BEPS II and authors' calculations.
Note: This chart shows the percentage of banks that regard state-owned banks as strong competitors in the SME lending market.

interviews were conducted with the chief executive officers (CEOs) of 611 banks in 32 countries across the EBRD regions in 2012. That second survey round included a special module looking at the competitive banking landscape in the bank's country of incorporation, which asked CEOs about the extent to which state banks were strong competitors in various segments of the credit market, both before the global financial crisis (in 2007) and afterwards (in 2011).[11]

The results of the survey indicate that, when it comes to lending to small and medium-sized enterprises (SMEs), domestic state banks are most likely to be regarded as serious and strong competitors in Turkey, Russia and the SEMED region (see Chart 3.6). Indeed, after the global financial crisis all participating CEOs in Turkey and more than 80 per cent of participating CEOs in Russia indicated that domestic state banks were strong competitors in the SME lending market. Banks' CEOs were also asked about their competitors in the retail and corporate lending markets, and the results for those questions were very similar to those shown in Chart 3.6.

Foreign state banks are generally regarded as less of a competitive threat (see Chart 3.6). In fact, foreign state banks are seen as posing the least threat in terms of competition in those economies and regions where domestic state banks are most dominant – notably Turkey, Russia and the SEMED region. This indicates that the two types of state bank are substitutes, possibly because governments that own state banks are less likely to allow foreign state-owned competitors to enter the domestic market.

State banks' strategies

How exactly did state banks step up their activities in the aftermath of the global financial crisis? BEPS II provides unique insight into the main perceived constraints that banks face when trying to acquire new clients, as well as the strategies used to attract new customers before and after the crisis.

[11] For more details regarding these questions and analysis of the causes and consequences of bilateral competition between banks in the EBRD regions, see De Haas et al. (2020c).

Before the global financial crisis, domestic state banks were significantly less likely than private banks to report that their corporate lending (defined as lending to firms with at least 250 employees) was held back by loan applicants having an inadequate credit history (that is to say, a poor credit history or no credit history at all; see top panel of Chart 3.7). This suggests that private banks may have been more demanding, or more conservative, in terms of the types of borrower that they lent to (see Box 3.2 for evidence from Turkey). That difference between state and private banks was also observed after the global financial crisis (see bottom panel of Chart 3.7). However, at that point, state banks were also significantly less likely to report that their lending was constrained because firms did not have sufficient cash flow or profits. And they were also less likely to worry about incomplete loan applications.

Thus, in the years that followed the global financial crisis, state banks felt less constrained by the poor quality of borrowers (in terms of their ability to generate cash flow, their credit history or the completeness of their loan applications). This helps to explain why state banks were more able to expand their activities in the decade after the crisis.

There are also important differences between state-owned and private banks in terms of the main strategies that they use to attract new clients (see Chart 3.8). Before the crisis, state banks were less likely than their private-sector peers to increase staff numbers, invest in the training of staff and other personnel, or introduce new and innovative banking services. In contrast, they were significantly more likely than private banks to attract new clients by participating in special lending programmes run by the government or international agencies. After the crisis, these differences in strategy disappeared, with the exception of state banks' participation in government lending programmes targeting certain groups of corporate or retail borrowers.

Taken together, the above results suggest that state banks tend, on average, to invest less in their staff's lending and customer acquisition skills. Partly as a result of that, their screening of potential clients may be less stringent than that of their privately owned peers. While this strategic difference allows state banks to scale up lending more quickly in times of crisis, it may of course come at a cost, potentially resulting in a decline in average loan quality in the medium to long term.

IN RECENT YEARS, STATE BANKS' ANNUAL RETURN ON ASSETS HAS, ON AVERAGE, BEEN

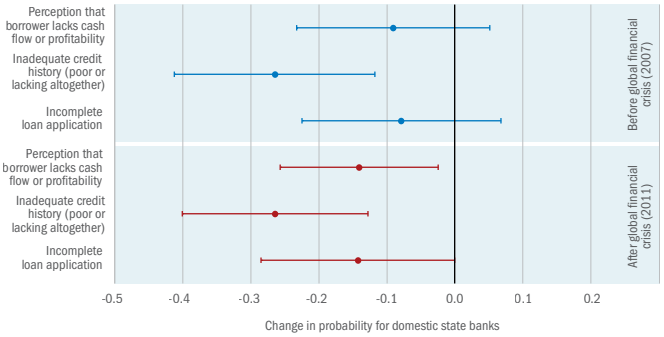
1.1

PERCENTAGE POINTS

LOWER THAN THAT OF SIMILAR PRIVATE BANKS

CHART 3.7.

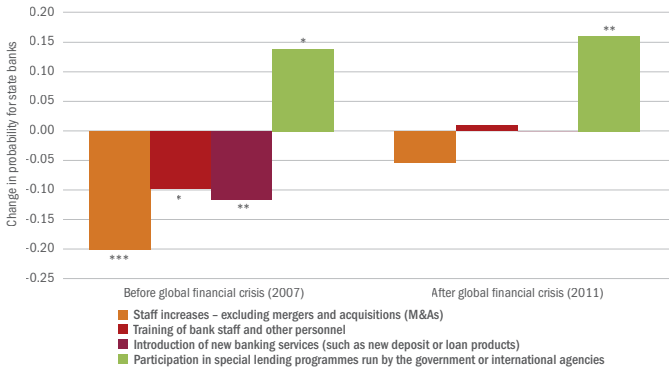
Lending by state banks is less constrained by borrowers' lack of credit history



Source: BEPS II and authors' calculations.
Note: These data represent estimated coefficients for a state bank dummy that are derived from bank-level linear probability models with region fixed effects. The dependent variable is a dummy variable that is equal to 1 if a particular client-related constraint is reported as being a frequent or very frequent reason for rejecting loan applications submitted by large firms (and 0 otherwise). 90 per cent confidence intervals are shown.

CHART 3.8.

State and private banks differ in terms of the main strategies used to attract new clients



Source: BEPS II and authors' calculations.
Note: These data represent estimated coefficients for a state bank dummy that are derived from bank-level linear probability models with region fixed effects. The dependent variable is a dummy variable that is equal to 1 if a particular strategy is reported as being important or very important for attracting new clients to the bank (and 0 otherwise). *, ** and *** denote values that are statistically significant at the 10, 5 and 1 per cent levels respectively.

The financial performance of state banks

How has state banks' stronger growth in the post-crisis period affected their financial performance, given that state banks expanded by applying less stringent screening mechanisms and participating more in government lending programmes? In order to answer that question, regression analysis can be used to relate various indicators of bank performance over the period 1999-2019 to the bank's performance in the previous year, the bank's ownership status (state-owned or private), country-year fixed effects taking into account changes in the economic outlook of the country where the bank operates, bank capitalisation in the previous year, the ratio of bank deposits to total liabilities, the ratio of net loans to assets, and the lagged dependent variable. Excluding various covariates, some of which may themselves be a result of state ownership, does not change the results in a material way. The sample includes commercial banks, cooperative banks, multilateral government banks, and specialist government credit institutions with assets of at least US$ 2.5 billion.

In both of the periods under consideration (that is to say, both before and after the global financial crisis), state banks generated lower returns than private banks on average assets (see Table 3.1). Indeed, over the period from 2010 to 2019, state banks' annual return on assets was, on average, 1.1 percentage points lower than that of equivalent private banks. That represents a substantial difference, given that the average return on assets was only 0.76 per cent during the period in question.

There are two underlying reasons for that substantial difference in profitability. First of all, state banks have been operating on the basis of lower net interest margins in the post crisis period. Relative to similar private banks in the same country and the same year, they have been charging borrowers lower interest rates and/or paying higher rates to depositors. Davydov (2018), for example, found that Russian state banks charged lower interest rates than their private-sector peers during the global financial crisis. Second, the non-performing loan (NPL) ratios of state banks were, on average, 1.6 percentage points higher than those of their private counterparts in the period 2010-19 – a substantial difference relative to the average NPL ratio of 11.6 per cent across all banks in that period. That greater tendency to accumulate bad loans on their balance sheets is consistent with state banks' greater propensity to lend to clients with weaker credit histories or cash flows. Earlier studies looking at the Middle East and North Africa confirm that state banks underperform relative to private lenders, with that weaker performance reflecting both operational inefficiencies (especially larger numbers of staff) and the negative impact that policy mandates have on loan quality.[12]

TABLE 3.1.

State banks achieve lower returns than private banks on average assets

Time period	1999-2007	2010-19	1999-2007	2010-19
Dependent variable:	Return on average assets (%)		Net interest margin (%)	
	(1)	(2)	(3)	(4)
State bank	-0.415***	-1.070***	0.135	-0.198***
	(0.156)	(0.383)	(0.145)	(0.073)
Lagged bank controls	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes
R^2	0.313	0.228	0.720	0.755
Number of observations	1,929	2,952	1,925	2,946
Number of banks	275	349	275	348
Dependent variable:	Ratio of NPLs to gross loans (%)		Ratio of non-interest expenses to average assets (%)	
	(5)	(6)	(7)	(8)
State bank	0.291	1.558**	-0.073	0.030
	(0.408)	(0.605)	(0.268)	(0.387)
Lagged bank controls	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes
R^2	0.727	0.738	0.524	0.399
Number of observations	853	2,616	1,925	2,952
Number of banks	202	337	275	349

Source: Bureau van Dijk (Bankscope and Orbis databases) and authors' calculations.
Note: These coefficients are derived from bank-level ordinary least squares models with standard errors clustered at bank level. *, ** and *** denote values that are statistically significant at the 10, 5 and 1 per cent levels respectively.

STATE BANKS' AVERAGE NPL RATIO IS

1.6

PERCENTAGE POINTS

HIGHER THAN THAT OF SIMILAR PRIVATE BANKS

[12] See, for instance, Farazi et al. (2011).

State banks and financial stability

The regression analysis also confirms that private banks' annual credit growth declined substantially during the global financial crisis relative to the pre-crisis period (see Chart 3.9). The sharpest decline was observed in 2009, when credit granted by domestic private banks declined by 32 per cent year on year. While foreign private banks' credit growth weakened in the midst of the crisis, persistent negative growth only occurred in the period 2010-11, when the euro area sovereign debt crisis intensified.

That de-leveraging by foreign private banks during the global financial crisis was slowed down by the Vienna Initiative and the related Joint IFI Action Plan – a cooperation platform involving multinational banking groups, home and host country supervisory and fiscal authorities, the EBRD, the IMF, the World Bank, the EU and the EIB, which sought to ensure macroeconomic stability in emerging Europe by preventing a large-scale withdrawal of foreign bank lending. As part of that initiative, parent banks signed commitment letters pledging to maintain exposures and support their subsidiaries in emerging Europe, with the subsidiaries of those parent institutions proving to be significantly more stable than other banks as a source of credit.[13]

In sharp contrast, state banks stepped up their lending as private banks were de-leveraging – especially in 2008 and 2009, at the height of the crisis. Evidence from Latin America and emerging Europe shows that state banks stepped up their lending activity during the global financial crisis and in the immediate aftermath, when private banks had to de-leverage because of funding difficulties, with lending by state banks being less affected by economic cycles.[14]

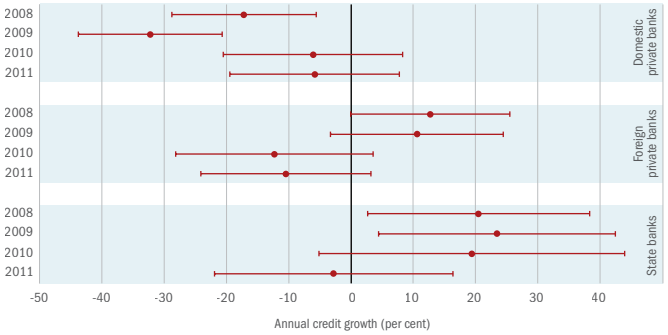
Evidence from Spain shows that state lending after 2009 had a positive impact in terms of supporting economic activity, but this came at a cost, resulting in an increase in defaults on loans issued by state banks.[15] In order to assess whether similar effects were observed in the EBRD regions, this chapter now turns its attention to a group of 291 subnational regions in central and eastern Europe, the Caucasus, Turkey and Ukraine. That analysis looks at differences in average income growth across regions (with state banks varying across those same regions in terms of the extent of their presence), controlling for average regional income prior to the crisis and country fixed effects.

The data confirm that there is a strong positive correlation (with a coefficient of 0.23) between the percentage of branches that are owned by state banks in a particular region and regional income growth in the period 2008-10 (see Chart 3.10). This suggests that the presence of state banks may have helped to soften the decline in economic activity during the global financial crisis.

Similarly, the results of the 2010 and 2016 rounds of the Life in Transition Survey, a large-scale representative household survey carried out across the EBRD regions (see Chapter 1),

CHART 3.9.

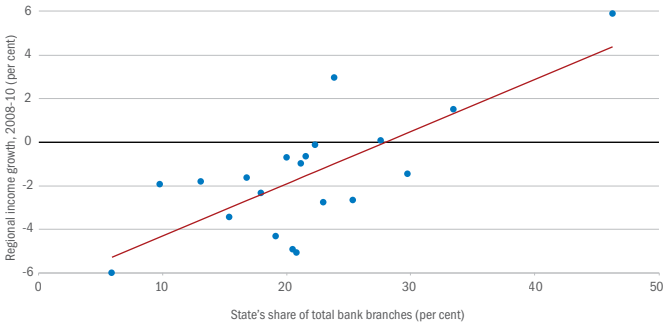
Unlike private banks, state banks increased their lending during the global financial crisis



Source: Bureau van Dijk (Bankscope and Orbis databases) and authors' calculations.
Note: These coefficients are derived from bank-level ordinary least squares models regressing annual credit growth on various controls, with standard errors clustered at bank level. The coefficients correspond to interaction terms combining private bank and state bank dummies with a crisis dummy. Controls include lagged total assets, lagged capitalisation, lagged ratio of deposits to liabilities, lagged ratio of net loans to assets, lagged return on average equity, lagged annual net loan growth, lagged GDP per capita growth and country fixed effects. 90 per cent confidence intervals are shown.

CHART 3.10.

Between 2008 and 2010, average income growth was stronger in regions with more state bank branches



Source: BEPS II, Eurostat, regional statistical offices and authors' calculations.
Note: This sample comprises subnational regions in 15 countries: Albania, Azerbaijan, Bulgaria, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Montenegro, North Macedonia, Romania, the Slovak Republic, Slovenia, Turkey and Ukraine.

[13] See De Haas et al. (2015), and De Haas and Tabak (2019).
[14] See Cull and Martínez Pería (2013), De Haas et al. (2015), Micco and Panizza (2006), Fungáčová et al. (2013) and Bertay et al. (2015).
[15] See Jiménez et al. (2019).

suggest that state banks softened the impact of the financial crisis for households. An index variable (ranging from 0 to 1) can be used to summarise the extent to which each household was negatively affected by the global financial crisis, combining information on job losses in the household, the closure of family businesses, reductions in working hours or pay, wage arrears, declines in remittances received from abroad, family members returning home from abroad, the need to take a second job or additional work, increased working hours in an existing job, and a set of 19 possible consumption responses (including reduced consumption of staple goods such as milk, reduced use of one's own car and an inability to make utility payments on time).

Regression analysis shows that state banks having a presence near the household (that is to say, in the Life in Transition Survey primary sampling unit where the household lives) is associated with the crisis having a smaller impact at household level (see Table 3.2). When account is taken of the respondent's country of residence, age, employment status (employed or unemployed), level of education, income and location (rural or urban), as well as the distance to the country's capital city, a 1 standard deviation increase in the presence of state banks is associated with a reduction of 12 per cent of a standard deviation in the severity of the crisis's impact on the household. Overall, these findings suggest that state banks can soften the economic impact of financial crises at local level, for instance by making it easier for households and small businesses to access emergency credit lines to tide them over in difficult times. State banks may, therefore, have acted as bridging lenders or relationship lenders during the crisis.[16]

Earlier studies have shown that economic shocks caused by bank deleveraging can erode people's trust in and preferences for market economics and private ownership.[17] That is supported by the results of this regression analysis, which show that households which were worse affected by the global financial crisis were indeed much less likely to trust banks (see Table 3.2). Interestingly, trust in banks declined less in regions where state banks played a greater role. Moreover, the 2016 round of the Life in Transition Survey showed the lasting impact of that effect, revealing that eight years after the start of the global financial crisis, households living in areas where state banks had more of a presence still tended to trust banks more.

Overall, these findings support the notion that state banks can help firms and households to weather the impact of economic downturns through their role as counter-cyclical lenders.[18] However, the beneficial effects of state banks' presence in the short term should be weighed against the potential for distortionary effects in the longer term. A recent study looking at Brazil, for example, shows that areas where government banks had more of a presence received more loans and experienced better employment outcomes during the global financial crisis.[19] However, that lending was politically motivated and allocated inefficiently, and it reduced productivity growth in the longer term.

TABLE 3.2.

The global financial crisis had a smaller impact on households when a state bank had a presence nearby

	2010 survey round		2016 survey round
Dependent variable:	Crisis impact	Trust in banks	Trust in banks
	(1)	(2)	(3)
Presence of state banks	-0.049***	-0.085	0.909***
	(0.014)	(0.197)	(0.280)
Impact of crisis		-1.075***	
		(0.258)	
Presence of state banks X impact of crisis		1.396*	
		(0.698)	
Controls	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes
R^2	0.130	0.111	0.072
Number of observations	29,620	27,244	37,775

Source: BEPS II, Life in Transition Survey (2010 and 2016 rounds) and authors' calculations.
Note: These estimates are based on linear models that regress an index measuring the impact of the crisis on each household on various control variables using population weights. Standard errors (reported in parentheses) are clustered at country level. Control variables include age, employment status (employed or unemployed), education, income, gender, location (rural or urban), and distance to the capital. *, ** and *** denote values that are statistically significant at the 10, 5 and 1 per cent levels respectively.

THE BENEFICIAL EFFECTS OF STATE BANKS' PRESENCE IN THE SHORT TERM SHOULD BE WEIGHED AGAINST THE POTENTIAL FOR DISTORTIONARY EFFECTS IN THE LONGER TERM

[16] See Beck et al. (2018) for a discussion of relationship lending as a stabilising force during the global financial crisis.
[17] See, for example, De Haas et al. (2016) for a discussion of the situation in Ukraine. See also Chapter 1.
[18] See Bertay et al. (2015).
[19] See Coleman and Feler (2015).

State banks and firm-level productivity

The increased role of state banks in the period since the global financial crisis can also be seen in their lending to firms across the EBRD regions. In particular, the results of the Enterprise Survey conducted by the EBRD, the EIB and the World Bank show a widespread increase in the proportion of firms that obtained their last loan from a state bank (as a percentage of all firms that have recently been granted a loan; see Charts 3.11 and 3.12). Those data are derived from the fifth and sixth rounds of the Enterprise Survey, which were conducted in 2011-14 and 2018-20 respectively. In 2018-20, the percentage of firms borrowing from state banks was particularly high in Belarus (70 per cent), Egypt (63 per cent), Russia (54 per cent), Uzbekistan (51 per cent), Ukraine (50 per cent) and Poland (44 per cent).

Firms' propensity to borrow from state banks has also increased in a group of comparator countries (Djibouti, Israel, Yemen, Italy, Malta and Portugal; see Chart 3.12), albeit the percentage of firms borrowing from state banks in such countries remains much lower than it is in the EBRD regions.

Next, this chapter examines the factors that influence a firm's decision to borrow from a state-owned or private bank, using a regression framework which explains the probability of a firm borrowing from a state bank rather than a private bank (conditional on it borrowing in the first place). All regressions include country-industry fixed effects, which take account of any industry-specific patterns in lending to firms in the country in question.

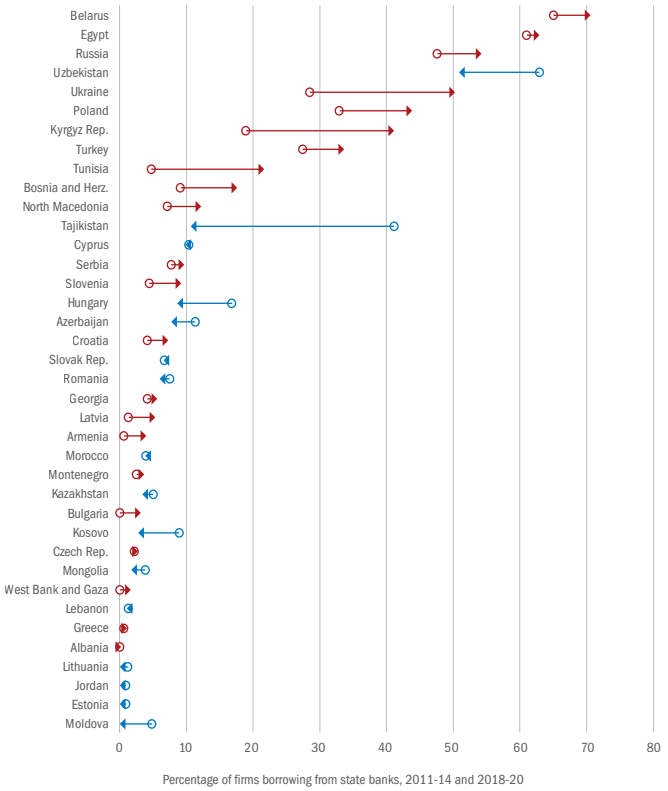
Four results stand out in this regard. First of all, firms in areas where state banks account for a higher percentage of branches are significantly more likely to borrow from a state bank (see Chart 3.13). This effect has strengthened in recent years, perhaps reflecting the expansion of state banks' branch networks and assets over the last decade. This also suggests that credit markets across the EBRD regions remain largely local in nature, as a result of both transport costs and the information advantages of local lenders.[20]

Second, firms in smaller localities (those with fewer than 50,000 inhabitants) are more likely to borrow from a state bank, while private banks tend to focus on larger cities. This could suggest that state banks care more about employment generation, especially in more remote parts of the country. Third, consistent with that, firms with lower sales relative to the size of their workforce are also more likely to borrow from a state bank. And fourth, foreign-owned firms and firms that export are less likely to borrow from a state bank, reflecting the fact that such firms tend to be run more professionally and find it easier to access other sources of credit (such as foreign-owned private banks and trade credit).

What are the implications of firms borrowing from state banks rather than private banks? Economic theory is ambivalent on the

CHART 3.11.

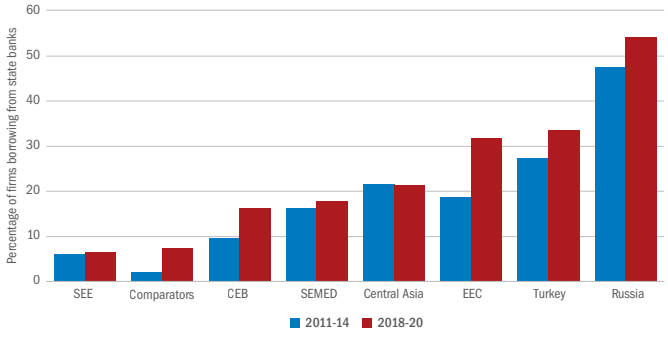
Economies vary strongly in terms of the percentage of firms borrowing from state banks in the periods 2011-14 and 2018-20



Source: Enterprise Survey and authors' calculations.
Note: The figures in this chart are calculated as a percentage of all firms that received a loan in the period in question. Red arrows indicate economies where the percentage was higher in 2018-20 than it had been in 2011-14; blue arrows indicate countries where it was lower in 2018-20 than it had been in 2011-14.

CHART 3.12.

There has been a widespread increase in the percentage of firms borrowing from state banks

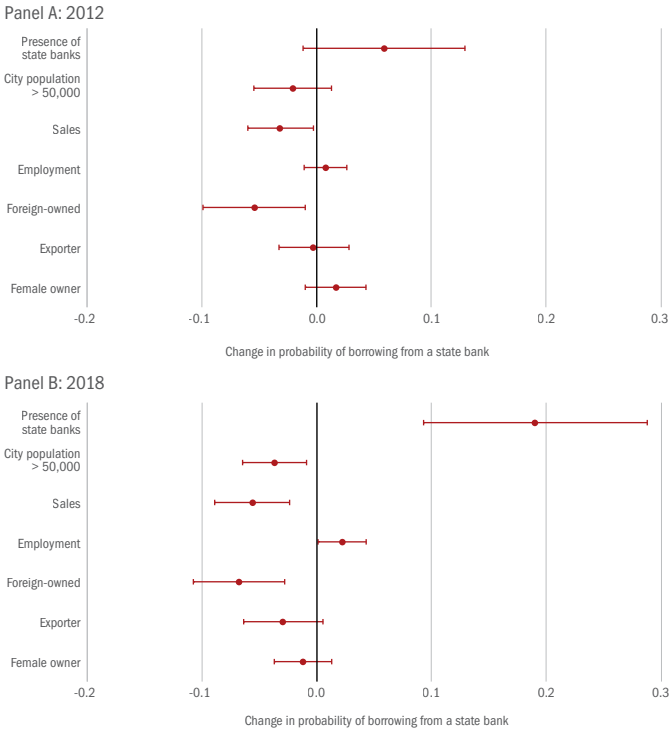


Source: Enterprise Survey and authors' calculations.
Note: The figures in this chart are calculated as a percentage of all firms that received a loan in the period in question.

[20] See also Qi et al. (2018).

CHART 3.13.

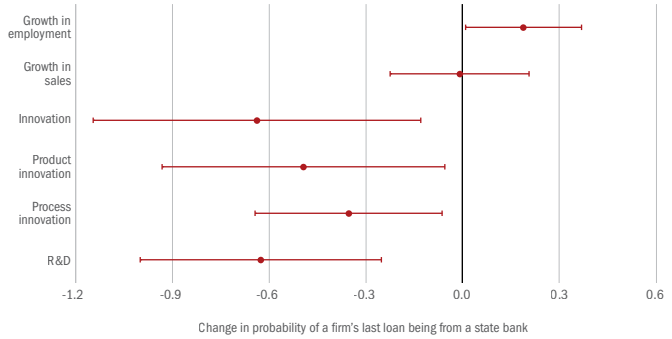
Firms in areas where state-owned banks have more of a presence are more likely to borrow from state banks



Source: Enterprise Survey, BEPS II and authors' calculations.
Note: These estimates are derived by regressing a dummy indicating whether a firm borrows from a state bank on various controls and country-industry fixed effects. Covariates that are not statistically significant are not shown. The 90 per cent confidence intervals shown are based on standard errors clustered at country level.

CHART 3.14.

Firms that borrow from state banks experience stronger employment growth, but innovate less



Source: Enterprise Survey, BEPS II and authors' calculations.
Note: These coefficients are derived from a two-stage least squares model regressing various measures of firm level performance (indicated on the vertical axis) on borrowing from a state bank. Borrowing from a state bank is instrumented using state banks' regional presence. Firm-level controls include country-industry fixed effects, the logarithm of firm age, the logarithm of sales three years previously, the logarithm of employment three years previously, and dummy variables indicating whether a firm is foreign-owned, an exporter, audited, female-owned, politically connected or located in a city with a population of more than 50,000. The 90 per cent confidence intervals shown are based on standard errors clustered at country level.

question of how government ownership of banks affects firm-level outcomes. On the one hand, state-owned banks could alleviate market failures in the funding of innovative and profitable projects, which arise as a result of the intangible nature of innovation related assets, making those assets difficult to collateralise.[21] On the other hand, however, political influence and/or non-commercial objectives could result in the misallocation of credit.

This question can be explored using instrumental variables regressions that seek to explain various firm-level outcomes on the basis of a number of firm-level characteristics, as well as a variable capturing whether a firm's last loan was granted by a state bank. One concern in this regard is that a firm's decision to borrow from a specific bank could potentially be based on firm-level characteristics that also have a direct impact on that firm's outcomes. For instance, foreign ownership may make a firm more likely to borrow from a private bank and, at the same time, increase that firm's propensity to innovate. In order to alleviate such concerns, the regressions in this analysis use state banks' share of local branches as an instrument for the likelihood of a firm borrowing from a state bank.[22] This allows us to study the impact on firm-level performance of variation in borrowing from state banks that arises as a result of differences in local credit markets. One necessary assumption in this regard is that the structure of local credit markets only has an impact on firm-level productivity through the firm's choice of banking relationship.

This analysis shows that firms which borrow from a state bank subsequently expand their workforce faster than similar firms which borrow from a private bank (although the same is not true of sales; see Chart 3.14). This suggests that the management of firms which borrow from state banks may be less inclined to invest in new labour-saving technologies that can boost firm-level productivity. Indeed, these results show that firms which borrow from a state bank are significantly less likely to engage in either product innovation or process innovation. They are also less likely to invest in R&D, an important input for subsequent innovation outcomes. Importantly, these differences are not attributed to a lack of access to bank credit, only to the ownership of the bank that the firm borrows from.[23] Thus, an increase in the presence of state banks may not necessarily eliminate market failures associated with the funding of innovation and growth-enhancing investment.

Economy-wide distortion by state banks

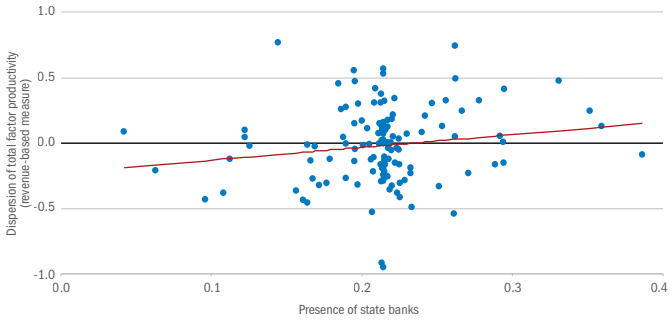
These results also suggest that an increase in state banks' presence in a region can impede the efficient reallocation of labour and physical capital across firms. This can, in turn, have a negative impact on the aggregate productivity growth of that region as employees and machinery become "trapped" in relatively unproductive firms.[24] When this happens, there tends to be a greater dispersion of productivity levels across firms within narrowly defined industries, as unproductive firms propped up by cheap bank credit neither catch up with their peers nor go out of business.

Indeed, regression analysis covering 130 subnational regions indicates that an increase in state banks' presence in a particular

[21] See Hall and Lerner (2010).
[22] See Bian et al. (2017).
[23] See Bircan and De Haas (2020).
[24] See Hsieh and Klenow (2009), and Gopinath et al. (2017).

CHART 3.15.

An increase in state banks' share of branches is associated with greater dispersion of productivity across firms



Source: Enterprise Survey, BEPS II and authors' calculations.
Note: This chart shows the results of analysis regressing the dispersion of a revenue-based measure of total factor productivity (for manufacturing firms) on a measure of the presence of state banks, controlling for country fixed effects. The line shows the corresponding linear relationship. Each dot represents a particular region. Regions with fewer than 10 manufacturing firms have been excluded.

region is associated with greater dispersion of a revenue-based measure of the total factor productivity of firms within that region (see Chart 3.15), taking into account country fixed effects and various regional characteristics. Indeed, a 5 percentage point increase in state banks' share of branches is associated with an increase in productivity dispersion that drags down aggregate regional productivity by 10.5 per cent. This finding is in line with the results of earlier cross-country studies, which found that an increase in the percentage of bank assets that are controlled by the state is associated with weaker growth and a more shallow financial system, especially in poorer countries.[25] However, privatising state banks' assets is not a panacea: it only leads to stronger growth when banks have fewer political connections and regional property rights are better protected.[26]

Such economic distortion is partly a reflection of state banks' susceptibility to political interference in their lending. For example, politicians may use state banks to provide employment and other benefits to supporters, in the expectation that these favours will lead to more votes. Box 3.1 takes a closer look at distortion caused by political interference using data on Turkey. Similarly, it has been shown that Brazilian firms which are eligible to receive loans from state banks on favourable terms tend to increase employment in politically attractive regions just before elections, especially when those elections are closely contested.[27]

State banks and state-owned enterprises

State banks may play a special role in the funding of other state-owned enterprises. For instance, a recent analysis of China's 2009-10 economic stimulus plan found that credit expansion had disproportionately favoured state-owned enterprises and firms with a lower marginal product of capital, reversing the reallocation of capital to private firms that had characterised China's strong growth prior to 2008.[28]

The analysis in this section looks at whether there is a special relationship between state banks and state enterprises, using data on 3.6 million enterprises (both privately owned and state-owned) across 102 countries over the period 2000-17. State enterprises are defined here as firms that are at least 20 per cent state-owned. Regression analysis is used to explain firm-level leverage (debt as a percentage of total assets) as a function of the firm's ownership (that is to say, whether it is privately owned or state owned) and an interaction term combining state ownership with the state's share of total banking assets in the economy. Those regressions take account of a firm's total assets, its profitability, the size of the non-debt tax shield and a measure of assets' tangibility, as well as country-industry-year fixed effects (which ensure that state enterprises are compared with similar privately owned enterprises in the same country, industry and year).

The results of the analysis show that while state enterprises tend, on average, to be less leveraged than similar private firms, they benefit considerably when state banks dominate the lending market (see Chart 3.16). In particular, in countries where state banks play a more prominent role, state enterprises have significantly higher debt-to-asset ratios than private firms. At the same time, higher levels of foreign ownership in the banking sector are associated with less leveraged state enterprises. This suggests that, relative to domestic private banks, foreign-owned banks and state-owned banks exercise more and less financial discipline respectively.

Improving the corporate governance of state banks

Improving the corporate governance of state banks and increasing their commercial focus may reduce the risk of distortion in the allocation of credit to firms. Indeed, cross-country evidence shows that state banks that are not subject to political interference tend to perform better than politicised state banks (although still worse than private banks).[29] Moreover, in economies with good governance, state banks have the potential to play an even greater role as providers of stable credit in the face of economic shocks.[30]

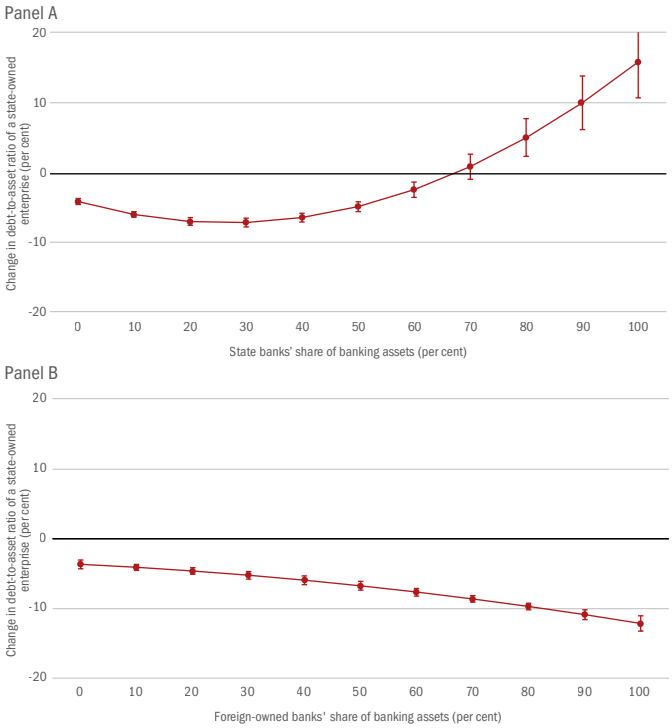
State banks' ability to successfully balance their commercial and non-commercial objectives depends on their corporate governance structure and the institutional environment in which they operate. A number of preconditions may need to be met in that regard if state banks are to contribute to long term economic growth.[31]

First of all, there should be no political interference in state banks' management or credit allocation. The appointment of banks' managers should not be guided by political considerations. More generally, state banks need to apply standard principles of sound banking (although the profitability objective may be traded off against explicit and well-articulated social and development objectives).

[25] See La Porta et al. (2002).
[26] See Berkowitz et al. (2014).
[27] See Carvalho (2014), Dinç (2005) and Micco et al. (2007).
[28] See De Haas et al. (2020a) and Cong et al. (2019).
[29] See Shen and Lin (2012), which measures political interference on the basis of instances where banks' CEOs are replaced shortly after elections.
[30] See Bertay et al. (2015).
[31] See Scott (2007).

CHART 3.16.

State-owned enterprises carry more debt when state banks play a more prominent role in the banking sector



Source: Bureau van Dijk (Orbis database), World Bank (Bank Regulation and Supervision Survey) and authors' calculations.
Note: These estimates are derived from an ordinary least squares model which regresses the debt-to-asset ratio on a dummy variable denoting state ownership of the firm and an interaction term combining that dummy with state banks' share of total banking assets, as well as various firm-level characteristics. The 95 per cent confidence intervals shown are based on standard errors clustered at firm level.

Second, state banks should publish annual reports (including full financial statements) and be transparent about their social objectives and mandates. Moreover, a clear monitoring system is required to assess whether a bank's performance is in line with its mandate. Making state banks' non commercial goals explicit and subject to public monitoring has the potential to enhance both transparency and accountability. More generally, the accounting, auditing, transparency and disclosure standards applicable to state banks need to be comparable to those governing publicly listed firms.

Third, there needs to be an appropriate legal framework and clarity about the entity that is acting as the banks' "owner" on behalf of the state. In addition to setting out clear disclosure requirements and accounting and auditing standards, the relevant laws and regulations also need to identify and delimit the objectives of state banks (including as regards any public policy objectives). Steps also need to be taken in order to make banks' boards more effective, such that they are better able to deliver on their mandates.[32]

Fourth, in order to guarantee financial sustainability, state banks should cover their own operational costs. The interest rates that they charge should cover their funding costs. Mandates that force state banks to offer credit at low interest rates – either to specific politically connected individuals or across the board – often hamper their recovery of costs.

More generally, policymakers need to encourage contestability in the banking system through the healthy entry of well-capitalised institutions and the timely exit of insolvent ones, including state banks. A strengthening of market competition in banking, coupled with improvements to the governance structure of state banks, is likely to be particularly beneficial in countries with weaker governance and limited state capacity to enforce regulations.[33]

Conclusion

State banks have grown in importance in many of the economies in the EBRD regions in recent years. As those state banks have expanded their assets and branch networks, they have become serious competitors for other banks. Their greater appetite for risk can help to soften the impact that adverse economic shocks have on households and firms, and it can also enable small young firms with little collateral to gain access to finance (especially in regions that are traditionally underserved by private banks). However, state banks' role as a stabilising and inclusive source of finance is likely to come at a cost, resulting in lower levels of innovation and total factor productivity in firms. The evidence presented in this chapter shows that these costs are partly a reflection of political interference in the lending decisions of state banks, particularly around the time of elections.

Reducing political actors' direct and indirect intervention in the lending decisions of state banks is of paramount importance in order to ensure that lenders pursue commercial objectives. Policymakers can increase the operational independence of state banks by appointing independent board members, selecting senior managers primarily on the basis of commercial criteria, and assessing performance on the basis of a transparent monitoring system. Staffing policies that are independent of civil service regulations can help to prevent the hoarding of labour for political ends, while periodic external audits based on international standards (with results made publicly available) can help to increase transparency. Moreover, where the state owns less than 100 per cent of the bank, it is essential that minority shareholders' rights are clearly defined and strongly protected.

In the absence of political frictions, policymakers may seek to use state banks' privileged access to government resources to distribute large funding packages to the real economy in response to a financial or health crisis. It is important that they do so in a way that preserves competition and limits distortion of the funding market, in order to reduce the risk of misallocating labour and capital across firms. Such lending practices can also help to ensure that state banks have a healthy portfolio of borrowers and limit operational losses, thereby continuing to make a profit (at least on a cyclically adjusted basis).

[32] See Nestor (2018).

[33] See World Bank (2013).

BOX 3.1.

The "dark side" of state banks

Critics of state banks often cite political interference in the timing and targeting of lending as the main source of distortions in credit markets. In line with that argument about the "dark side" of state banks, a number of studies have documented political credit cycles in specific countries, for instance in Brazil, Germany, India, Pakistan and Russia.[34] This box takes a closer look at political credit cycles in Turkey.

Over the last 15 years, state banks across Turkey have significantly increased their presence in government strongholds (defined as provinces that have been governed by the party controlling the central government throughout that period), expanding their operations far more strongly in those areas than in other regions (see Chart 3.1.1).[35] There is no such differential in terms of the opening and closing of branches for private banks. On the one hand, this pattern is consistent with politicians' patronage of core supporters, whereby elected officials seek to improve the welfare of citizens in provinces that have supported them strongly at the ballot box. On the other hand, however, it may also reflect the government's strategy of increasing financial inclusion in previously underserved segments of the Turkish population. For instance, the World Bank's Global Findex Survey shows that the percentage of Turkish women with formal bank accounts rose from 33 per cent in 2011 to 54 per cent in 2017. Similarly, state banks have been busy establishing Islamic participation banks as subsidiaries in order to reach out to more conservative segments of society. (Those banks operate on a non-interest basis and follow Islamic law. In practice, they make a profit through equity participation that requires a borrower to give the bank a share in their profits.)

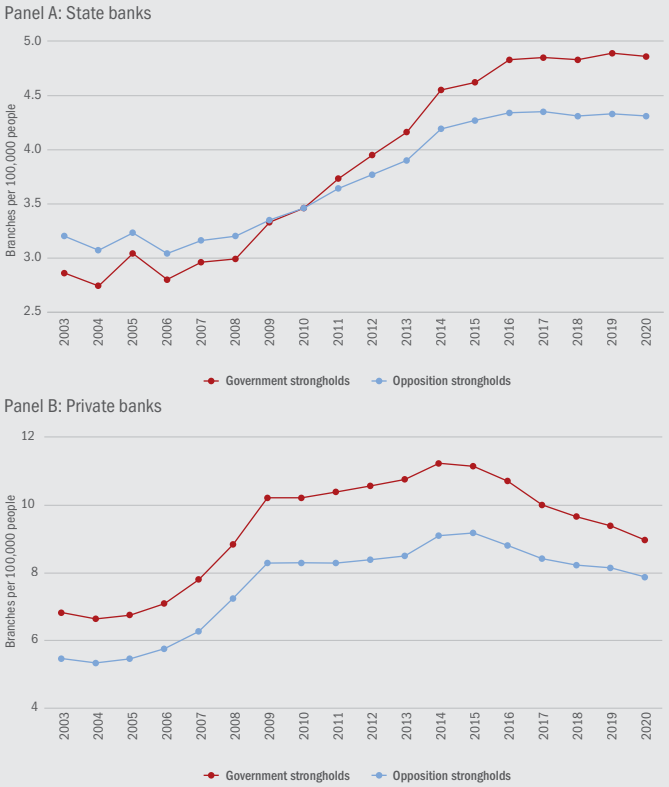
In order to shed more light on the drivers of those differential patterns for state and private banks, the analysis in this box draws on Turkish credit data, which are aggregated separately for state and private banks by province over the period 2003-17.[36] A single party had control of the central government throughout that period, exercising direct authority over the three state banks that operate nationally, which account for a combined total of around a third of all banking assets. If state banks are at least partly guided by political motivations, lending patterns in a particular province could be correlated with the political affiliation of the relevant mayor and the degree of electoral competition in that province. Analysis comparing lending by state banks and private banks in election and non-election years and across provinces with different political characteristics yields two main findings.

First, state banks engage in strategic lending around the time of local elections. In contrast with private banks, state banks lend more in provinces where the incumbent mayor is affiliated with the party controlling the central government and faces strong competition from political opponents in the run up to local elections. Similarly, state banks reduce their lending in competitive provinces where the incumbent mayor represents an opposition party (see Chart 3.1.2). This finding is in line with the notion of "tactical redistribution", whereby governments use public resources (in this case, lending by state-owned banks) as a strategic tool to improve their chances of re-election.[37] This pattern can be observed in state banks' lending to firms, but not in their lending to consumers, which is consistent with the view that local politicians are judged largely on local economic performance.

Further evidence of tactical redistribution can be seen in the responses of firms surveyed as part of the fifth round of the Enterprise Survey (see Table 3.1.1). In provinces where support for the party controlling the central government is traditionally strong, an average of around one in five businesses report having received a loan from a state bank. In contrast, that ratio is only one in ten in the provinces where opposition parties have their highest levels of support. Average interest rates on loans to firms are consistent both across regions and between state and private banks, implying that state banks price their loans on the basis of market rates. However, state banks are more likely to require collateral in provinces where support for opposition parties is higher. As a result, those provinces have higher

CHART 3.1.1.

State banks have opened more new branches in government strongholds than in other parts of the country

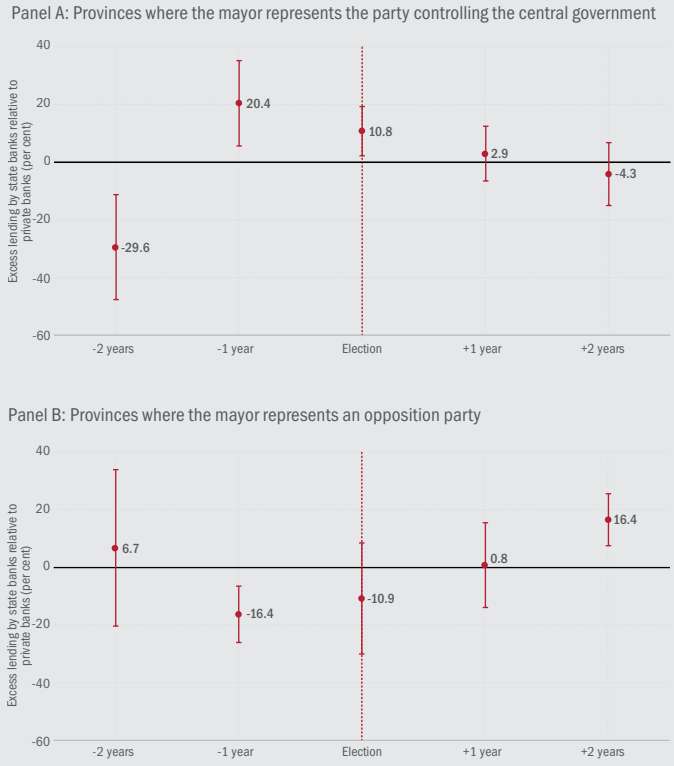


Source: Banks Association of Turkey and authors' calculations.
Note: "Government strongholds" denotes provinces where the party controlling the central government won all three local elections over the period 2004-14. "Opposition strongholds" refers to provinces where opposition parties won all three local elections. Averages are weighted on the basis of provinces' populations.

[34] See Dinç (2005) for evidence on 19 emerging markets, Cole (2009) on India, Carvalho (2014) on Brazil, Englmaier and Stowasser (2017) and Koetter and Popov (2020) on Germany, Khwaja and Mian (2005) on Pakistan and Fungáčová et al. (2020) for Russia.
[35] See Bircan and Saka (2019b).
[36] See Bircan and Saka (2019a).
[37] See Dixit and Londregan (1996).

CHART 3.1.2.

Tactical redistribution of state bank lending around the time of local elections



Source: Bircan and Saka (2019a) and authors' calculations.
Note: These estimates are derived from triple difference-in-differences regressions using data on annual bank credit broken down by bank type (state or private) and province. Each plotted coefficient is derived from a single regression; 90 per cent confidence intervals are shown.

TABLE 3.1.1.

Firms report better access to finance in provinces where support for the party controlling the central government is stronger

	Government stronghold	Opposition stronghold	Difference in means (p-value)
	(1)	(2)	(1)-(2)
Percentage of firms that received their last loan from a state bank	19.00	9.00	0.008***
Interest rate on last loan from a state bank in per cent	11.84	11.00	0.455
Percentage of firms that needed to provide collateral for last loan from a state bank	48.00	70.00	0.097*
Average perception as to whether access to finance is an obstacle to doing business on a scale of 0 (none) to 4 (severe)	0.67	0.85	0.009***

Source: Enterprise Survey and authors' calculations.
Note: "Government stronghold" denotes a province where the party controlling the central government won all three local elections over the period 2004-14. "Opposition stronghold" refers to a province where an opposition party won all three local elections. The last column reports the p-value for a two-tailed t-test of differences in the means reported in the first two columns. *, ** and *** denote statistical significance at the 10, 5 and 1 per cent levels respectively.

percentages of firms reporting that access to finance is a severe obstacle to doing business.

A second finding is that these systematic differences in firms' access to credit matter for the real economy. Industries with high levels of state bank lending that are located in politically contested provinces experience substantial reductions in employment, sales and assets in the run-up to local elections if the incumbent mayor represents an opposition party. Meanwhile, the opposite is true of closely contested provinces where the incumbent mayor represents the party controlling the central government. In opposition strongholds, credit growth declines particularly strongly in relatively efficient industries in the run-up to local elections.

As otherwise efficient industries respond to the tightening of financial constraints by shedding employment and assets, politically motivated bank lending may have long-lasting adverse effects on the allocation of capital, aggregate productivity and growth in regions that experience political lending cycles. It has been estimated that political lending may lower local aggregate productivity by nearly 2 per cent, which would explain a 10th of the overall productivity differential across firms in Turkey.[38]

The rapid expansion of lending by Turkish state banks over the last decade may have increased access to credit for previously underserved segments of the market. To the extent that productive enterprises benefited from this additional credit, state banks may have helped to improve the overall competitiveness of the economy. However, the existence of political lending cycles implies that the newly available credit was not always allocated to the most deserving companies. Overall, the evidence so far suggests that productivity losses stemming from the misallocation of credit outweigh potential gains from the increased availability of credit.

[38] See Bircan and Saka (2019a).

BOX 3.2.

Looking on the "bright side" of state banks

Small young firms are traditionally the most financially constrained businesses in an economy. They do not yet have a well-established track record with audited financial statements and often lack the collateral that is needed to take out a bank loan. At the same time, small young firms account for a large percentage of employment creation and often introduce the most innovative consumer products. What role can state banks play in helping this dynamic but financially constrained segment of the economy?

This box presents analysis of access to credit for start-ups and other young firms in Turkey. It draws on a credit registry that covers all loans issued in the country since 2006. That analysis is based on a sample of first-time borrowers spanning all sectors and regions of the country. These are typically newly registered firms with just a handful of employees, often referred to as "micro enterprises".

This analysis looks at private and state banks' appetite for lending to those first-time borrowers from a risk perspective, removing any common effects stemming from the year the loan was issued and the size of the firm. It then divides the universe of first-time borrowers into 20 equally sized bins by firm age and reports the average risk rating assigned to those borrowers by their banks, whereby a higher risk rating indicates a greater likelihood of default.

The vast majority of borrowers have been in operation for less than five years when they first take out a loan (see Chart 3.2.1). Regardless of their age, however, first-time borrowers that receive a loan from a state bank are perceived to be riskier than equivalent firms that borrow from a private bank. This suggests that state banks may have a greater willingness to lend to start-ups and other young firms that private banks deem less creditworthy. To the extent that state banks lend to young firms with profitable projects that would otherwise not come to fruition, they can improve the performance of small businesses and boost economic activity in a meaningful way.

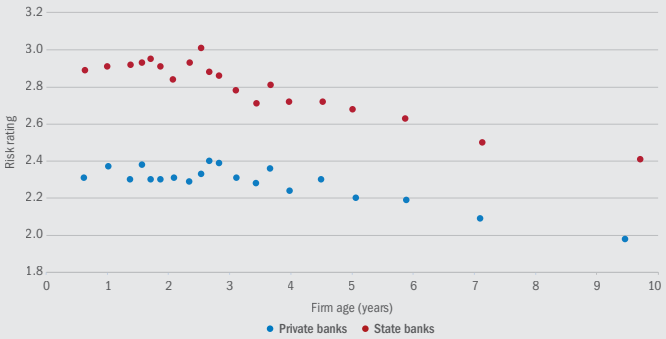
Even if they have a profitable project and a clear business plan, start-ups and other young firms are often unable to access credit for the simple reason that they lack the necessary collateral. In that kind of situation, state banks with a greater appetite for risk in respect of younger firms have the potential to play an important role. Indeed, the patterns in Turkish credit data would suggest that Turkey's state banks are playing that very role (see Chart 3.2.2). As before, this analysis accounts for the fact that banks may be more likely to require collateral in certain years or from firms with fewer employees.

Less than half of all loans issued by state banks to first-time borrowers in this sample required collateral to be provided up front. In contrast, around 80 per cent of all loans issued by private banks to equivalent first-time borrowers required collateral. For young firms with at least a year of financial statements, state banks required collateral only 60 per cent of the time, whereas private banks did so more than 75 per cent of the time. Thus, state banks would appear to have lower collateral requirements than private banks when it comes to firms that are less than two years old.

In the EBRD regions (as in most emerging markets), weaknesses in the registration of collateral, the enforcement of contracts, bankruptcy

CHART 3.2.1.

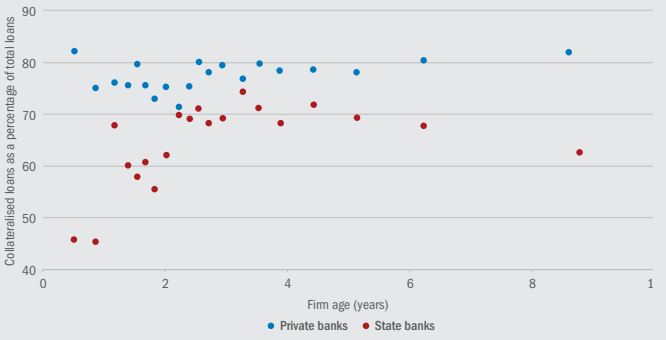
First-time borrowers given loans by Turkish state banks tend to be regarded as riskier



Source: Turkish credit registry and authors' calculations.
Note: This bin scatter plot controls for the year in which the loan was disbursed and the size of the firm.

CHART 3.2.2.

Turkish state banks are less likely than private banks to demand collateral from first time borrowers



Source: Turkish credit registry and authors' calculations.
Note: This bin scatter plot controls for the year in which the loan was disbursed and the size of the firm.

procedures and judicial processes all serve to discourage banks from lending to the youngest and smallest enterprises.[39] This box presents evidence showing that state banks can play an important role by bridging the financing gap faced by young firms, which represent an inherently dynamic (and risky) segment of the economy. Importantly, state banks' greater ability and willingness to lend to riskier clients should not come at the expense of lending by private banks. If private and state banks can achieve such complementarity, they can both boost the incomes of traditionally unbanked sections of the population and maintain low rates of delinquency.[40]

LESS THAN
50%
OF LOANS ISSUED BY TURKISH STATE BANKS TO SMALL YOUNG FIRMS BORROWING FOR THE FIRST TIME REQUIRE COLLATERAL, COMPARED WITH
80%
OF EQUIVALENT LOANS GRANTED BY PRIVATE BANKS

[39] See Beck et al. (2010).
[40] See Da Mata and Resende (2020).

BOX 3.3.

Correspondent banking under threat

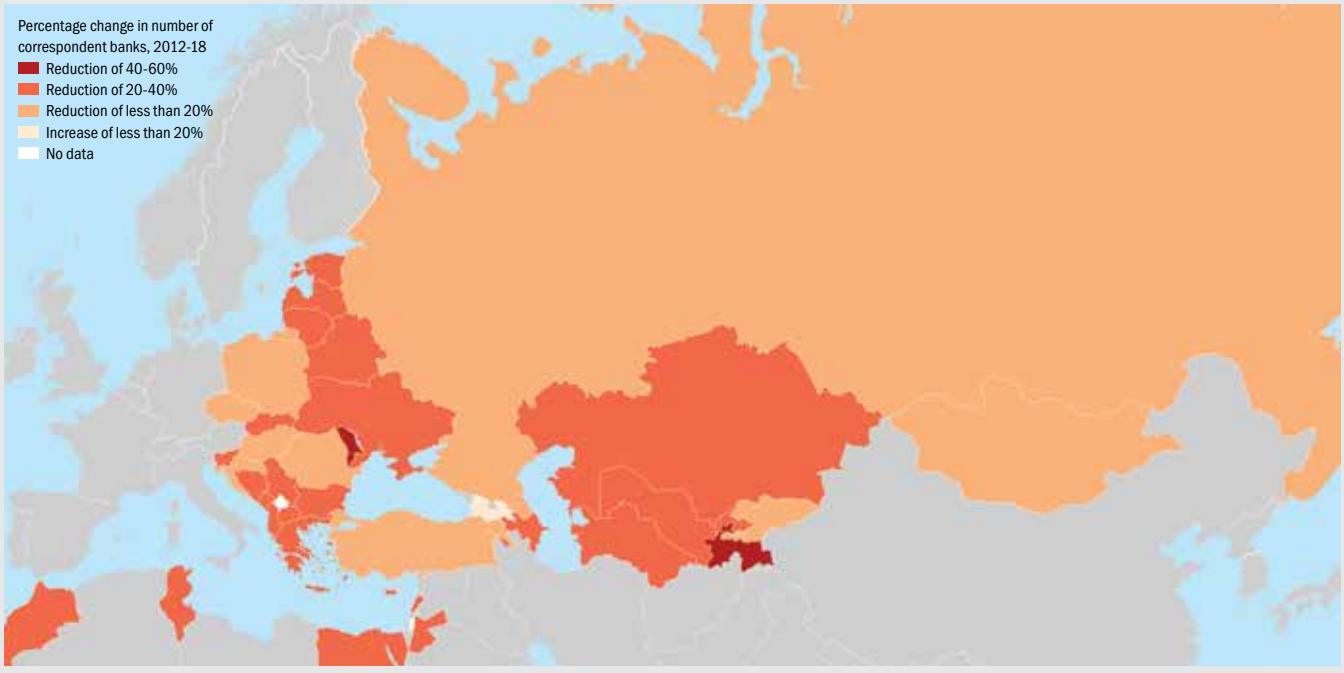
Correspondent banking is an arrangement whereby one bank (the correspondent bank) holds the deposits of other banks (respondent banks) and provides payment and other services to those banks. Correspondent banking is essential for international trade, as it allows importers to make cross-border payments to exporters. Specifically, correspondent banks facilitate payments between the local banks of the importer and the exporter, which do not usually hold accounts with each other. Correspondent banks also participate in bank-intermediated trade finance solutions, which facilitate trade in situations where there is a high probability of payment not being made or goods not being shipped and enforcement is expensive.[41]

Against this background, it is worrying that firms in many emerging markets have recently experienced a sharp decline in their access to correspondent banking services. Global banks have severely restricted the provision of correspondent banking services in response to the rapidly increasing cost of complying with financial crime regulations (abandoning those services entirely in some cases).[42] The resulting limitations on access to correspondent banking could potentially have serious consequences for international trade, growth and financial inclusion.[43] One key factor that has contributed to the withdrawal of correspondent banking services is the record US$ 8.9 billion fine that was imposed on the French correspondent bank BNP Paribas in June 2014 for violating sanctions against Sudan, Cuba and Iran, which was issued because the bank allowed international transfers to be made to banks in those countries. The ruling in that case made it clear that any bank which facilitates global transactions that threaten the integrity of the US financial system can, in principle, be tried in a US court. That penalty has led to a sharp reassessment of the cost of compliance – as regards both the required level of due diligence and the fines that could be expected – and contributed to correspondent banks' withdrawal from countries with a high risk of financial crime.[44]

The EBRD regions have not been immune to those developments, with the number of active correspondent banks in those economies declining by an average of 24 per cent between 2012 and 2018 (see Chart 3.3.1). There is, however, significant variation across countries. While the number of correspondent banks fell by less than 15 per cent in countries such as Croatia and Turkey (and even increased in Georgia), Latvia saw a 29 per cent decline, Tajikistan a 48 per cent decline and Moldova a 55 per cent decline. Some of those countries were the subject of significant money laundering concerns, which resulted in global banks terminating correspondent banking services. However, in a number of countries – including Egypt, Tunisia and Ukraine – major foreign correspondent banks switched their correspondent relationships from smaller private banks to state banks. Intelligence from market participants suggests that this reflects the fact that working with

CHART 3.3.1.

Correspondent banking services have been reduced across the EBRD regions



Source: Bank for International Settlements (BIS).
Note: This map shows the percentage change in the number of active correspondent banks in all economies in the EBRD regions between 2012 and 2018 (with the exception of Kosovo and the West Bank and Gaza, for which no data are available). The map is used for data visualisation purposes only and does not imply any position on the legal status of any territory.

[41] See Schmidt-Eisenlohr (2013).
[42] See World Bank (2015).
[43] See BIS (2016) and World Bank (2015).
[44] See BIS (2016).

state banks may involve simpler and less costly know-your-customer procedures – and, in some cases, lower levels of credit risk and reputational risk.

In order to assess the economic consequences of this sharp and sudden fall in the availability of correspondent banking, De Haas et al. (2020b) surveyed local respondent banks in the EBRD regions. That survey was conducted at the end of 2019, with questions covering the period between 2009 and 2019. Of the 131 banks that were invited to take part, 91 banks in 28 economies completed the entire questionnaire – a response rate of 69 per cent.[45] That survey yields three main insights.

First, correspondent banking networks have changed over time. In 2013, 75 per cent of all correspondent banks were located in the United States of America or Germany, but those two countries had a combined market share of only 54 per cent in 2019. Correspondent banks now hail from a wider range of countries, with Russian and Austrian banks now accounting for a larger percentage of the total. Replacing US correspondent banks with banks from other regions may increase costs as a result of longer intermediation chains.

Second, respondent banks report that accessing correspondent banking services has become more difficult and more costly. For example, local banks are finding it particularly difficult to access US dollars. In 2013, only 7 per cent of banks found it difficult or impossible to access US dollars, but by 2019 that figure had increased to 26 per cent. Accessing other cross-border services, such as payment services, currency clearing and trade finance, has also become more difficult. For instance, the percentage of banks reporting that they had difficulty accessing payment services (or no access at all) rose from 5 per cent in 2013 to 13 per cent in 2019, while the equivalent figure for currency clearing increased from 20 per cent in 2013 to 27 per cent in 2019, and the figure for trade finance rose from 11 to 19 per cent over the same period. Around 10 per cent of banks report that their access to the US export market has been severely limited (or even disappeared completely) as a result of the withdrawal of correspondent banks.

Third, local banks indicate that the most important reason for the decline in correspondent banking services is the fact that correspondent banking relationships do not generate sufficient business to justify the cost of carrying out additional due diligence on customers (with this being reported by 67 per cent of respondents). In addition, 51 per cent report that foreign correspondent banks have terminated relationships as a consequence of the stricter enforcement of regulations tackling money laundering and the financing of terrorism.

How has this sharp decline in access to correspondent banking affected exports across the EBRD regions? De Haas et al. (2020b) combine those survey data on the withdrawal of correspondent banks with bank-level data from Bankfocus, information on bank branches from BEPS II and firm-level export data from the Orbis database. They show that firms in towns and cities that have experienced a substantial loss of correspondent banking services are now less likely to export, and that exporters in those localities export less than firms in towns and cities that have not seen such a withdrawal of services. This suggests that the decline in active correspondent banking across the EBRD regions has had a substantial negative impact on both local banks and their exporting clients. Similarly, a recent study found that a decline in the availability of letters of credit in destination countries for exports during the 2008-09 financial crisis had a negative impact on Turkish exports to those destinations.[46]

Ensuring that firms regain access to correspondent banking is especially important in times of heightened uncertainty such as the Covid-19 pandemic.[47] Because of Covid-19-related disruptions to supply chains, many importers have had to source inputs from different suppliers, often from more remote countries. This has resulted in more complex transport routes, entailing longer financing periods for the trade cycle and a need to hold larger stocks, while foreign exporters have been more likely to request payment by documentary credit. These changes have significantly increased demand for trade credit. In the first seven months of 2020, for example, the EBRD's Trade Facilitation Programme (TFP) financed trade transactions with a total value of €1 billion, a 40 per cent increase relative to the same period in 2019.

In order to address the loss of correspondent banking relationships on account of the increased challenges of complying with financial crime legislation, the EBRD – in close cooperation with international compliance bodies – has set up a three-pronged programme to promote international standards in the area of compliance, which involves the following:

1. Compliance training and certification, whereby bank staff will have the opportunity to obtain professional certificates awarded by the International Compliance Association (ICA) in areas such as due diligence on customers, prevention of financial crime, and money laundering risks in correspondent banking

2. Policy dialogue with the relevant national central bank, focusing on efforts to bring best international practices to the country in question, including specialist training to improve banks' know your customer profiles

3. Individual advisory services for selected banks to help bring banks' compliance procedures up to the required international standard

[45] The economies in question were Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Greece, Jordan, Kazakhstan, Kosovo, the Kyrgyz Republic, Lebanon, Moldova, Mongolia, Montenegro, Morocco, North Macedonia, Romania, Serbia, Tajikistan, Tunisia, Turkey, Ukraine, Uzbekistan, and the West Bank and Gaza.

[46] See Crozet et al. (2020).

[47] See Demir and Javorcik (2020).

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4 THE STATE AND THE GREEN ECONOMY

As the objectives of the Paris Agreement on climate change make clear, greenhouse gas emissions need to decline substantially by 2050 to prevent disastrous global warming. Existing commitments at country level – both in the EBRD regions and elsewhere – are not strong enough to achieve that goal. The scale and urgency of what is needed over the next 30 years is such that an assertive state is required to guide private initiative. In the short term, the transition to a green economy should be built into Covid-19 recovery packages. In the medium term, the state needs to address the barriers, market imperfections and policy failures which are impeding that transition. And in the longer term, the state must support the "creative destruction" which that transition process will unleash, while at the same time making sure that it is equitable and smooth.


CAUTION
POLLUTION
CLEANING
IN PROGRESS

Introduction

Global warming is widely recognised as posing a major threat to humanity. Recent changes in weather patterns, rising sea levels and more frequent extreme weather events have caused widespread economic damage and loss of human life. The Intergovernmental Panel on Climate Change (IPCC) has warned that we have only a few years left to radically decarbonise the world economy if disastrous global warming is to be avoided.[1]

Climate change and other environmental problems do not observe national borders and can only be managed through timely collective action. The 2015 Paris Agreement on climate change[2] provides an opportunity for countries to strengthen the global response to climate change by keeping global temperature rises well below 2°C – and ideally as low as 1.5°C – relative to pre-industrial levels.

The scale and urgency of what is required over the next 30 years will pose unprecedented challenges for the state. It will require the state to play a more central role, guiding, enforcing and coordinating the transition to a green economy. This is not a case of "Central Planning 2.0"; it is about steering private initiative in the right direction. The Covid-19 pandemic has shown just how vulnerable the global economic system can be in the face of system-wide risks, so the need to transition to a green economy remains urgent even as governments prioritise public health and battle the economic fallout from the pandemic.

This chapter looks at the role of the state in the transition to a green economy. It begins by assessing the ambitions of economies in the EBRD regions in terms of achieving the goals of the Paris Agreement and supporting the transition to a green economy. It describes actions taken at state level in the form of policies and laws and examines their impact on greenhouse gas (GHG) emissions. It also provides guidance on the state's role in that transition process in the short, medium and longer term, drawing on existing evidence. Lastly, this chapter concludes by looking at the role of the private sector in the transition to a green economy.

Taking stock

Climate change objectives under the Paris Agreement

This chapter starts by looking at climate change objectives set at state level in various economies. The adoption of the Paris Agreement at the United Nations Climate Change Conference of the Parties in 2015 (COP 21) was one of the biggest climate change milestones in history. The overarching aim of the Paris Agreement is to reduce GHG emissions and ensure that global temperature increases this century remain well below 2°C relative to pre-industrial levels, while ideally pursuing a scenario whereby temperature rises remain below 1.5°C.

As of September 2020, a total of 197 parties have signed the agreement, and 189 of them have ratified it. All of the economies in the EBRD regions have signed and ratified the Paris Agreement, with the exception of Turkey (which has signed it, but not yet ratified it) and Kosovo (which is not a member of the UN). Under the agreement, all parties are required to set out the contributions that they intend to make to the objectives of the Paris Agreement in a formal submission to the UN. Those "nationally determined contributions" (NDCs) include all efforts to reduce national emissions and adapt to the impact of the changing climate.

All of the economies in the EBRD regions have taken some action on climate change and managed to reduce their GHG emissions relative to the levels seen in the early 1990s.[3] However, the reductions and ambitions seen to date fall short of what is required to achieve the objectives of the Paris Agreement. Comparing NDCs across economies is difficult, because they vary in terms of their mitigation targets and the years by which those objectives are to be achieved, as well as using differing methodologies and measuring targets against different base years. In the EBRD regions, 22 economies have an absolute GHG emission reduction target, 11 have a "business as usual" (BAU) target (whereby no additional emission reduction policies are adopted between the submission of the NDC and the target year), two economies have a target of reducing the carbon-intensity of GDP, and another two economies only list policies and actions. The most common base years are 1990 and 2005, but 2000, 2010, 2013 and 2030 are also used. All but two economies have chosen 2030 as their target year.

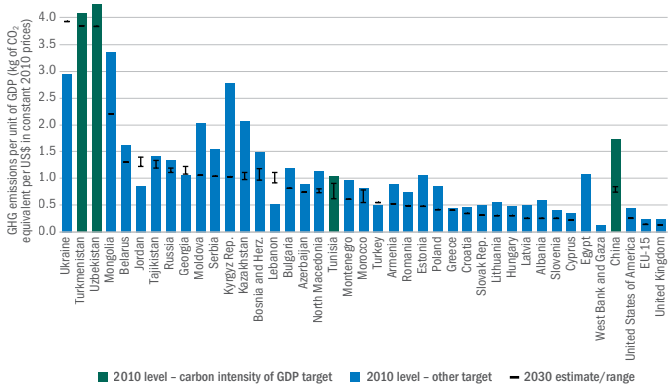
However, standardising those methodologies and combining them with various assumptions on GDP growth and UN projections on population growth makes such a comparison possible.[4] The analysis in this chapter focuses on the economies of the EBRD regions and a limited number of comparator countries: China, the United Kingdom, the United States of America and EU member states outside the EBRD regions.

Most economies are committed to reducing GHG emissions relative to GDP (see Chart 4.1). Indeed, GHG emissions per unit of GDP are expected to fall by 2030 in all but five economies in the EBRD regions, with reductions potentially ranging from as little as 3 per cent in Morocco to 63 per cent in the Kyrgyz Republic.

[1] See IPCC (2014).
[2] See UN (2015).
[3] See EBRD (2017).
[4] See Annex 4.1 for more details.

CHART 4.1.

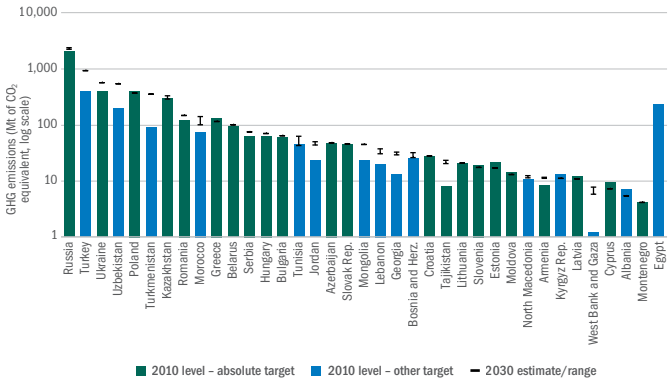
In most economies in the EBRD regions, NDC commitments imply a decline in overall GHG emissions per unit of GDP between 2010 and 2030



Source: NDC Registry, EU (2018), Climate Analysis Indicators Tool (CAIT), GDP growth forecasts (produced by the EBRD, the IMF and the OECD) and authors' calculations.
Note: See Annex 4.1 for details. Kosovo is not a member of the UN, so has not submitted an NDC. The West Bank and Gaza have non-member observer status at the UN. Egypt's NDC does not set a specific target. GDP estimates for 2030 are not available for the West Bank and Gaza. Economies are ordered on the basis of the GHG emissions per unit of GDP in 2030 that are implied by their NDC targets, from the highest to the lowest. Economies with red bars have targets aimed at reducing the carbon intensity of GDP by 2030, while those with blue bars have other types of target. Turkmenistan's NDC does not set a target as such, but mentions a desire to achieve a specific reduction in emission levels per unit of GDP.

CHART 4.2.

The NDC commitments of most economies in the EBRD regions imply an increase in overall GHG emissions between 2010 and 2030

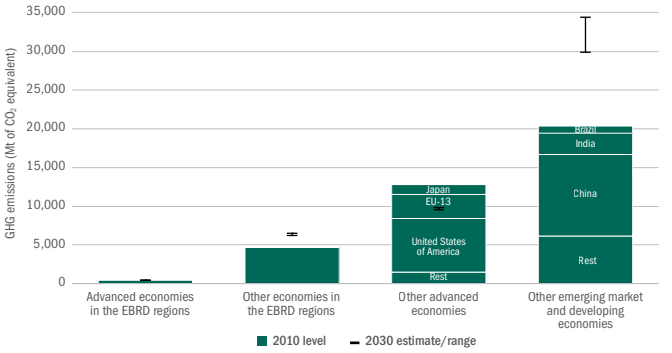


Source: NDC Registry, EU (2018), CAIT, GDP growth forecasts (produced by the EBRD, the IMF and the OECD) and authors' calculations.
Note: See the note accompanying Chart 4.1.

IN 23 ECONOMIES IN THE EBRD REGIONS, NDC TARGETS IMPLY AN INCREASE IN OVERALL GHG EMISSIONS BETWEEN 2010 AND 2030

CHART 4.3.

NDC commitments imply a reduction in overall GHG emissions for advanced economies, but not for emerging market or developing economies



Source: NDC Registry, EU (2018), CAIT, GDP growth forecasts (produced by the EBRD, the IMF and the OECD) and authors' calculations.
Note: See the note accompanying Chart 4.1. This chart is based on data for 138 economies. Seven of the economies in the EBRD regions are classified as "advanced economies": Cyprus, Estonia, Greece, Latvia, Lithuania, the Slovak Republic and Slovenia.

At the same time, NDC commitments in Turkey imply a 5 per cent increase in emissions per unit of GDP, and commitments in Lebanon involve emissions potentially more than doubling relative to GDP. In comparator economies, meanwhile, GHG emissions per unit of GDP are expected to decline by between 42 and 52 per cent.

The planned reduction in GHG emissions per unit of GDP is not enough to offset the pollution that is associated with expected GDP growth. Indeed, in most of the economies in the EBRD regions, those targets imply a rise in emissions between 2010 and 2030 – with emissions increasing by more than 150 per cent in some instances (as in the case of Tajikistan, Turkmenistan, Uzbekistan, and the West Bank and Gaza, for instance; see Chart 4.2). There are only 13 economies where NDCs imply reductions in GHG emissions between 2010 and 2030, with those reductions ranging from 0.5 per cent in Lithuania to 25 per cent in Cyprus.

In 2016, a number of economies (including Armenia, Belarus, Bulgaria, Croatia, Greece, Hungary, Kazakhstan, Lithuania, Moldova, Montenegro, North Macedonia, Romania, Serbia, the Slovak Republic, Slovenia and Ukraine) had absolute emissions that were below the 2030 target set out in their NDCs. This is not surprising, given that GHG emissions in most of those countries were much higher in their chosen base year (1990 or 2005 in most cases) than they were in 2010 or 2016, owing to the cheap energy and chronic environmental neglect of the central planning era.[5] However, it does highlight the fairly unambitious nature of the emission reduction targets in NDCs, particularly as regards absolute reductions in GHG emissions.

At an aggregate level, NDC commitments imply a decline in the absolute emissions of advanced economies (as defined by the IMF) and an increase in the absolute emissions of emerging market and developing economies (see Chart 4.3). This pattern is consistent with the principle of "common but differentiated

[5] See EBRD (2017).

IN THE SECOND ROUND OF NDCS, EMISSIONS TARGETS NEED TO BE STRENGTHENED
THREEFOLD
IN ORDER TO ACHIEVE THE 2°C GOAL AND
MORE THAN FIVEFOLD
IN ORDER TO ACHIEVE THE 1.5°C GOAL

responsibilities and respective capabilities", under which advanced economies – which are responsible for most of the GHGs in the atmosphere and have greater scope to act – are expected to take the lead in the fight against climate change by reducing their own GHG emissions, as well as providing support to developing economies.

Despite that principle, deeper and faster cuts in emissions will be required in the future, and countries will need to indicate those reductions in the second round of NDCs, starting in 2020. Globally, GHG emissions have been rising at a rate of 1.5 per cent per year over the last decade, without any sign of peaking. In the second round of NDCs, countries will need to strengthen their NDC ambitions threefold in order to achieve the 2°C goal and more than fivefold in order to achieve the 1.5°C goal.[6]

Support for the transition to a green economy

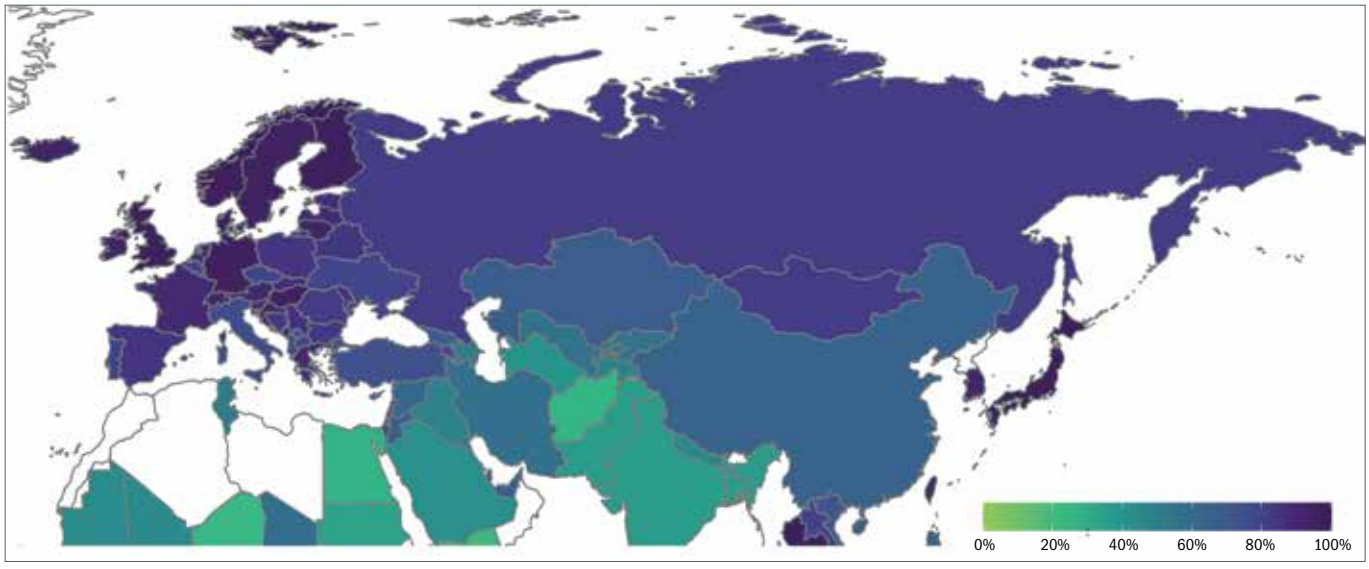
The climate change ambitions of individual governments reflect the opinions of the voters and stakeholders that those governments represent. In the EBRD regions, many economies continue to specialise in energy intensive industries – a legacy of the central planning era. Analysis of international trade statistics in the UN Comtrade database shows that highly energy-intensive industries[7] account for more than 50 per cent of total goods exports in Azerbaijan, Belarus, Egypt, Greece, Kazakhstan, the Kyrgyz Republic, Montenegro, Russia, Tajikistan and Uzbekistan.

Moreover, consumers have become accustomed to cheap – often subsidised – energy. Consequently, the politics of decarbonisation reforms has been extremely challenging. In the Kyrgyz Republic, for example, the government approved increases in residential tariffs in 2009, accompanied by subsidies for low income households through state-run social assistance programmes, but political unrest led to a reversal of that increase and a change in government in 2010.[8]

Thus, the transition to a green economy requires determined political leadership, as well as good public policy and strong state institutions. However, it also offers the prospect of healthier, safer, cleaner and more sustainable forms of economic prosperity. Increasingly, political leaders have the support of their

CHART 4.4.

People living in the EBRD regions claim to have a reasonably good understanding of climate change



Source: Gallup Poll 2008-10 and authors' calculations.
Note: This map shows the percentage of survey respondents who claim to know "a great deal" or "something" about global warming or climate change. No data are available for the economies in white.
This map is used for data visualisation purposes only and does not imply any position on the legal status of any territory.

[6] See UNEP (2019).
[7] As defined by Upadhyaya (2010).
[8] See Rosenthal et al. (2017).

citizens in this regard – not least among the young, whose futures may be directly affected by any failings in this area. Overall, people living in the EBRD regions claim to have a reasonably good understanding of climate change, on the basis of the results of representative household surveys (see Chart 4.4). However, while the percentage of people who claim to know at least something about climate change stands at more than 90 per cent in central Europe and the Baltic states (CEB), it remains below 60 per cent in the southern and eastern Mediterranean (SEMED) region and Central Asia.

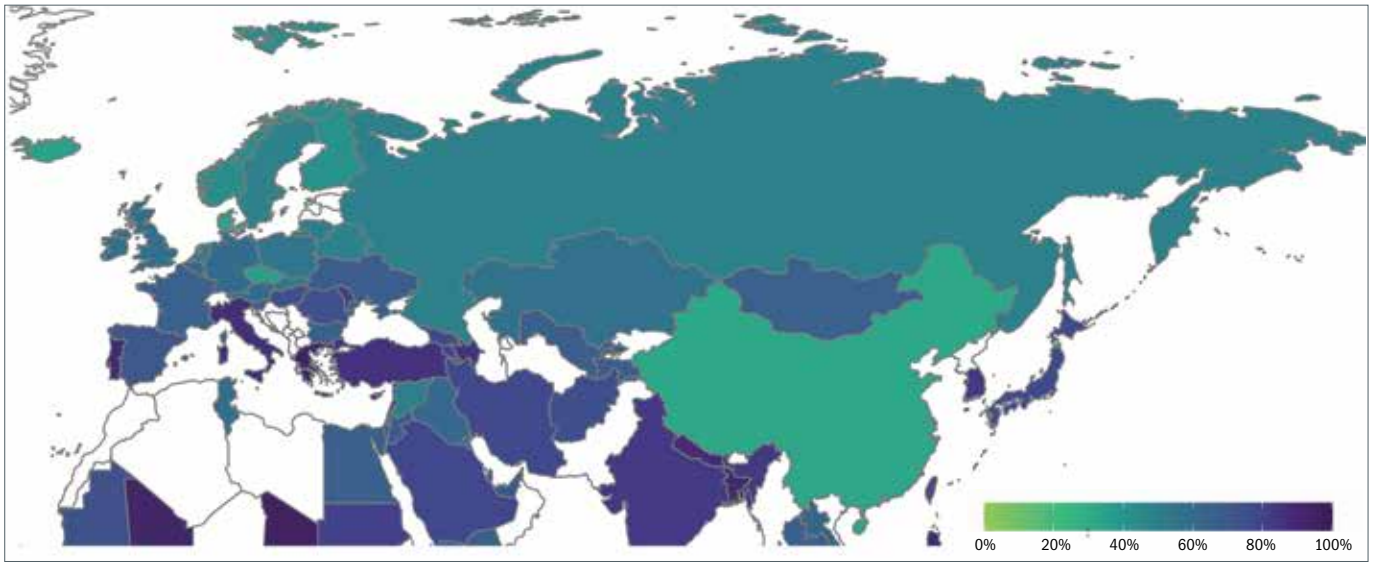
In the EBRD regions, the percentage of respondents who see global warming as a personal threat is highest in Greece (96 per cent) – which is not surprising, given that people living on its many islands can see the threat much more clearly than the inhabitants of, say, land-locked Belarus (49 per cent; see Chart 4.5). Overall, people living in less developed economies tend to regard climate change as a greater personal threat than people in developed economies (see Chart 4.5).

However, the perception that climate change is a threat does not necessarily translate into action, as highlighted by recent data on the Fridays for Future (FFF) movement – an international initiative whereby schoolchildren, inspired by Greta Thunberg, take time off from school on Fridays to participate in demonstrations, demanding action from political leaders to prevent climate change and calling for the fossil fuel industry to transition to renewable energy. Measured in per capita terms, demand for action on climate change is particularly strong in

MORE THAN 90%
OF PEOPLE IN CENTRAL EUROPE AND THE BALTIC STATES CLAIM TO KNOW AT LEAST SOMETHING ABOUT CLIMATE CHANGE, COMPARED WITH LESS THAN 60% IN THE SOUTHERN AND EASTERN MEDITERRANEAN AND CENTRAL ASIA

CHART 4.5.

Inhabitants of less developed economies tend to regard climate change as a greater personal threat



Source: Gallup Poll 2008-10 and authors' calculations.
Note: This map shows the percentage of survey respondents who feel that global warming is either a "very serious threat" or a "somewhat serious threat" to them and their family.
No data are available for the economies in white. This map is used for data visualisation purposes only and does not imply any position on the legal status of any territory.

Estonia, Slovenia and Montenegro (see Chart 4.6), with the number of climate strikes per capita between November 2018 and May 2020 exceeding equivalent figures for the United Kingdom and the United States of America, as well as the EU average. In the EBRD regions, climate strikes tend to be less common than in advanced economies but slightly more common than in other emerging market economies. For details of the impact that the Covid-19 crisis has had on people's concerns about climate change, see Box 4.1.

Action in the form of laws and policies

Another way of assessing the performance of economies is to look at the green policies and measures that have been implemented and their effect. All economies in the EBRD regions have adopted laws and policies tackling climate change. Analysis of a dataset combining the IEA Policies and Measures Database and the Climate Change Laws of the World database with additional research on green laws and policies in Kosovo, North Macedonia and the West Bank and Gaza reveals that, by 2019, economies in the EBRD regions had adopted a total of 248 green laws (parliamentary acts or government edicts) and 560 green policies (principles, rules and guidelines) at national level (with EU member states being subject to a further 57 laws and 68 policies adopted at European level; see Annex 4.2). As Chart 4.7 shows, the number of green laws and policies being adopted has increased dramatically since the 1990s, both in the EBRD regions and elsewhere. The majority of those laws and policies are regulatory in nature (introducing environmental standards, for instance). Information and agreement-based policies were popular early on, with policies involving taxes and levies gaining in traction over time.

The regression analysis presented in Table 4.1 (column 1) indicates that passing a green law or adopting a green policy is associated with declining CO_2 emissions per unit of GDP, over both the short and the long term.[9] That analysis links GHG emissions per unit of GDP to the introduction of green laws and policies, taking account of various country-level characteristics, as well as country and year fixed effects.

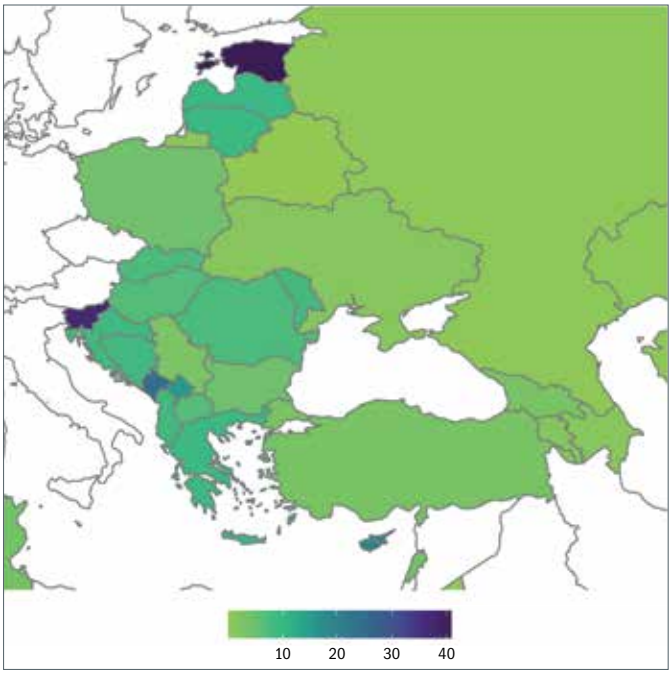
GREEN LAWS AND POLICIES ARE ASSOCIATED WITH A

12%

REDUCTION IN CO_2 EMISSIONS FROM THE EBRD REGIONS BETWEEN 1997 AND 2016 RELATIVE TO THE LEVELS THAT WOULD OTHERWISE HAVE BEEN SEEN

CHART 4.6.

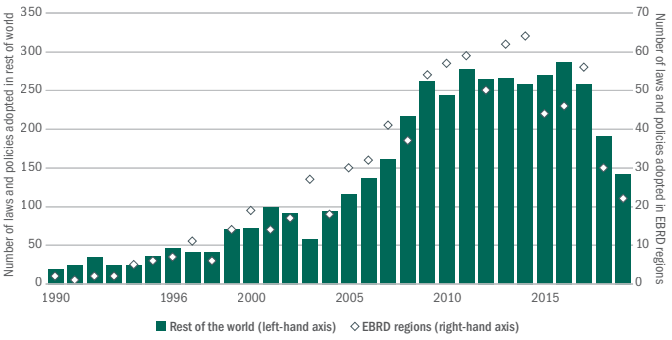
In Estonia, Slovenia and Montenegro, the number of school strikes per capita is higher than the average for the EU-27



Source: Fridays for Future, World Development Indicators and authors' calculations.
Note: This map shows the number of school strikes per million of population in the period from November 2018 to May 2020. This map is used for data visualisation purposes only and does not imply any position on the legal status of any territory.

CHART 4.7.

The number of green laws and policies being adopted has increased dramatically since the 1990s



Source: IEA Policies and Measures Database, Climate Change Laws of the World database, and authors' research and calculations.

[9] The analysis is based on the methodology used by Eskander and Fankhauser (2020).

TABLE 4.1.

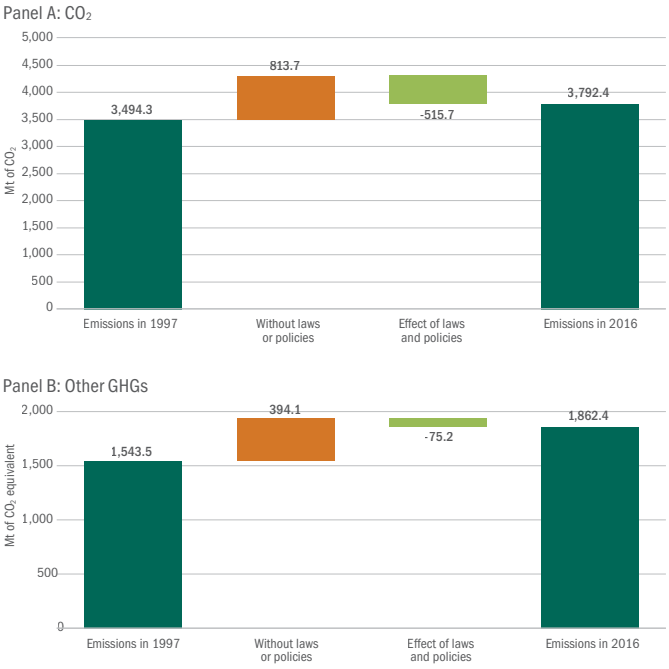
Climate laws make a difference, but only if they are implemented as planned

Dependent variable:	(1) CO_2 emissions per unit of GDP	(2) Other GHG emissions per unit of GDP
(L1) stock of recent laws x (L1) rule of law	-0.0077***	-0.0003
	(0.0015)	(0.0012)
(L1) stock of older laws x (L1) rule of law	-0.0106***	0.0004
	(0.0021)	(0.0016)
(L1) stock of recent policies x (L1) rule of law	-0.0014*	-0.0025***
	(0.0009)	(0.0008)
(L1) stock of older policies x (L1) rule of law	-0.0024***	-0.0033***
	(0.0006)	(0.0005)
(L1) rule of law	-0.5405***	-0.3194***
	(0.1043)	(0.0984)
(L1) log of GDP per capita at PPP	0.4834**	-0.8719***
	(0.2093)	(0.1096)
(L1) (log of GDP per capita at PPP)^2	-0.0531***	0.0152**
	(0.0110)	(0.0065)
(L1) imports as a percentage of GDP	0.0016***	-0.0004
	(0.0005)	(0.0003)
(L1) services as a percentage of GDP	-0.0018*	-0.0003
	(0.0010)	(0.0007)
(L1) temperature (deviation)	-0.0247***	-0.0021
	(0.0076)	(0.0057)
(L1) federal systems	0.2021***	0.0561**
	(0.0422)	(0.0245)
(L1) HP filter	0.2098	0.3629**
	(0.1643)	(0.1497)
Observations	3,090	3,076
R^2 (within)	0.9470	0.9891

Source: IEA Policies and Measures Database, Climate Change Laws of the World database, World Development Indicators, Database of Political Institutions 2017, World Bank Climate Change Knowledge Portal, and authors' research and calculations.
Note: "(L1)" indicates that values are lagged by one period. "Recent" laws/policies have been adopted in the last three years; "older" laws/policies were adopted more than three years ago. "Temperature (deviation)" is the difference between the average annual temperature and the average temperature for the period 1991-2016. The "federal systems" indicator is equal to 1 for countries where subregions have legislative powers. "HP filter" is the Hodrick-Prescott filter applied to the logarithm of GDP at purchasing power parity (PPP). All regressions include country and year fixed effects. Robust standard errors are reported in parentheses, and *, ** and *** denote statistical significance at the 10, 5 and 1 per cent levels respectively.

CHART 4.8.

Green laws and policies have not offset the rise in CO_2 emissions in the EBRD regions and the Czech Republic



Source: Authors' calculations.
Note: These data are based on the estimates presented in columns 1 and 2 of Table 4.1.

What ultimately matters, however, is the enforcement of such green laws and policies in order to achieve effective reductions in emissions. The regression analysis also shows that the magnitude of the impact depends on the strength of enforcement (captured here by the Worldwide Governance Indicator measuring the rule of law). In a country with the strongest recorded score for the rule of law, passing a new green law is associated with a 0.7 per cent per unit of GDP reduction in annual CO_2 emissions in the short term and 1 per cent in the long term. In contrast, adopting a new green policy in a country with the weakest recorded score for the rule of law is associated with only 0.2 per cent per unit of GDP emissions reduction in the long term. Given the governance gap between the economies of the EBRD regions and advanced economies, which has been well documented,[10] a climate law or policy that is adopted in the EBRD regions can be expected to have a weaker impact on emissions than an equivalent law or policy adopted in an advanced economy.

Green laws and policies are associated with reduced CO_2 emissions from the EBRD regions totalling 12 per cent between 1997 and 2016 relative to the levels that would otherwise have been seen (see Chart 4.8). This is an encouraging start, but much more will need to be done to accelerate the transition to a green economy. The sections that follow assess the various short, medium and long-term options in terms of possible government interventions.

[10] See EBRD (2019).

The role of the state in the short term

In the short term, policies supporting the transition to a green economy need to be coordinated with efforts to support the economic recovery following the Covid-19 crisis. The objectives of the transition to a green economy and the post-Covid-19 recovery are not necessarily in conflict with one another. Indeed, sustainability concerns should be built into any recovery package. Stimulus measures have to be timely (that is to say, shovel-ready), focus on investment that generates local jobs in the short run, and aligned with long-term national and global objectives in the area of sustainable development. In other words, the stimulus needs to foster transition to a green economy and focus on zero-carbon investment with a significant multiplier effect. In order to meet the 2°C target set by the Paris Agreement, all investment should, from now on, be consistent with achieving net-zero emissions by 2050 (meaning that a balance is struck between releasing emissions into the atmosphere and removing them by means of carbon sinks such as forests).[11]

Such measures can involve improvements in infrastructure (in the transport, communication, energy and water sectors, for instance), investment in renewable energy, spending on general R&D or research in the area of clean energy, extensive retrofitting of government-owned buildings, investment in energy-efficient residential buildings or the use of energy management systems.[12] Measures such as investment in connectivity infrastructure and investment in renewable energy generate more employment in the short term,[13] when jobs are scarce amid the recession. In the long term, these investments then require less labour for operations and maintenance, thus freeing up labour as the economy returns to pre-Covid-19 capacity. In addition, renewables also save on fuel and are better for the environment.

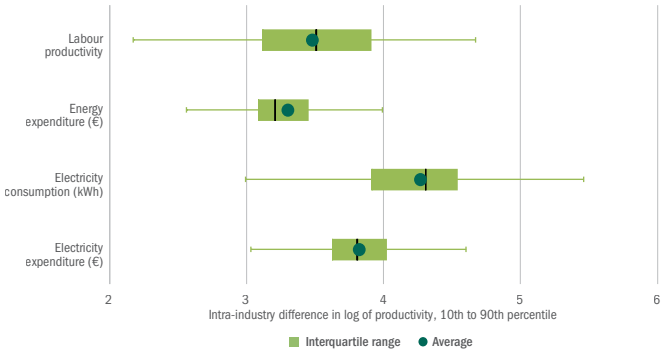
Supporting homeowners who want to improve the energy efficiency of their homes has a similar effect: it creates jobs, and it comes with environmental, economic and social benefits. It reduces buildings' emissions, lowers energy bills and creates a comfortable environment for residents. In the EBRD regions, for instance, the Bank has helped around 120,000 households to invest in high-quality green technologies such as thermal insulation, lighting, windows and doors, domestic appliances, heat pumps and solar panels through dedicated credit lines, in partnership with 40 financial institutions across 12 economies, helping to prevent 356,000 tonnes of CO_2 emissions per year.[14]

More broadly, it is important to recover from the pandemic in a way that makes businesses resilient to future shocks. This includes preparing them for the transition to a green economy. Rather than propping up zombie firms that have little chance of surviving in the green economy, the state can design its support packages in a way that readies businesses for the future.

For example, the labour productivity of manufacturing firms varies widely across the EBRD regions, but firms vary even more when it comes to electricity consumption per unit of output. This

CHART 4.9.

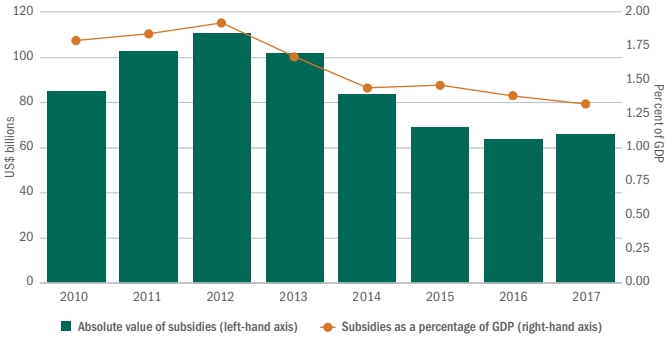
Dispersion in electricity consumption per unit of output is greater than that seen in other measures of productivity



Source: Enterprise Surveys and authors' calculations.
Note: These observations show, for each measure of productivity listed on the y-axis, the difference in terms of the logarithm of productivity between firms in the 90th and 10th percentiles of the productivity distribution for 170 manufacturing industries across the EBRD regions and the Czech Republic, taking into account industry fixed effects. The median for each measure is indicated by a vertical line. Extreme values (1.5 times the interquartile range above the third quartile or below the first quartile) are denoted by the ends of the horizontal lines.

CHART 4.10.

Pre-tax fossil fuel subsidies in the EBRD regions have declined since 2010, but remain substantial



Source: Coady et al. (2019) and authors' calculations.

SUSTAINABILITY AND THE TRANSITION TO A ZERO-CARBON ECONOMY SHOULD BE BUILT INTO POST-COVID-19 RECOVERY PACKAGES

[11] See Hepburn et al. (2020b).
[12] See Hepburn et al. (2020a) and IEA (2020).
[13] See Garrett-Peltier (2017) and Füllemann et al. (2020).
[14] These data only cover purely residential buildings; those that are also used by small enterprises are not included.

POST-COVID-19 STIMULUS MEASURES HAVE TO BE TIMELY, TARGETED AND ALIGNED WITH LONG-TERM SUSTAINABILITY OBJECTIVES

is true even when looking at differences within relatively narrowly defined industries (see Chart 4.9). This means that many firms are not operating anywhere near the energy efficiency frontier. Consider, for example, an industry in central Europe and the Baltic states with average dispersion of electricity consumption per unit of output. In that industry, an establishment in the 90th percentile of electricity efficiency produces more than 68 times the output of an establishment in the 10th percentile while using the same amount of electricity. Such differentials tend to be even larger in other EBRD regions. In part, they reflect differences in electricity costs (inclusive of any subsidies). However, they also point to the inefficient use of energy.

This, in turn, suggests that there is potential to improve energy performance. Covid-19 support should therefore be used to help firms reach the energy efficiency frontier. Such a support package could include free energy audits for firms, which could highlight the physical and behavioural changes that are needed to reduce energy consumption. In exchange for receiving free energy audits, firms could, as a minimum, be required to implement the low-cost operational or maintenance adjustments that are recommended in order to save energy (for example, switching equipment on and off as required, rather than at the start and end of each shift). Where an audit identifies a need for investment in energy efficiency measures, the firm could be given access to subsidised financing, perhaps in return for adopting energy efficiency performance targets. In addition to reducing firms' energy bills, such measures will also contribute to economy-wide efforts to achieve targets set under the Paris Agreement.

The role of the state in the medium term

In the medium term, the state needs to address the barriers, market imperfections (externalities) and policy failures that are impeding the transition to a green economy. Many of these actions will also have wider economic and environmental benefits, such as better functioning markets and a cleaner environment.

The first step is to get prices right. Energy prices need to reflect the economic and environmental costs of the relevant fuel type. This means that a cost should be applied to carbon pollution in order to encourage polluters to reduce their emissions (in contrast with the existing energy subsidies, which effectively incentivise firms to pollute more).

Fossil fuel subsidies

In the EBRD regions, more than 70 per cent of GHG emissions originate in the energy sector, with fossil fuels (which include coal, oil and gas) being used to generate 81 per cent of all electricity in those regions in 2015.[15] Moreover, in several countries in the EBRD regions that are heavily reliant on fossil fuels for their energy supply, subsidies are applied to both fossil fuels and electricity generated from fossil fuels. By reducing the cost of driving diesel and petrol cars or burning fossil fuels for heating and electricity, such subsidies attach a negative price to carbon emissions. That encourages pollution and incentivises inefficient use of carbon-intensive energy.[16]

IMF estimates suggest that pre-tax subsidies on fossil fuels (where the cost of supplying fuels exceeds their domestic price) declined between 2010 and 2017 in the EBRD regions, both in absolute terms and relative to GDP (see Chart 4.10).[17] In Uzbekistan, for instance, pre-tax subsidies fell from more than 25 per cent of GDP in 2010 to 8 per cent in 2017, and they fell from 21 per cent to 8 per cent over the same period in Turkmenistan. They also declined as a percentage of GDP in Egypt, Morocco, Russia and Ukraine, but they increased in Albania, Armenia, Azerbaijan, Belarus, Jordan, Kazakhstan, the Kyrgyz Republic, Lebanon, Mongolia, Tajikistan and Tunisia.

Carbon pricing

Putting a price on carbon is arguably the most important step in terms of addressing climate change, although it is not sufficient on its own. Carbon pricing will begin to correct the fundamental externality that lies at the heart of this problem, making emitters of GHGs confront the environmental costs of their actions.

The EBRD regions are home to a number of early adopters of carbon pricing, such as Poland (1990), Slovenia (1996), Estonia (2000) and Latvia (2004). Carbon pricing was given a major boost in 2005 with the establishment of the EU Emissions Trading System (ETS), which all of the EU member states in the EBRD regions participate in. Outside of the EU, Ukraine implemented carbon pricing in 2011 and Kazakhstan followed suit in 2013.[18]

[15] See EBRD (2017).
[16] See World Bank (2019).
[17] See Coady et al. (2019).
[18] See World Bank (2019).

The effectiveness of a carbon-pricing scheme depends on two factors: its scope (that is to say, the percentage of total emissions covered), and the price. While the percentage of emissions covered is relatively high in some countries (such as Ukraine), only 20 per cent of the world's emissions are covered by a carbon price. Moreover, the price of carbon is too low overall (see Chart 4.11).

In 2017, the High-Level Commission on Carbon Prices estimated that carbon prices would need to rise to between US$ 40 and US$ 80 per tonne of CO_2 by 2020 in order to deliver on the Paris Agreement.[19] Even the EU ETS prices carbon below that level; and in Poland, Estonia, Latvia and Ukraine, the price is only just above zero.

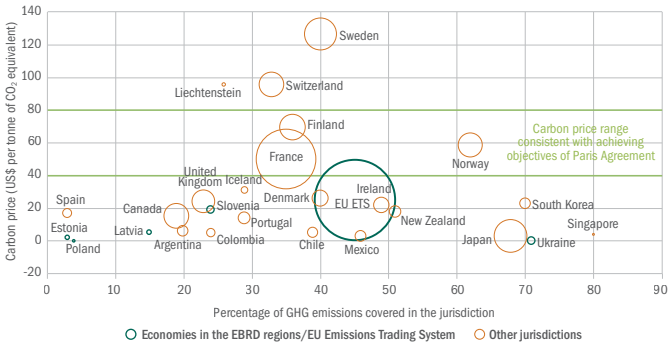
Some argue that carbon pricing could be detrimental to the competitiveness of highly energy intensive industries, even though there is little empirical evidence to support that claim.[20] In order to address such concerns, policymakers in many countries have been considering "carbon border adjustments" – import tariffs proportionate to the carbon content of goods imported from countries without adequate carbon pricing – in order to guard against "emissions leakage". The European Commission launched a public consultation on energy taxation and a carbon border adjustment mechanism in July 2020. While the precise details (including the sectors that will be subject to that measure) have yet to be determined, goods produced in highly energy-intensive industries are more likely to be affected. In several non-EU economies in the EBRD regions, highly energy-intensive industries accounted for more than 10 per cent of total goods exported to the EU in the period 2015-18. And in the case of North Macedonia and Russia, that figure stood at more than 30 per cent (see Chart 4.12). Having their own carbon taxes would exempt countries from the carbon border adjustment tax and enable them to keep the revenues in their own countries, as well as providing an incentive for firms to invest in improving energy efficiency.

Carbon pricing has a low implementation cost and is highly efficient, encouraging low-carbon adjustments all along the supply chain through producers' decisions on intermediate inputs and consumers' choices on final goods. Individual emitters facing a carbon price are probably better placed to identify the best way to reduce their carbon output than regulators, who may otherwise opt for more stringent industry standards.

IN NORTH MACEDONIA AND RUSSIA, HIGHLY ENERGY-INTENSIVE INDUSTRIES ACCOUNTED FOR MORE THAN 30% OF TOTAL GOODS EXPORTS TO THE EU-27 IN THE PERIOD 2015-18

CHART 4.11.

The overall carbon price remains below the price range that would be consistent with achieving the objectives of the Paris Agreement



Source: World Bank (2019), High-Level Commission on Carbon Prices (2017) and authors' calculations.
Note: The size of each circle denotes the nominal amount of government revenue that is generated by carbon pricing.

ONLY 20% OF GLOBAL EMISSIONS ARE COVERED BY A CARBON PRICE

However, carbon pricing can be regressive. Most carbon tax is paid on energy (heating and electricity), which accounts for a larger percentage of the expenditure of lower-income households. Protests in the Kyrgyz Republic in 2010 attest to consumers' potential sensitivity to changes in energy prices. Indeed, public opposition is one of the main obstacles to the implementation of carbon taxes. Experience to date suggests that carbon taxes should be phased in gradually, with their proceeds being earmarked for additional climate change mitigation measures, as well as support for lower-income households.

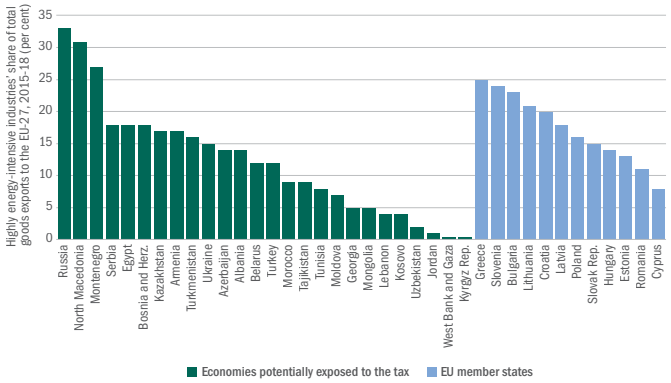
In particular, the adverse distributional effects of carbon pricing could be addressed by means of transfers to lower-income households (funded by additional revenue raised through carbon pricing), coupled with targeted subsidies encouraging improvements to residential energy efficiency. Policymakers should ensure that they keep the public informed about carbon-pricing initiatives at all stages of the process, from the design stage right through to implementation.[21]

Nevertheless, carbon prices alone are not sufficient to trigger structural change on the necessary scale within the necessary timescale.[22] Many structural challenges, such as the design of cities and production networks, respond slowly or weakly to changes in prices, owing to inertia in business decisions, information barriers (see below) and other rigidities.

[19] See High-Level Commission on Carbon Prices (2017).
[20] See Dechezleprêtre and Sato (2017) for an overview.
[21] See Carattini et al. (2018) and Rentschler (2018).
[22] See Hepburn et al. (2020b).

CHART 4.12.

Economies where highly energy-intensive sectors make up a larger percentage of exports to the EU are more exposed to a potential carbon adjustment tax



Source: UN Comtrade, Kosovo Statistical Agency and authors' calculations.
Note: Highly energy-intensive industries are defined on the basis of Upadhyaya (2010). Data for Kosovo relate to the period 2016-18.

Other barriers impeding the transition to a zero-carbon economy

In addition to the failure to "internalise" environmental externalities, there are also various other factors that are impeding the transition to a zero-carbon economy. Clean energy represents a public good, meaning that the social benefits of R&D in this area may far exceed private benefits on account of largely un-monetised benefits such as better air quality and healthier lifestyles. This results in an insufficient supply of green innovation. Failures in capital markets may also limit the amount of green financing available. Moreover, green innovation also relies on network effects and is thus vulnerable to coordination failures – as can be seen, for example, when it comes to establishing carbon capture and storage (CCS) clusters or providing the infrastructure needed to charge electric vehicles.

As a result, energy efficiency levels fall short of the potential level (giving rise to what is termed the "energy efficiency gap"). Some of this gap can be explained by hidden costs, such as the cost of obtaining relevant information about energy-efficient technologies and the risks associated with their deployment. The opportunity cost of alternative investments that are forgone in order to invest in energy efficiency (including the cost of scarce managerial attention), which are not included in engineering estimates, also plays a role.[23] However, a large percentage of the energy efficiency gap reflects under-pricing of energy and uncertainty about future energy prices.[24]

Information barriers appear to play an important role in the EBRD regions. More than 60 per cent of firms that have not invested in energy efficiency improvements say that their main reason for not doing so is that they do not see them as a priority, with only 12 per cent blaming a lack of funding for green investment.[25] This could reflect imperfect information (or a lack of information) about the savings that can be made as a result of investing in more energy-efficient machinery or equipment, making companies disinclined to invest in them. In comparison, only 12.5 per cent of surveyed firms say (rightly or wrongly) that energy efficiency investments are unprofitable. Box 4.2 looks at how an online platform can be used to improve the dissemination of information about green technologies and associated funding options.

A lack of financial resources is the third most cited reason for not investing in energy efficiency. In the absence of a regulatory nudge, investors find it difficult to embrace projects that involve new, climate friendly solutions. The perception of a high degree of risk is driven by the significant upfront costs associated with certain technologies, as well as the untested nature of new business models lacking historical performance data. However, awareness of green issues in the financial markets is gradually increasing (see Box 4.3).

The role of the state in the long term

The economic changes that are required in order to transition to a green economy are deep, structural and systemic. Indeed, they are sometimes considered to be akin to a new industrial revolution.[26] The state has an important role to play in this process of creative destruction. A proactive role for the state does not mean a move towards widespread state ownership or government-directed economic activity. It means strengthening public policy in order to address the market failures discussed in the previous section and integrate environmental policies into a wider industrial strategy aimed at achieving clean growth. And as creative destruction inevitably creates both winners and losers, public policy also needs to mitigate the risks for those who are adversely affected by the transition to a green economy.

A green industrial policy needs to anticipate long-term technological trends and promote broader structural change across the economy – not just in industrial sectors. This kind of shift to a low-carbon economy can also deliver resource efficiency and productivity enhancements, thereby improving the competitiveness of the economy as a whole.

62%
OF FIRMS THAT HAVE NOT INVESTED IN ENERGY EFFICIENCY MEASURES OVER THE LAST THREE YEARS REPORT THAT OTHER TYPES OF INVESTMENT ARE A HIGHER PRIORITY

[23] See Allcott and Greenstone (2012).
[24] See Jaffe and Stavins (1994), and Gillingham and Palmer (2014).
[25] See EBRD (2019).
[26] See Bowen and Fankhauser (2011).

Traditional industrial policies and green industrial policies are similar in many ways. Both steer the economy towards an increase in value added and enhanced productivity. Both entail risks relating to political capture and the misallocation of scarce resources. And the trade-offs that are inherent in traditional industrial policy also apply to green industrial policy, as do the lessons that have been learned regarding politically connected firms and the governance of state-owned enterprises (see Box 1.8 and Chapter 2).

Support for clean innovation

The transition to a green economy relies on technological change: a switch from polluting to clean technologies (from traditional internal combustion engines to electric and hybrid vehicles, for example). However, innovation tends to exhibit a high degree of path dependence. Firms that have historically carried out a lot of innovation in relation to dirty technologies will find it easier to continue innovating in those areas. At the same time, a firm is more likely to innovate in areas relating to clean technologies if it is located in a country where other firms have been innovating in such areas.[27] In addition, the types of technology that are developed will be influenced by the relative prices of energy inputs.[28]

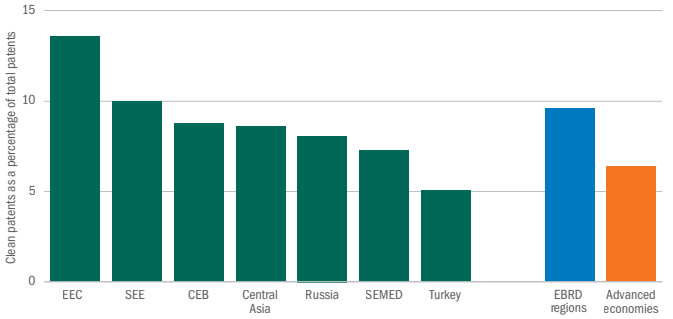
This indicates that the state has a role to play in supporting technological change. Carbon pricing is key in this regard, but on its own it may not necessarily result in firms switching to clean innovation given the extent of technological path dependence. The state needs to encourage the development of clean technologies of the future by subsidising R&D in such areas.[29] Increased state support for radical new clean technologies is also justified by the substantial knowledge spillovers that they produce, which are comparable to those seen in nanotechnology or information technology (IT).[30] Since knowledge developed by one firm can often be used by competitors for a fraction of the cost of developing it, firms may otherwise invest too little in knowledge development relative to the level that would be optimal for society as a whole.

In order to assess trends in clean innovation in the EBRD regions, this chapter now turns its attention to the subject of clean patents. Although innovation rates tend to be low in many economies in the EBRD regions, clean patents account for a relatively large percentage of total patents in those regions (averaging around 9.6 per cent of total patents, compared with an average of 6.4 per cent in advanced economies; see Chart 4.13). In fact, prior to 2004, clean patents' share of total patents was actually higher in the EBRD regions than it was in the rest of the world, albeit the overall patenting rate in the EBRD regions was far lower.

AROUND 9.6% OF ALL PATENTS FILED IN THE EBRD REGIONS BETWEEN 1990 AND 2019 WERE CLEAN PATENTS, COMPARED WITH 6.4% IN ADVANCED ECONOMIES

CHART 4.13.

The economies of eastern Europe and the Caucasus (EEC) lead the way in the EBRD regions in terms of clean patents' share of total patents



Source: European Patent Office (PATSTAT database, spring 2020) and authors' calculations.
Note: These data are based on patents filed with the European Patent Office in the period 1990-2019. "Advanced economies" exclude EBRD countries of operations that the IMF classifies as advanced economies.

In countries that primarily adopt – rather than develop – new technologies (including many economies in the EBRD regions), governments could foster the diffusion of technology by making it easier for firms to participate in global value chains and hire individuals with the requisite skills. In contrast, local content policies (which are a common component of industrial policy in areas such as renewable energy) may slow technological change down instead of deepening it (see Box 4.4).

Support for technological change needs to be immediate and decisive, but it does not need to be permanent. Once more firms have started engaging in clean innovation and using clean technologies, the rest will follow, thanks to knowledge spillovers and network effects. For instance, when the network of electric charging points becomes more comprehensive and petrol stations become scarcer, the attractiveness of electric vehicles will rise.

"Just transition"

The state has a duty to make the transition to a green economy equitable by facilitating the shift to new jobs for workers affected by technological change (such as people employed in the coal, oil and gas sectors, those working in energy-intensive industries that are reliant on fossil fuels, such as the steel, cement and

[27] See Aghion et al. (2016).
[28] See, for instance, Acemoğlu et al. (2012).
[29] See Acemoğlu et al. (2012) and Aghion et al. (2016).
[30] See Dechezleprêtre et al. (2017).

AROUND 40%
OF THE ECONOMIES IN THE EBRD REGIONS HAVE A LEVEL OF CARBON INTENSITY WHICH IS ABOVE THE GLOBAL AVERAGE

petrochemical sectors, and people living in communities where livelihoods are supported by large employers operating in fossil fuel-linked sectors). At the same time, governments also need to regulate jobs in the green economy from an environmental point of view and a health and safety perspective. In other words, the transition to a green economy needs to be just (see Box 4.5).

The extent of an economy's vulnerability depends on a variety of factors, which vary substantially across the EBRD regions. They include the economy's endowments in terms of fossil fuels, its industrial structures, workers' skill-sets and the degree of labour market mobility. Importantly, the vulnerability of specific groups of workers is also driven by broad factors such as the competitiveness and location of industries within the economy.[31]

Around 40 per cent of the economies in the EBRD regions have a level of carbon intensity which is above the global average. Given the prevalence of fossil fuel subsidies across the EBRD regions (see Chart 4.11), consideration needs to be given to the distributional consequences of their removal in order to support those who are least able to afford higher energy prices. Importantly, NDCs have so far paid insufficient attention to the issue of economic inclusion. Only 25 per cent of all NDCs submitted by economies in the EBRD regions include plans for skills training, while many countries foresee no activities at all in relation to human capital.

The state is a major owner of fossil fuel assets in the EBRD regions, as discussed in Chapter 2. That is especially true of the coal sector, which employs more than 1.1 million people, both directly and indirectly, and is particularly vulnerable to any transition to a green economy in the short term. The public sector also has a crucial role to play in supporting the development of new economic opportunities in communities impacted by such a transition process. For example, the state may need to strengthen social safety nets and provide targeted support to displaced workers, including assistance with the acquisition of new skills linked to the needs of local labour markets, help finding new high-quality jobs, mental health support and financial counselling. In the EU, subnational regions that are highly reliant on carbon-intensive industries can be awarded EU funds to help support a just transition process, but they must first draw up a strategic plan detailing the measures that they plan to implement.[32]

When it comes to the removal of fossil fuel subsidies, a successful policy design will include measures aimed at increasing public support for reforms, adequate social protection for low-income households, the gradual phasing-out of the subsidies in question, and the establishment of adequate mechanisms to stop rapid price rises.[33]

Private-sector initiatives

Previous sections focused on the role of the state in the transition to a green economy. Ultimately, that role involves guiding private initiative in a sustainable direction, with the private sector responding to the incentives that it faces. This next section looks at the ways in which private firms can support that transition process.

Voluntary emissions targets

Against the backdrop of pressure from investors, and anticipating government policies that could penalise carbon emissions in the future, a growing number of companies have announced their own voluntary emissions targets (albeit the emissions covered still account for only a small fraction of the total emissions generated by human activities). Ikea, for example, plans to reduce its emissions by 15 per cent by 2030, including indirect emissions related to raw materials and consumers' use of products. Apple, meanwhile, is committed to being 100 per cent carbon-neutral in terms of its supply chain and products by 2050.[34] And BP, an oil and gas company, recently declared its intention to become a net-zero company by 2050.[35]

While these initiatives are welcome, there is little consensus on what "carbon neutrality" or "net-zero emissions" really mean, and there is no clear standard for calculating a company's carbon footprint. Increasingly, however, companies are including emissions derived from their supply chains and emissions resulting from customers' use of their products, in addition to their own emissions (such as those produced by their office buildings or company-owned vehicles).[36]

The Science Based Targets initiative (SBTi) seeks to fill that gap by establishing and promoting best practices in the area of evidence-based target setting, providing resources and guidance to help reduce barriers to the adoption and independent verification of companies' targets.[37] As of August 2020, a total of 433 companies have approved science-based

[31] See EBRD (2011).

[32] See EBRD (2020).
[33] See Rentschler (2018).
[34] See www.apple.com/uk/newsroom/2020/07/apple-commits-to-be-100-percent-carbon-neutral-for-its-supply-chain-and-products-by-2030 (last accessed on 01 September 2020).
[35] See www.bp.com/en/global/corporate/news-and-insights/press-releases/bernard-looney-announces-new-ambition-for-bp.html (last accessed on 01 September 2020).
[36] See Hook (2018).
[37] See CDP et al. (2015).

targets, while a further 521 companies are committed to submitting their targets for validation within 24 months of signing up to the initiative.[38] The majority of them (including both state-owned utilities and privately owned companies, most of which are listed) signed up to the initiative in 2019. Sixteen of those companies are located in the EBRD regions. What is more, one of the 16, Magyar Telecom in Hungary, has an approved target.

Companies in the EBRD regions are, on average, less prepared for the transition to a low-carbon economy than companies elsewhere. This is also reflected in assessments by the Transition Pathway Initiative (TPI), which looks at the quality of companies' management of their GHG emissions and risks and opportunities relating to the transition to a low-carbon economy, as well as the current and targeted emissions intensity of each company in the context of international targets and national pledges made under the Paris Agreement.

Green labelling and certification

Increasingly – either voluntarily or as a result of regulation – firms in the EBRD regions are becoming more transparent about the environmental footprint of their products, including packaging, input materials, the energy that is consumed during production and the applicable environmental and health and safety standards. One option for firms that are looking to do this is to use an independently verified green-labelling scheme based on life-cycle considerations.

The European Commission has been working to simplify and improve green labelling and packaging. The EU Ecolabel, which was established in 1992, covers a wide range of different product groups, from manufactured goods to tourist accommodation. As of March 2020, more than 70,000 products have been awarded the EU Ecolabel in 24 different product categories. Of that total, 7,770 labels have been awarded in the EBRD regions – most of them in Greece (3,523), Poland (2,727) and Estonia (781). Other international schemes include Fair Trade, Green Seal, the Forest Stewardship Council, Excellence in Design for Greater Efficiencies (EDGE), Performance Excellence in Electricity Renewal (PEER) and Leadership in Energy and Environmental Design (LEED).

In addition, some countries have established their own national green-labelling schemes – which are, in turn, recognised by the Global Ecolabelling Network (GEN). National schemes in the EBRD regions include Eco-Labelling (run by Kazakhstan's International Academy of Ecology), Vitality Leaf (run by Russia's Ecological Union) and the Ecolabelling Programme (run by Ukrainian NGO Living Planet).

The role of international organisations

The evidence discussed above suggests that there is plenty of room for improvement in terms of companies' readiness for the transition to a low-carbon economy in the EBRD regions. International organisations (including the EBRD) have a key role to play in supporting that transition, both as investors and as providers of capacity-building programmes.

One example of such support is an EBRD initiative, launched in 2018, which seeks to develop guidelines on enhancing companies' governance in respect of climate-related risks and opportunities in emerging markets and helps firms to implement the required measures.[39] The Corporate Climate Governance Toolkit enables companies to ascertain whether climate-related considerations are adequately integrated into their decision-making processes, as well as identifying ways in which that integration could be enhanced. Such initiatives can be supported by broader capacity-building programmes helping companies and governments to develop effective climate strategies and report on them. UNCTAD, for instance, has been advising managers of ports on climate risks and their mitigation.

The transition to a green economy can also be taken into account when prioritising investment, as is the case with the EBRD's revised Green Economy Transition (GET) approach (termed "GET 2.1"). In addition to the specific attention that is paid to the issue of "just transition", all investments are, by 2025, to be screened for alignment with the Paris Agreement and national climate-related action plans, with increased investment in projects focusing on the "greening" of the financial sector and energy systems, industrial decarbonisation, sustainable cities, food supply chains, the preservation of natural capital, opportunities relating to the circular economy and green digital solutions.

Conclusion

The transition to sustainable growth and a green economy will only be a success if the private sector applies its ingenuity, investment and entrepreneurship to that endeavour. However, a strong state – encompassing sound public policy, strong state institutions and determined political leadership – is needed to channel private-sector dynamism in the right direction. That does not mean central planning; it means that the state should incentivise companies and consumers to think green, promote clean investment and remove barriers preventing a smooth transition to the low-carbon economy of the future.

National governments – both in the EBRD regions and elsewhere – have yet to live up to their responsibilities in this regard. At present, the NDCs of economies in the EBRD regions under the Paris Agreement imply a further increase in GHG emissions over the next 10 years. Thus far, green laws and policies have only reduced GHG emissions by around 12 per cent relative to the levels that would otherwise be expected. Under the Paris Agreement, countries are expected to review and ratchet up their NDCs in the course of 2020. They must take this opportunity to radically increase their ambitions and align them with the Paris Agreement's objective of restricting global warming to well below 2°C relative to average pre-industrial temperatures.

If they are to achieve that objective, countries must, in the short term, build the transition to a green economy into their Covid-19 recovery plans. Many of the government investment

[38] Data taken from https://sciencebasedtargets.org/companies-taking-action on 21 August 2020.

[39] See Haralampieva (2019).

projects that are needed for the transition to a green economy (such as investment in clean energy and energy efficiency) are also effective ways of supporting the post-Covid-19 recovery.

The state must also be ruthless in focusing its support on industries and firms that have a zero-carbon future, while refraining from propping up zombie firms that will struggle in the green economy. Earmarking a percentage of those support packages for energy efficiency improvements, for example, could help firms that are currently underperforming to move closer to the energy efficiency frontier. The analysis in this chapter has found considerable heterogeneity in firms' energy efficiency performance, which suggests that there is ample scope for such measures.

In the medium term, the state needs to address the market and policy failures that are impeding the transition to a green economy. The key here is to get prices right. That means putting a higher price on carbon and applying that higher price to a broader set of emission sources. It also means removing fossil fuel subsidies, which still total more than 1 per cent of GDP in the EBRD regions.

Additional incentives, subsidies and regulation are also needed to encourage greater resource efficiency, leverage network effects (for instance, ensuring that electric cars have access to a comprehensive network of charging points) and ensure access to capital for firms with viable green investment projects. Low-carbon solutions such as renewable energy and electric cars often entail significant capital costs at the outset (although their eventual operating costs may be low), which highlights the essential role that a well-functioning financial market plays in supporting the transition to a green economy.

In the longer term, the state must support the creative destruction that the transition to a green economy will unleash. Clean innovation has the same benefits as IT or nanotechnology in terms of knowledge creation. The fact that the wider societal benefits of green innovation far exceed the private returns to innovating firms justifies the provision of additional government support. At the same time, active policies aimed at seizing the opportunities presented by the transition to a green economy will need to guard against the common pitfalls of industrial policy, including capture by politically connected interests.

Because carbon-intensive economic activity is so deeply entrenched in the EBRD regions, the state will also have a key role to play when it comes to supporting workers and communities that are adversely affected by such creative destruction. The state has a duty to make that transition process equitable – for instance, by supporting labour market mobility and reskilling, and by enforcing labour standards to ensure the attractiveness of jobs in the green economy.

BOX 4.1.

The Covid-19 pandemic and attitudes towards climate change

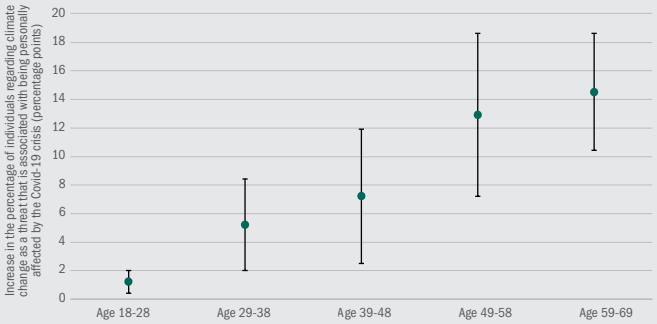
Covid-19 and climate change share a few similarities: neither observes national borders; and in both cases, the worst damage can only be averted if society commits to decisive action in the face of a seemingly abstract threat.[40] Indeed, the Covid-19 pandemic shows the size of the challenge that we face as regards climate change. Because of this, it has been suggested that the pandemic may increase awareness of climate change, with deliberative engagement mechanisms (such as citizens' assemblies and juries) being a powerful way of building a social mandate for climate action post-Covid-19.[41] At the same time, research carried out prior to the pandemic found that older generations (who face greater health risks as a result of Covid 19) were less likely than younger generations to regard climate change as a serious threat.[42]

This box investigates the relationship between age, the economic impact of the Covid-19 crisis and attitudes to climate change using individual-level data from a survey carried out in 2020 by the EBRD and the ifo Institute, which covered nearly 18,000 individuals in Belarus, Egypt, Greece, Hungary, Poland, Serbia, Turkey and Ukraine. Regression analysis is used to explain attitudes to climate change on the basis of various individual-level characteristics, such as age, gender, education, income decile, political views (left or right) and country of residence, as well as interaction terms combining a person's age group (29-38, 39-48, 49-58 or 59-69, with 18-28 being the reference category) with a variable indicating whether an individual has been personally affected by the Covid-19 crisis.

The analysis shows that older respondents in those eight countries who have been economically affected by Covid-19 are significantly more likely to believe that global climate change poses a serious threat to them and their families than individuals of a similar age who have not been affected by the crisis (see Chart 4.1.1). For younger age groups, the corresponding differences are smaller. This finding is important, as older people make up a growing percentage of the voting public and affect the transition to a green economy through behavioural choices.[43]

CHART 4.1.1.

Older individuals who have been economically affected by Covid-19 are more likely to regard climate change as a threat



Source: EBRD-ifo Institute survey and authors' calculations.
Note: These estimates are based on linear probability models which regress an indicator of the perception that climate change is a serious threat on various individual-level characteristics, country dummies, and interaction terms combining age group dummies with a dummy variable indicating that a respondent has been economically affected by Covid-19. Coefficients for those interaction terms are shown in the chart. The 95 per cent confidence intervals shown are based on robust standard errors clustered at country level.

Perhaps surprisingly, additional analysis (not reported here) reveals that this pattern is absent in six western European countries. This could be because the Chernobyl nuclear accident in 1986 has had a long-lasting impact on environmental awareness in parts of the EBRD regions, or it could be due to the fact that older generations in the EBRD regions grew up in a worse environmental situation as a result of the high levels of industrial pollution under central planning.

Taken together, the results of this analysis suggest that the Covid-19 pandemic could boost awareness of environmental issues and increase popular support for measures to address climate change, particularly in the EBRD regions.

[40] See Klenert et al. (2020).
[41] See Howarth et al. (2020).
[42] See Gallup (2018).
[43] See Frumkin et al. (2012).

BOX 4.2.

Leveraging IT to facilitate the diffusion of green technology

It is often difficult for homeowners and businesses to identify the best-performing green technologies and the green financing programmes that will provide funding for such purchases. One way of addressing that challenge is through an online platform, such as the EBRD's Green Technology Selector, which was launched in 2018. This online shopping-style platform acts as a global directory of best-in-class energy efficiency and renewable energy technologies, covering everything from solar panels and biomass boilers to thermal insulation.

The platform features products from all over the world, with technology vendors applying to have their high-end products included on the platform in order to make them more visible to prospective clients. Performance requirements for the technologies listed on the platform are periodically adjusted to reflect market developments.

Meanwhile, the EBRD's new Tech Selector mobile app allows businesses and homeowners to explore more than 18,000 green technologies and identify those that are eligible for financing under special initiatives (such as the Green Economy Financing Facility,[44] the Green Trade Facilitation Programme[45] or the Finance and Technology Transfer Centre for Climate Change programme,[46] all of which are run by the EBRD in partnership with local financial institutions). For instance, if a client decides to invest in green technology that is not available in their own country, they can benefit from a dedicated trade credit instrument provided by a financial institution participating in the EBRD's Green Trade Facilitation Programme.

BOX 4.3.

"Greening" the financial system

Shifts in people's awareness of the implications of climate change are beginning to influence the ways in which markets operate – with significant consequences for the global financial system. In particular, climate change considerations are being integrated into financial supervision and due diligence on prospective investments, including the assessment, management and disclosure of climate-related risks and opportunities by both financial and non-financial firms. Climate-related risks are broad in nature, encompassing both the potential for a decline in the profitability of carbon-intensive sectors and potential damage resulting from climate change. The most prominent market-driven initiative in this area is the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), which published recommendations in 2017 advocating voluntary climate-related financial disclosures for regulated financial and non-financial organisations.[47]

The Green New Deal and the Sustainable Finance Action Plan under the EU's capital markets union are another example of an ambitious policy framework that seeks to steer the financial system towards climate-resilient sustainable development. Under those initiatives, the European Central Bank and Europe's supervisory authorities are rolling out strategies aimed at integrating green disclosure requirements into their supervisory activities. Despite the existence of that common policy and supervisory framework, the fact that firms in central and south-eastern Europe are less familiar with disclosure practices poses particular challenges for the effective implementation of the framework across the EU. More broadly, there is a need to ensure that emerging market economies are able to adopt practices that support the greening of their financial systems.

The gap between those new supervisory expectations relating to the greening of the financial system and established market practices in the EBRD regions may require strategic intervention (even in economies outside the EU that are, to some extent, influenced by EU financial regulations). Such interventions may involve the provision of policy advice to policymakers, supervisors and financial firms, as well as targeted financial assistance for market participants.

At the same time, the limitations of using financial supervision as a means of promoting green industrial policies should be recognised. Central banks and financial supervisors are primarily responsible for ensuring financial stability. While responding to systemic climate-related risks to financial stability is entirely consistent with that mandate, most financial supervisors would not support the use of financial supervision to engineer the wider greening of the economy. The balance between greening the economy and prudential supervision of the financial system is a delicate one, with the two objectives not being fully aligned.

[44] See https://ebrdgeff.com (last accessed on 04 September 2020).
[45] See www.ebrd.com/work-with-us/trade-facilitation-programme.html (last accessed on 04 September 2020).
[46] See http://fintecc.ebrd.com/index.html (last accessed on 04 September 2020).
[47] See EBRD (2019).

BOX 4.4.

Local content policies in the renewable energy sector

In addition to objectives relating to the green economy, governments also pursue a variety of other goals relating to employment and industrial and technological development, giving rise to complex choices. In this context, one group of policies that deserve particular attention are the local content provisions that are used in the renewable energy sector. The use of such policies in that sector increased in the aftermath of the 2008-09 global financial crisis, with such developments also being observed in some economies in the EBRD regions.[48]

When building infrastructure, producers of renewable energy can decide where to source their equipment from and on what terms. However, local content policies may encourage or require them to source a certain percentage of intermediate goods and services from local manufacturers or service providers. Such policies may involve a local content premium – a subsidy in exchange for the voluntary sourcing of domestic inputs – or a strict requirement whereby local content has to be at a certain level in order for a permit to be granted.

Governments often argue that such local content policies strengthen the national supply chain supporting the renewable energy sector. This is thought to be achieved in two ways: first, by boosting demand for goods produced by local manufacturers, who will then invest in expanding their activities, both in scale and in scope, thereby growing the local value chain; and second, because international equipment manufacturers or technology companies will be inclined to set up local manufacturing subsidiaries or develop supplier relationships with existing local companies, so as not to be constrained by local content requirements or to benefit from local content premia.

However, empirical evidence suggests that local content policies in the renewable energy sector are unlikely to reliably increase demand for locally produced equipment. Instead, they are likely to result in a number of risks and costs:[49]

- First, they increase production costs and end-user tariffs, driving energy prices up, or they require significant public spending on local content premia.
- Second, they result in distortions, with the creation of value chains and jobs simply coming at the expense of activity in other sectors.
- Third, local content policies do not have an established track record of helping to build sustainable, competitive and innovative value chains in the renewable energy sector, given that such policies do not help the sector to become competitive in the long run through long-term investment or innovation.
- And fourth, such policies contravene World Trade Organization (WTO) rules and other international trade agreements.

Evidence from case studies looking at local content policies in the Russian, Turkish and Ukrainian renewable energy sectors provides further support for these arguments. In Russia, multiple rounds of procurement were conducted between 2013 and 2019, with the required level of local content rising from 25 to 70 per cent. As of December 2019, only 56 per cent of the planned renewable energy capacity for the period 2014-19 has been commissioned. In Turkey, a number of tender procedures have been conducted since 2016, with conditions including a requirement that the successful tenderer establish manufacturing capacity in the country that is equivalent to 70 per cent of the equipment required. Thus far, however, none of the projects in question have reached the construction phase. And in Ukraine, local content premia were introduced in 2015 through higher feed-in tariffs for eligible projects, with only a modest impact to date.

In the above examples, local content policies do not seem to have played a significant role in the development of value chains in the renewable energy sector. Indeed, it could be argued that they have, instead, been associated with delays in the deployment of new renewable energy capacity, driven by unsuccessful auctions, a lack of uptake of local content premia and implementation delays. In 2020, the Kazakh government took note of the above evidence and decided to abandon its plans to incorporate local content premia in its tender procedures in the renewable energy sector.

There are other, less risky, non-distortionary policies that have had some success in triggering the development of local value chains and job creation.[50] For instance, supplier development programmes aimed at establishing sustainable cooperation between local and international firms have the potential to foster innovation through the diffusion of technology.

BOX 4.5.

"Just transition" – making the green economy inclusive

The Paris Agreement of December 2015 commits parties to "taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities".[51]

Numerous countries have pledged to ensure a "just transition", signing up to initiatives such as the Solidarity and Just Transition Silesia Declaration adopted at the 2018 United Nations Climate Change Conference (COP 24) or the ILO's Climate Action for Jobs Initiative, with dedicated approaches being developed both at country level and at regional level (as in the case of the EU's Just Transition Mechanism, for instance).

The term "just transition" generally refers to measures that help workers to take advantage of opportunities to obtain new, higher-quality jobs linked to the green economy, while also protecting those who are at risk of losing their jobs. Such measures include labour market policies, skills training, social safety nets and action to support regional economic development. For example, the EBRD's "just transition initiative" focuses on the reconversion of high-carbon assets, the rehabilitation of land, other green investment that fosters local employment and reskilling, and entrepreneurship support programmes for those affected by the transition to a green economy. Pilot initiatives are due to be run in cooperation with both national and regional authorities.

[48] See Kuntze and Moerenhout (2013).
[49] See, for example, Hansen et al. (2019).
[50] See OECD (n.d.).
[51] See UN (2015). The reference to a "just transition" relates back to ILO (2015).

Annex 4.1. Comparing the ambition levels of NDCs

NDCs contain a variety of different mitigation targets and vary in terms of the years in which those objectives are to be achieved, the methodologies that are employed, and the base years against which those targets are measured (see Table A.4.1.1). Nevertheless, it is still possible to compare them, as this annex explains. In order to be able to compare the ambition levels of those various submissions, a common target year (2030) has been chosen, along with a common base year (2010). What is more, while the EU's NDC sets an absolute target of a 40 per cent reduction in GHG emissions by 2030 relative to 1990 levels, the commitments specified in EU (2018) have been used instead, with 2005 as their base year, in order to better reflect the actual commitments of EU member states. Those targets exclude sectors participating in the EU Emissions Trading System, which have been tasked with reducing their emissions by 43 per cent between 2005 and 2030.

The first step involved estimating the targeted level of GHG emissions in 2030. For countries with an absolute target to be achieved by 2030, that estimate was based on the most recent NDC. For countries with a BAU target to be achieved in 2030, the implied level of emissions in 2030 was derived from the Pledge Pipeline produced by Jörgen Fenhann at the UNEP DTU Partnership.[52] For countries with carbon-intensity targets relative to GDP, estimates of economic growth produced by the EBRD, the IMF and the OECD were used (assuming that the estimate for the last year available was applicable to all subsequent years). For countries with carbon-intensity targets relative to population, median variant population estimates derived from the UN's 2019 Revision of World Population Prospects were used. Linear extrapolation was applied in the case of countries with a target year other than 2030.[53]

Second, a common base year of 2010 was applied. A recent base year helps to minimise the impact that idiosyncrasies in countries' previous emission paths have on the comparison. Where 2010 levels of GHG emissions could not be obtained from NDCs, CAIT estimates were used.[54]

In order to assess how far countries have come in terms of meeting their NDC targets, progress between 2010 and 2016 (the most recent year for which comparable GHG emission data are available) was assessed to provide an indication of the further efforts that are needed to achieve the objectives set out in NDCs. While the comparisons provided are dependent on a large number of assumptions, they are a useful indication of the relative degree of ambition in the various NDC targets.

TABLE A.4.1.1.

Overview of NDCs

Economy	Base year	Target year	Target type	Reduction targeted
EBRD regions				
Albania	2030	2030	BAU	11.50%
Armenia	2010	2050	Absolute	633 Mt of CO_2 equivalent
Azerbaijan	1990	2030	Absolute	35.00%
Belarus	1990	2030	Absolute	28.00%
Bosnia and Herz.	1990	2030	BAU	2% (3%)
Bulgaria	2005	2030	Absolute	0.00%
Croatia	2005	2030	Absolute	7.00%
Cyprus	2005	2030	Absolute	24.00%
Egypt	-	2030	Policies and actions	No specific target
Estonia	2005	2030	Absolute	13.00%
Georgia	2013	2030	BAU	15% (25%)
Greece	2005	2030	Absolute	16.00%
Hungary	2005	2030	Absolute	7.00%
Jordan	2030	2030	BAU	1.5% (12.5%)
Kazakhstan	1990	2030	Absolute	15% (25%)
Kosovo	n/a		Not a UN member	
Kyrgyz Rep.	2030	2030	BAU	11.49-13.75% (29-30.89%)
Latvia	2005	2030	Absolute	6.00%
Lebanon	2030	2030	BAU	15% (30%)
Lithuania	2005	2030	Absolute	9.00%
Moldova	1990	2030	Absolute	70.00%
Mongolia	2030	2030	BAU	14.00%
Montenegro	1990	2030	Absolute	30.00%
Morocco	2030	2030	BAU	17% (42%)
North Macedonia	2030	2030	BAU	30% (36%)
Poland	2005	2030	Absolute	7.00%
Romania	2005	2030	Absolute	2.00%
Russia	1990	2030	Absolute	25-30%
Serbia	1990	2030	Absolute	9.80%
Slovak Rep.	2005	2030	Absolute	12.00%
Slovenia	2005	2030	Absolute	15.00%
Tajikistan	1990	2030	Absolute	10-20% (25-35%)
Tunisia	2010	2030	Carbon-intensity	13% (41%) per unit of GDP
Turkey	2030	2030	BAU	21.00%
Turkmenistan	2000	2030	Policies and actions	41.18% per unit of GDP/no specific target
Ukraine	1990	2030	Absolute	>40%
Uzbekistan	2010	2030	Carbon-intensity	(10%) per unit of GDP
West Bank and Gaza	2040	2040	BAU	12.8-24.4%
Comparators				
China	2005	2030	Carbon-intensity	60-65% per unit of GDP
EU (non-EBRD)	2005	2030	Absolute	
United Kingdom	2005	2030	Absolute	37.00%
United States of America	2005	2025	Absolute	26-28%

Source: NDC Registry, 2018.
Note: Kosovo is not a member of the UN and has not submitted an NDC. The West Bank and Gaza have non-member observer status at the UN. Moldova has submitted its second NDC. Figures in parentheses in the final column indicate the emission reduction that a country would be able to achieve with the aid of additional international support for mitigation actions. Turkmenistan's NDC does not set a specific target, but mentions a desire to achieve emission levels per unit of GDP 1.7 times lower than those recorded in 2000. "EU (non-EBRD)" comprises Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Spain and Sweden.

[52] See www.unenvironment.org/explore-topics/climate-change/what-we-do/mitigation/pledge-pipeline (last accessed on 20 July 2020).
[53] See UNFCCC (2016).
[54] See www.climatewatchdata.org/data-explorer/historical-emissions?historical-emissions-data-sources=71&historical-emissions-gases=246&historical-emissions-regions=All%20Selected&historical-emissions-sectors=843&page=1 (last accessed on 19 June 2020).

Annex 4.2. Assessing green laws and policies

The analysis in this chapter draws on two databases providing details of laws and policies relating to climate change and the environment.

First, the IEA Policies and Measures Database provides comprehensive details of a wide variety of green policies and laws. As of August 2020, it contains more than 5,600 laws and policies across 150 economies, going all the way back to the 1950s, and covers everything from local municipal measures to international endeavours. It also spans a wide range of subject areas, from waste management and infrastructure for electric vehicles to renewable energy subsidies and building standards, with policies and laws being classified by type, industry and subject area. The subject areas with the most measures are energy efficiency and renewable energy, while the industries with the most measures are electricity, heating and transport. The database records the year in which each measure is implemented, rather than the year of its adoption (as well as indicating the status of measures that have been discontinued or have not yet entered into force).

Second, the Climate Change Laws of the World database (which is run jointly by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and the Sabin Center for Climate Change Law at Columbia Law School) contains, as of August 2020, more than 1,900 national level and EU laws and policies relating to climate change, covering climate change mitigation and adaptation, as well as disaster risk management. It contains data on 197 economies – all UN member states and parties to the United Nations Framework Convention on Climate Change (UNFCCC), as well as non-members such as Kosovo and the West Bank and Gaza – with laws and policies dating as far back as 1947. It also distinguishes between acts passed by a legislative body and policies or measures decreed by an executive authority (such as the government or president). Around 60 per cent of all entries in the database are laws, and the remaining 40 per cent are policies.
The database covers a wide range of sectors, including buildings, taxation and green finance, energy supply and demand, industry, transport and land use, and forestry conservation and management. However, it does not cover nuclear energy, gases that harm the ozone layer or general environmental laws. And, in contrast with the IEA database, it only includes measures that are still in force.

The analysis in this chapter draws on both databases. As the IEA database contains mostly policies, while the Climate Change Laws of the World data focus on laws, the two combine to provide a good overview of the international landscape of green laws and policies. Those data have, in turn, been further supplemented with information on laws and policies in Kosovo, North Macedonia and the West Bank and Gaza, which has been obtained from government websites and reports by international organisations.

This chapter only considers the 1,036 laws and 4,107 policies that were in force across the 197 economies in 2020. It first excludes the 59 EU laws and 68 EU policies, before using an alternative approach that assigns those laws and policies to all EU member states (which accounts for the possibility that the existence of EU laws and policies reduces the need to adopt measures at country level).

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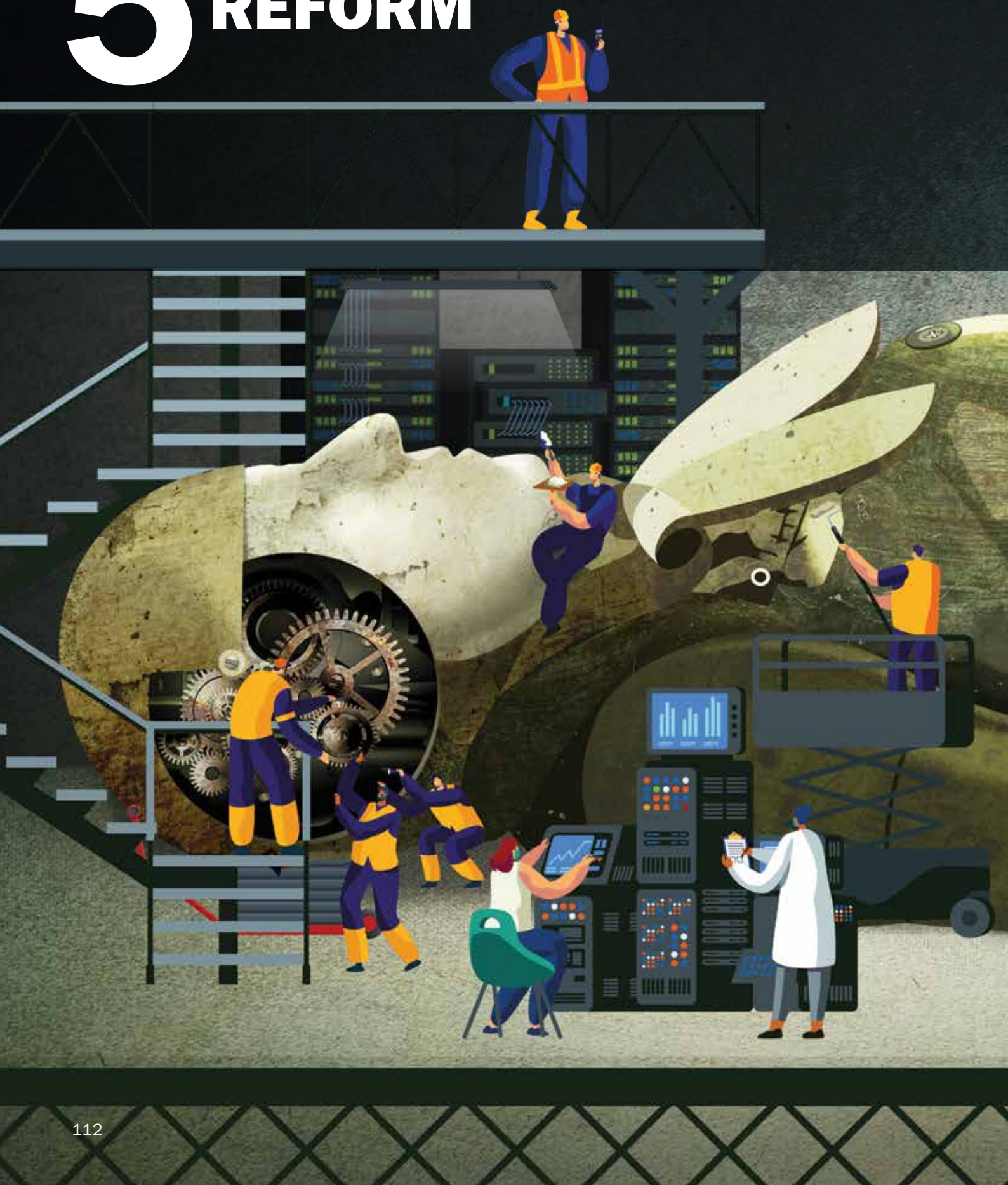
5 STRUCTURAL REFORM



This section of the report presents updated transition scores for the economies in the EBRD regions and discusses the reforms that have been carried out in those economies over the last year. Successfully implementing structural reforms is not an easy task at the best of times, and it is even more difficult in times of crisis, when policymakers' focus shifts from addressing longer-term issues to tackling immediate challenges. In the EBRD regions, the ongoing coronavirus pandemic has probably affected governments' ability to implement further structural reforms in the short term. At the same time, however, the economic and social fallout from the pandemic has emphasised the need for continued structural reform measures across the EBRD regions in order to ensure that economies recover quickly and become more resilient to external shocks.

Introduction

Governments across the EBRD regions have implemented a wide range of measures in response to the coronavirus pandemic. Those actions, which have been unprecedented in terms of their scope and the speed of their implementation, have ranged from the provision of liquidity to the banking system and moratoriums on loan repayment to various tax breaks for businesses and direct payments for households. With policymakers having so many urgent health and economic issues to deal with, the likelihood of structural reforms being postponed – or abandoned altogether – has increased. However, while it might well be more difficult to implement structural reforms during a crisis (see Box S.1), carrying out essential reforms has the potential to facilitate a stronger economic recovery and make the economy more resilient to future shocks.

As this section shows, many countries have continued to carry out essential structural reforms over the last year, with successful initiatives including the upgrading of governance frameworks for state-owned enterprises, the strengthening of anti-corruption policies, the digitisation of government services, the expansion of technical and vocational education and training (TVET) programmes, and a number of effective public-private partnerships. Most of those reforms were initiated before the onset of the pandemic, but in most cases their implementation has continued despite the challenging environment. However, some measures have been delayed. In Kazakhstan, Romania and Ukraine, for instance, the privatisation of major assets has been postponed on account of the adverse economic outlook and the potential disruption to the operations of state enterprises.

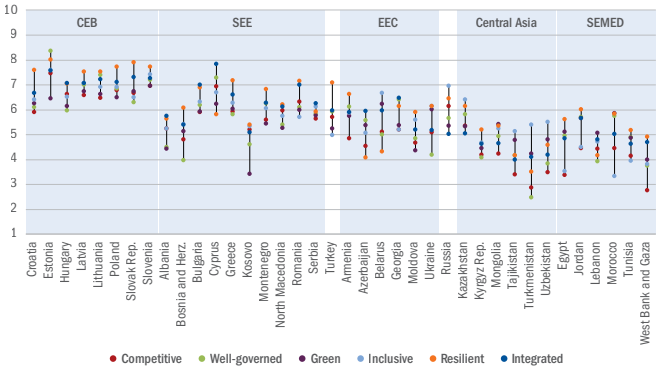
The assessment in this section focuses on six key qualities of a sustainable market economy, looking at whether economies are competitive, well-governed, green, inclusive, resilient and integrated. Analysis of changes to "assessment of transition qualities" (ATQ) scores over the last year points to a number of specific developments across the EBRD regions. Across those six areas, increases in scores have been observed primarily in eastern Europe and the Caucasus (EEC), south-eastern Europe (SEE) and Central Asia. At the same time, declines have tended to be moderate and have been concentrated in scores for green transition and governance, and have been seen primarily in central Europe and the Baltic states (CEB) and the SEE region (see Table S.1 and Chart S.1).

Competitiveness scores have increased modestly across economies over the last year. In several countries, consistent improvements in the business climate over a number of years have resulted in steady improvements in competitiveness scores over a longer period. Over the period 2016-20, for example, economies have made progress in terms of making it easier to start a business (Montenegro, Tunisia and Turkey), resolving insolvencies (Azerbaijan, Georgia, Kosovo and Morocco) and the overall ease of doing business (Azerbaijan, Jordan and Kosovo).

However, developments in terms of **governance** scores have been mixed, with both increases and declines being observed over the last year. Notable increases have been recorded in Armenia, Azerbaijan and Tajikistan, while scores have declined in Albania, Mongolia, Poland, Turkey and Ukraine. Over the period 2016-20, the largest increases have been observed in Armenia, Azerbaijan, Cyprus, Egypt, Montenegro and Morocco, while scores have declined in Albania, Bosnia and Herzegovina, Mongolia, North Macedonia and Poland. Improvements have been driven mainly by progress in the areas of contract enforcement, compliance with standards aimed at tackling money laundering and the financing of terrorism (AML/CFT standards), protection of intellectual property, and corporate transparency and disclosure. In Albania, Bosnia and Herzegovina, Mongolia, North Macedonia and Poland, falling scores have been caused mainly by gradual declines for indicators measuring the effectiveness of courts, informality and the perception of corruption, and frameworks for challenging regulations.

CHART S.1.

ATQ scores for six qualities of a sustainable market economy, 2020



Source: EBRD.
Note: Scores range from 1 to 10, where 10 denotes the synthetic frontier for each quality.

TABLE S.1.

ATQ scores for six qualities of a sustainable market economy

	Competitive			Well-governed			Green			Inclusive			Resilient			Integrated		
	2020	2019	2016	2020	2019	2016	2020	2019	2016	2020	2019	2016	2020	2019	2016	2020	2019	2016
Central Europe and the Baltic states																		
Croatia	5.91	5.85	5.84	6.10	6.04	6.21	6.27	6.40	6.18	6.41	6.36	6.49	7.60	7.49	7.27	6.67	6.59	6.68
Estonia	7.48	7.45	7.42	8.38	8.39	8.41	6.45	6.45	6.68	7.61	7.58	7.58	8.03	7.94	7.86	7.57	7.57	7.63
Hungary	6.64	6.58	6.48	5.98	5.96	5.69	6.14	6.27	6.39	6.53	6.54	6.69	7.06	7.14	6.76	7.08	7.18	7.73
Latvia	6.58	6.49	6.45	7.00	6.95	6.77	6.74	6.87	6.51	7.07	6.99	7.16	7.53	7.50	7.39	7.08	7.16	7.53
Lithuania	6.49	6.38	6.48	7.41	7.17	7.21	6.63	6.75	6.45	6.91	6.83	6.83	7.53	7.37	7.46	7.23	7.20	7.35
Poland	6.78	6.81	6.67	6.86	7.00	7.28	6.51	6.51	6.65	6.93	6.89	6.65	7.74	7.71	7.92	7.11	7.01	6.93
Slovak Republic	6.67	6.61	6.59	6.31	6.34	6.14	6.74	6.87	7.02	6.51	6.50	6.39	7.90	7.92	7.80	7.32	7.31	7.56
Slovenia	6.96	6.91	6.84	7.20	7.09	7.08	6.97	7.11	6.81	7.43	7.42	7.32	7.73	7.69	7.72	7.28	7.38	7.32
South-eastern Europe																		
Albania	5.25	5.18	4.88	4.50	5.16	5.09	4.43	4.43	4.50	5.25	5.26	5.31	5.65	5.44	5.15	5.76	5.85	5.57
Bosnia and Herzegovina	4.80	4.72	4.88	3.98	4.12	4.49	5.14	5.15	4.95	5.43	5.41	5.21	6.09	6.08	5.84	5.41	5.35	5.19
Bulgaria	5.90	5.82	5.72	6.19	5.97	5.84	5.93	6.06	5.85	6.32	6.27	6.19	6.89	6.82	6.81	7.01	7.02	7.06
Cyprus	6.94	6.90	6.85	7.30	7.34	6.84	6.24	6.36	6.07	6.69	6.65	6.62	5.82	5.71	5.09	7.85	7.82	7.60
Greece	5.94	5.90	5.95	5.82	5.64	5.54	6.03	6.16	6.18	6.28	6.19	6.13	7.19	7.04	6.85	6.61	6.59	6.16
Kosovo	5.21	5.13	4.49	4.61	4.75	4.74	3.41	3.41	3.41	5.34	5.33	5.33	5.41	5.21	5.09	5.10	4.97	4.74
Montenegro	5.60	5.56	5.28	6.27	6.11	5.86	5.44	5.45	5.08	6.07	6.06	5.99	6.83	6.45	6.33	6.29	6.18	5.84
North Macedonia	5.98	5.94	5.74	5.40	5.43	5.71	5.27	5.27	5.03	5.76	5.74	5.75	6.21	5.96	5.63	6.13	6.07	5.80
Romania	6.32	6.29	6.19	6.10	6.17	5.89	5.99	6.13	5.88	5.70	5.71	5.64	7.17	7.19	7.20	7.01	7.00	6.88
Serbia	5.64	5.54	5.30	5.84	5.77	5.66	5.78	5.79	5.55	6.13	6.06	6.33	5.94	5.85	5.74	6.25	6.24	6.26
Turkey	5.71	5.51	5.53	5.92	6.08	6.01	5.24	5.25	5.32	4.99	4.95	4.94	7.09	7.04	7.13	5.98	5.87	6.00
Eastern Europe and the Caucasus																		
Armenia	4.84	4.76	4.49	6.13	5.80	5.68	5.76	5.75	5.51	5.89	5.94	5.78	6.63	6.52	6.22	5.91	5.80	5.45
Azerbaijan	4.54	4.30	4.14	5.58	5.31	5.04	5.37	5.37	5.14	5.07	4.93	4.73	4.09	4.00	4.11	5.95	5.85	5.61
Belarus	5.11	5.04	4.56	5.01	4.86	4.63	6.24	6.24	6.20	6.68	6.68	6.69	4.32	4.36	3.62	5.97	5.94	5.59
Georgia	5.21	5.15	4.73	6.42	6.45	6.46	5.38	5.37	5.16	5.20	5.17	5.08	6.16	6.19	5.84	6.49	6.48	6.17
Moldova	4.67	4.58	4.64	4.84	4.92	4.49	4.36	4.36	4.21	5.61	5.51	5.68	5.90	5.87	5.30	5.21	5.21	5.18
Ukraine	5.10	5.03	4.99	4.18	4.39	4.08	6.01	6.01	5.75	6.14	6.17	6.20	6.14	5.80	4.92	5.19	4.99	4.98
Russia	6.16	6.11	5.57	5.66	5.65	5.35	5.35	5.10	5.10	6.97	6.96	6.74	6.45	6.40	6.44	5.02	5.06	5.00
Central Asia																		
Kazakhstan	5.35	5.26	5.14	5.81	5.64	5.53	5.34	5.34	4.85	6.42	6.38	6.37	6.14	6.04	6.06	5.04	4.99	5.00
Kyrgyz Republic	4.19	4.00	3.85	4.08	4.05	3.99	4.45	4.44	4.50	4.67	4.56	4.83	5.20	5.19	5.14	4.64	4.67	4.56
Mongolia	4.24	4.20	4.09	4.94	5.07	5.28	5.42	5.41	5.39	5.25	5.12	5.39	5.36	5.40	5.26	4.66	4.76	5.13
Tajikistan	3.40	3.23	3.16	4.17	3.81	3.85	4.78	4.78	4.58	5.13	5.02	4.67	4.16	3.89	3.43	3.99	3.72	3.42
Turkmenistan	2.87	2.73	2.80	2.48	2.43	2.43	4.23	4.23	4.10	5.39	5.49	5.29	3.51	3.29	3.41	4.11	4.08	4.22
Uzbekistan	3.48	3.42	3.36	3.84	3.81	3.76	4.80	4.79	3.93	5.51	5.50	5.60	4.58	3.98	3.84	4.18	4.06	4.06
Southern and eastern Mediterranean																		
Egypt	3.38	3.18	3.35	4.95	4.71	4.42	5.11	5.10	4.78	3.54	3.56	3.62	5.62	5.31	5.12	4.85	4.78	4.43
Jordan	4.45	4.15	4.11	5.72	5.62	5.65	5.66	5.78	5.84	4.49	4.39	4.49	6.01	6.04	5.74	5.67	5.66	5.92
Lebanon	4.44	4.43	4.43	3.92	3.96	3.97	5.07	5.08	5.09	4.71	4.71	4.86	4.17	4.51	4.20	4.80	4.82	4.94
Morocco	4.45	4.17	4.09	5.76	5.58	5.33	5.87	5.86	5.90	3.33	3.18	3.45	5.85	5.82	5.84	5.02	5.07	5.07
Tunisia	4.15	4.02	4.13	4.90	4.96	4.95	4.88	4.88	4.68	3.94	3.85	4.06	5.17	5.09	4.76	4.64	4.58	4.38
West Bank and Gaza	2.75	2.67	2.44	3.76	3.64	3.60	4.00	4.00	4.02	3.82	3.88	4.00	4.91	4.98	4.80	4.70	4.60	4.54

Source: EBRD.

Note: Scores range from 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of a sustainable market economy. Scores for years prior to 2020 have been updated following methodological changes, so they may differ from those published in the *Transition Report 2019-20*. Owing to lags in the availability of underlying data, ATQ scores for 2020 and 2019 may not fully correspond to that calendar year.

Green scores have not generally seen significant changes over the last year – with the sole exception of Russia, where a notable increase has been observed as a result of the ratification of the 2015 Paris Agreement on climate change in September 2019. Over the period 2016-20, green scores have increased significantly in Egypt, Kazakhstan, Montenegro and Uzbekistan.

Inclusion scores have increased modestly over the last year across a number of economies. Over the period 2016-20, the strongest increases in scores for the gender component of the inclusion index have been seen in Bosnia and Herzegovina, Poland and Tajikistan, driven by increases in women's shares of total managerial positions and total employers, as well as improvements in women's financial inclusion. At the same time, gender scores have declined in the Kyrgyz Republic, Moldova, and the West Bank and Gaza as a result of the gender gap in terms of saving and borrowing rates, as well as declines in women's share of total employers. Meanwhile, scores for the youth component of the inclusion index have increased in Armenia, Moldova and Tajikistan on account of a rapid increase in the number of bank accounts held by young people.

ATQ scores for **energy resilience** have increased in Montenegro, Tajikistan, Ukraine and Uzbekistan over the last year as a result of improvements in the regulation of the power sector and progress with the restructuring of the energy sector. Meanwhile, the largest increases in **financial resilience** scores have been observed in Egypt, Kosovo, Montenegro, North Macedonia, Ukraine and Uzbekistan, driven by improved capital adequacy ratios, improvements to the funding structure of the banking sector, and advances in respect of risk management and corporate governance frameworks. Lebanon, on the other hand, has seen its score fall as a result of significant vulnerabilities in its financial sector. Over the period 2016-20, financial resilience scores have improved in a number of countries (including Albania, Belarus, Cyprus, Moldova, North Macedonia and Ukraine).

Improvements in **integration** scores have been observed in a few economies over the last year (including Kosovo, Tajikistan, Ukraine and Uzbekistan). Those increases have been driven mainly by reductions in the cost of cross border trading.

THE UZBEK GOVERNMENT PLANS TO ABOLISH
70
TYPES OF BUSINESS LICENCE AND
35
TYPES OF PERMIT AS OF 2021

Competitive

ATQ scores for competitiveness have increased modestly over the last year, being driven primarily by gradual improvements in indicators measuring the ease of doing business. The largest increases have been observed in the southern and eastern Mediterranean (Egypt, Jordan and Morocco) and Central Asia (the Kyrgyz Republic and Tajikistan), driven by improvements in the ease of doing business and the quality of workers' skills. Turkey and Azerbaijan have also seen their scores rise, with increases in those countries being driven by declines in the cost of starting a business and improvements to their arrangements for resolving insolvencies. No significant declines have been observed over the last year.

Over the period 2016-20, economies have made significant progress in terms of the cost of starting a business (Montenegro, Tunisia and Turkey), the arrangements for resolving insolvencies (Azerbaijan, Georgia, Kosovo and Morocco) and the overall ease of doing business (Azerbaijan, Jordan and Kosovo). The largest increases in competitiveness scores over that period have been seen in Azerbaijan, Belarus, Georgia and Kosovo (reflecting improvements in the ease of doing business), as well as in Russia (reflecting an increase in credit to the private sector, improvements in the performance of logistics, trade-enabling infrastructure, and reductions in subsidies and other transfers).

Despite the pandemic, many countries have carried on with their reform efforts, which should support the further structural transformation of their economies and aid their recovery following the Covid-19 crisis. Several countries, for example, have pushed ahead with reforms to their agricultural sectors. In March 2020, for instance, Ukraine overturned a ban on the sale of private farmland with effect from 2021. While some restrictions on the sale of agricultural land remain in place (with private individuals able to buy land from 2021, but legal entities unable to do so until 2024), this still represents an important step in terms of opening up the country's farmland market and making the sector a more attractive destination for investment. Uzbekistan, meanwhile, launched agricultural reforms in October 2019, after adopting a new development strategy that seeks to gradually end the state's close control over cotton and wheat production and introduce market-based pricing mechanisms. Those reforms should support the expansion of private enterprise in the agricultural sector (which remains heavily dominated by the state) and improve its competitiveness.

Several countries have implemented reforms aimed at making it easier to do business, with particular emphasis on SMEs. For example, following its establishment of the Agency for Support of SMEs in 2017, the government of Azerbaijan opened its first House of SMEs in March 2020 in the north of the country – the first in a series of one-stop shops providing a range of government services to SMEs in a single location. Similarly, Jordan, Kazakhstan and Uzbekistan have carried out

substantial reforms over the last year with the aim of making it easier to do business, which has resulted in significant improvements in their Doing Business rankings. Those reforms have ranged from the enhancement of the countries' tax regimes to reductions in the number of checks and control measures. The Uzbek government also plans to abolish 70 types of business licence and 35 types of permit from 2021, with a large number of business activities expected to move to a notification-only basis. Uzbekistan has also embarked on a reform of its competition policy framework with the support of international financial institutions (including the EBRD), increasing the autonomy of the country's competition authority (by making it accountable to parliament, rather than the government) and giving that authority broader powers to investigate and prevent anti-competitive behaviour.

A number of countries have carried out reforms focusing on state-owned enterprises, although the ongoing pandemic has affected the pace and timing of such measures. Kazakhstan, for instance, has continued to implement its 2016-20 privatisation programme, but the Covid-19 crisis has resulted in delays to the initial public offerings (IPOs) of some large state enterprises (including the national oil and gas company, KazMunayGas, and the country's flag carrier, Air Astana). IPOs have also been delayed in Romania after the country's parliament approved a law in August 2020 stipulating that publicly owned shares in state enterprises could not be sold for the next two years. That law also allows the state to acquire stakes in companies operating in a number of specific areas, including the manufacturing of medical products, energy, transport, and information and communication technology. Uzbekistan has also pushed ahead with its privatisation programme, making state assets available for purchase in a range of industries (including the banking sector) in 2020. Ukraine, meanwhile, has taken a number of initial steps in its efforts to privatise state assets. In October 2019, for example, the Ukrainian government lifted restrictions preventing the privatisation of more than 1,000 state enterprises, and ownership of more than 500 firms was transferred to the state property fund with a view to facilitating privatisation. However, in September 2020 the Ukrainian parliament put the sale of large state assets on hold for the duration of the pandemic (albeit preparations for the privatisation of such assets are continuing). Similarly, Serbia has proceeded with the privatisation of Komercijalna banka, the country's third-largest bank. Following its purchase in November 2019 of a 34.6 per cent stake held by international investors, the Serbian government sold its entire stake in the bank (83.2 per cent) to Slovenian bank NLB in February 2020. That transaction is expected to be completed by the end of 2020.

IN UKRAINE, FORMAL OWNERSHIP OF MORE THAN 500 STATE-OWNED ENTERPRISES WAS TRANSFERRED TO THE STATE PROPERTY FUND IN OCTOBER 2019 IN PREPARATION FOR PRIVATISATION

Well-governed

Effective governance will be crucial in order to deliver a green, resilient and inclusive recovery across the EBRD regions. The various subcomponents of the governance index suggest that governments in those regions still need to do more to improve communication with their citizens, make public spending more transparent and strengthen their capacity for sound policymaking. At the same time, the crisis has placed greater emphasis on governments' ability to make sound policy decisions, mobilise the necessary resources and coordinate actions across multiple stakeholders (both at domestic level and internationally).

Developments in governance scores have been mixed over the last year, with both increases and declines being observed. Notable increases have been recorded in Armenia, Azerbaijan and Tajikistan on account of improvements in frameworks for challenging regulations, as well as transparency and disclosure (with Armenia and Tajikistan also seeing improvements in their compliance with AML/CFT standards). At the same time, ATQ scores for governance have declined in Albania, Mongolia, Poland, Turkey and Ukraine, with notable declines being observed for the effectiveness of courts (Albania, Bosnia and Herzegovina, Kosovo, Poland and Ukraine), and the perception of corruption and political stability (Albania, Mongolia, Poland, Turkey and Ukraine).

Over the period 2016-20, the largest increases have been observed in Armenia, Azerbaijan, Cyprus, Egypt, Montenegro and Morocco, driven by improvements in the enforcement of contracts, compliance with AML/CFT standards, protection of intellectual property, and transparency and disclosure. Meanwhile, scores have declined in Albania, Bosnia and Herzegovina, Mongolia, North Macedonia and Poland, driven by deterioration in indicators measuring the effectiveness of courts, informality, the perception of corruption and the framework for challenging regulations. Over the period 2016-20, scores for the effectiveness of courts and judicial

independence have declined in many countries. In contrast, scores for e-government, protection of property rights and enforcement of contracts have generally improved.

Many countries have continued to push ahead with governance-related reforms, particularly as regards anti-corruption policies, compliance with AML/CFT standards, the governance of state enterprises and the digitisation of government services. In May 2020, for example, Lebanon adopted a law aimed at combating corruption in the public sector and established a National Commission for Fighting Corruption. This follows a number of earlier initiatives (such as laws on access to information, the protection of whistle blowers, transparency in the oil and gas sectors, and illicit enrichment) and is a welcome step, given that widespread corruption remains a significant obstacle to the development of the private sector in that country. Uzbekistan, meanwhile, established a new anti-corruption agency in June 2020 with a mandate to implement anti-corruption control systems within the government and across state enterprises and state-owned banks. Effective implementation of those measures will be key if the initiative is to be a success. In October 2019, the Armenian government approved its anti-corruption strategy for 2019-22, which foresees the establishment of a single specialist agency for the detection and investigation of corruption-related crimes in 2021. In November 2019, Ukraine made illicit enrichment a crime again, following a ruling by the Constitutional Court in February 2019 which had overturned a law that was adopted in 2015. And in June 2020, Morocco approved a bill strengthening the role of its anti-corruption authority. At the same time, however, little progress has been made with the adoption of the country's proposed law on illicit enrichment.

Some countries have also made progress in terms of their compliance with AML standards and practices. In May 2020, the Mongolian government met the requirements set by the Financial Action Task Force (FATF) for removal from its "grey list", having been added to that list in October 2019 on account of several deficiencies in the country's AML procedures. Similarly, Bulgaria strengthened its AML framework in November 2019 by adopting the additional provisions contained in the EU's Fifth Anti-Money Laundering Directive. Among other things, those amendments increased the number of entities that are subject to AML standards and introduced enhanced due diligence requirements.

A number of countries have made progress with reforms focusing on the governance of state-owned enterprises. For example, Bulgaria's new law on public enterprises, which entered into force in October 2019, has increased transparency and independent decision-making at state-owned firms and has resulted in the country being declared compliant with the OECD's Guidelines on Corporate Governance of State-Owned Enterprises. That new law also provides for the establishment of an Agency for Public Enterprises and Control, which is expected to ensure stronger coordination of ownership functions and enhanced monitoring of state enterprises' performance. Similarly, Armenia has strengthened its reporting requirements for large enterprises (including state-owned firms) by adopting a law on mandatory audits and the publication of financial reports. Serbia, meanwhile, has made progress with the development of its state ownership policy, with that new policy expected to be adopted by the end of 2020. And in Azerbaijan, a holding company was set up in August 2020 to manage the state's portfolio of publicly owned enterprises. That represents a significant development, with the company seeking to increase the efficiency and transparency of the country's state-owned enterprises.

One important development – especially given the ongoing pandemic – is the increased attention that has been paid to the digitisation of government services in a number of countries. In Greece, for example, a digital services platform was launched following the onset of the pandemic, allowing a number of government services to be delivered online. In September 2020, the Greek government then announced further digitisation plans involving simplified arrangements for the registration of businesses and related services. Similarly, Moldova launched a one-stop electronic shop in March 2020, enabling firms to submit reports digitally and reducing the reporting burden on companies. In July 2020, the Moldovan authorities then announced more than 30 additional measures aimed at speeding up the digitisation of government services. In May 2020, the Tunisian government approved special provisions relating to the electronic transmission of data, giving electronic documents legal force and paving the way for the digitisation of public services. Tunisia has also launched a digital wallet scheme to facilitate payments and social support measures for its citizens. In December 2019, the North Macedonian government launched a dedicated electronic platform, providing more than 700 public services online by September 2020. And in March 2020, Turkmenistan adopted a law on electronic documents and digital services, laying the foundations for the digitisation of public services.

IN JULY 2020, THE MOLDOVAN AUTHORITIES ANNOUNCED MORE THAN 30 ADDITIONAL MEASURES AIMED AT SPEEDING UP THE DIGITISATION OF GOVERNMENT SERVICES

Green

Green scores have not generally seen significant changes over the last year – with the sole exception of Russia, where a notable increase has been observed as a result of the ratification of the 2015 Paris Agreement on climate change in September 2019. In several countries, however, downward revisions have been made to scores measuring the effectiveness of carbon-pricing mechanisms, with declines being recorded for Croatia, Jordan, Latvia, Romania, the Slovak Republic and Slovenia as a result of a recommended carbon price of US$ 40 being used as a benchmark in 2020 (up from US$ 10 previously).[1]

Over the period 2016-20, green scores have increased significantly in Egypt, Kazakhstan, Montenegro and Uzbekistan as a result of the ratification of GHG emission reduction commitments (Egypt, Kazakhstan and Uzbekistan), improved implementation of carbon pricing (Egypt and Kazakhstan), a reduction in fossil fuel subsidies (Uzbekistan) and an increase in the percentage of electricity that is produced using renewable sources (Montenegro).

Several countries have made progress with reforming their regulatory environment from the perspective of energy efficiency and green investment. Georgia, for example, has adopted new laws on energy efficiency and the energy performance of buildings by transposing the relevant EU directives. These new pieces of legislation should help the country to fulfil its emission reduction commitments, improve energy performance standards for buildings and reduce the economy's overall energy intensity. North Macedonia also adopted a comprehensive new law on energy efficiency in February 2020, paving the way for green investment and facilitating improvements in energy efficiency. Similarly, the Slovenian government unveiled a draft energy efficiency law in July 2020, which has yet to be adopted. Meanwhile, a new energy efficiency law in Uzbekistan, which was adopted in 2019, entered into force on 1 January 2020. That legislation sets mandatory energy efficiency standards for new buildings and restricts the use of energy-intensive lighting and industrial equipment. Moreover, after delay, Serbia has now adopted its National Emission Reduction Plan, strengthening its commitment to cutting emissions (particularly those produced by thermal power plants). And in Ukraine, operators of industrial equipment will, as of 2021, be required to monitor and report on their emissions in order to improve the country's monitoring framework for GHG emissions. This requirement should help Ukraine to align its GHG monitoring framework with EU legislation and facilitate the launch of a national emission trading system in the near future.

In 2020, the EU launched a Just Transition Mechanism for its member states (including those in the EBRD regions) in order to help ensure that the transition towards a climate-neutral economy takes place in a fair way. It is aiming to mobilise at least €150 billion over the period 2021-27 in the most affected subnational regions in order to address the socio-economic impact of that transition. It is expected that investment (which will be underpinned by the preparation of "territorial just transition plans") will support local employment opportunities in new sectors, offer reskilling opportunities for existing workers, and facilitate access to clean, affordable and secure energy.

IN DECEMBER 2019,THE NORTH MACEDONIAN GOVERNMENT LAUNCHED A DEDICATED ELECTRONIC PLATFORM, PROVIDING MORE THAN 700 PUBLIC SERVICES ONLINE BY SEPTEMBER 2020

Inclusive

Overall, ATQ scores for inclusion have increased modestly over the last year across a number of economies. Notable increases have been seen in Mongolia and Morocco (on account of increases in the proportion of total employers that are women) and Azerbaijan (following improvements to the flexibility of hiring and firing for young people).

Over the period 2016-20, scores for the gender component of the inclusion index have improved most in Bosnia and Herzegovina, Poland and Tajikistan, driven by increases in women's shares of total managerial positions and total employers, as well as improvements in financial inclusion for women. At the same time, however, gender scores have declined over that period in the Kyrgyz Republic, Moldova, and the West Bank and Gaza, driven by the widening gender gap in terms of saving and borrowing rates and declines in women's share of total employers.

Over the same period, scores for the youth component of inclusion have improved in Armenia, Moldova and Tajikistan, reflecting a rapid increase in the number of bank accounts held by young people. Prior to the onset of the pandemic, youth unemployment was on a downward trend in many economies, especially in SEE and Western Balkans countries (such as Bosnia and Herzegovina, Cyprus, Greece and North Macedonia). The Covid-19 crisis may reverse that trend, given its strongly negative impact on youth employment opportunities.

A number of countries have pushed ahead with major reforms aimed at enhancing education and labour market

[1] Following its latest assessment, the High-Level Commission on Carbon Prices has recommended a carbon price range of US$ 40-80 in 2020, rising to US$ 50-100 by 2030.

outcomes (especially for young people) over the last year, with initiatives aimed at improving the provision of TVET programmes and making them more relevant to the labour market being particularly worthy of note. In Serbia, for example, the new law on dual education and training that was adopted in 2017 took effect in the 2019-20 academic year, with early results from participating TVET programmes indicating that students had increased exposure to workplace learning. In addition, Serbia also adopted a law on dual-study models in higher education in 2019. Similarly, many provisions of Poland's new law reforming the TVET system entered into force in 2019, improving cooperation between TVET providers and employers and introducing new qualifications and quality control mechanisms. In Jordan, meanwhile, a new Vocational and Technical Skills Development Commission was established in October 2019 under a new law on vocational and technical skills that was adopted in July 2019. That entity has been tasked with setting standards in terms of skills and leading the country's TVET sector through the establishment of sector skills councils (with the support of, and in cooperation with, the EBRD). In Romania and Croatia, the availability of dual-learning components of TVET programmes was expanded in the 2019-20 academic year following increased interest from employers, while Slovenia has adopted a new labour market law aimed at facilitating access to employment for older people and boosting social protection for the unemployed. Egypt, meanwhile, established its first sector skills council in 2019 (with support from the EBRD) in an attempt to institutionalise the private sector's role in the standardisation and development of skills.

Resilient

Energy

ATQ scores for energy resilience have remained unchanged in most economies over the last year, with the exception of increases in Montenegro, Tajikistan, Ukraine and Uzbekistan (as a result of improvements in regulation and progress with the restructuring of the power sector).

Those developments appear to be consistent with longer-term trends observed over the period 2016-20. For instance, scores for Ukraine and Uzbekistan have increased considerably over that period on account of continued efforts to improve the regulations governing the power sector. In particular, following a multi-year process supported by international financial institutions (including the EBRD), the Ukrainian state-owned gas company Naftogaz was unbundled in 2019 in line with the EU's Third Energy Package and a new gas transport company was created. It is expected that the unbundling of the main incumbent in the Ukrainian gas sector will pave the way for further liberalisation of the country's gas market.

Many other countries have reformed the regulatory framework governing the energy sector over the last year,

UNDER NEW GEORGIAN LEGISLATION, RENEWABLE ENERGY IS TO ACCOUNT FOR

35%

OF TOTAL ENERGY CONSUMPTION BY 2030

which should contribute to increased energy resilience in the future. In October 2019, for example, Georgia took a significant step towards aligning its regulatory framework with EU energy legislation (the Third Energy Package) and the Treaty Establishing the Energy Community by adopting the Law on Energy and Water Supply and the Law on Renewable Energy Sources. Under those laws, which lay the foundations for the development of a competitive power market through the unbundling of transmission and distribution system operators, renewable energy is to account for 35 per cent of total energy consumption by 2030. In May 2020, Albania amended its Power Sector Law with a view to improving compliance with EU energy legislation and allowing for the effective unbundling of its distribution system operator. Bulgaria has amended its Energy Law, taking steps towards further liberalisation of the natural gas market (introducing a framework for gas exchange, as well as rules on gas balancing and the organisation of trading points). In a significant development, the Romanian government has announced the cancellation of several measures that were introduced in 2019 through an emergency order that undermined the functioning of Romania's open energy markets, with price caps in the electricity and gas markets expected to be phased out by the end of 2021. In Tajikistan, meanwhile, a new regulatory unit was established for the electricity sector in 2019 (supported by the EBRD's ongoing policy engagement) in order to improve the regulatory environment in that sector and lay the foundations for the creation of a fully independent regulator. Tajikistan has also made progress with the unbundling of the integrated state-owned electricity sector operator, Barqi Tojik, by creating two separate companies responsible for the transmission and distribution segments of the power network, though full unbundling has yet to be completed in that sector.

Several economies have taken important first steps towards improving network integration. In Montenegro, for instance, a 600 MW electricity interconnector linking the country to the Italian power network began operating in November 2019. That project should allow the Western Balkans countries to diversify their electricity supply and strengthen the reliability of the regional electricity grid. In a related development, a national electricity market operator, MEMO Ltd, began operating in North Macedonia in October 2019. That operator has been tasked with establishing a day-ahead electricity market and supporting the implementation of the country's market-coupling project with Albania and Bulgaria.

Financial institutions

On balance, increases in financial resilience scores have outnumbered declines over the last year. The largest increases have been observed in Egypt, Kosovo, Montenegro, North Macedonia, Ukraine and Uzbekistan, driven by improved capital adequacy ratios, improvements to the funding structure of the banking sector, and advances in respect of risk management and corporate governance frameworks. However, Lebanon's financial resilience score has declined on account of significant vulnerabilities observed in its financial sector.

Several countries (including Albania, Belarus, Cyprus, North Macedonia and Ukraine) have seen consistent increases in their financial resilience scores over the period 2016-20, driven by improvements to the funding structure of the banking sector (as measured by the loan-to-deposit ratio), declines in NPLs as a percentage of total loans, increased competition, and improvements to supervisory and regulatory frameworks.

Several economies have pushed ahead with measures reforming the regulatory framework for the financial sector over the last year, in some cases even after the onset of the pandemic. In February 2020, for instance, the National Bank of Moldova made a number of improvements to the country's supervisory framework and ended the special administration regime at Moldindconbank (the country's second-largest bank) following the establishment of the bank's new supervisory and management boards. Bulgaria, meanwhile, has adopted several European Banking Authority (EBA) guidelines on the management of NPLs and internal bank governance. In addition, the Bulgarian and Croatian central banks entered into close cooperation with the European Central Bank (ECB) in 2020, and a number of systemically important banks in those two countries will now be supervised directly by the ECB. In Egypt, meanwhile, a new banking law was adopted in May 2020, which gives the Central Bank of Egypt additional powers to regulate the sector and, if necessary, intervene through short-term bailouts for struggling banks. That law also contains provisions on the regulation of new financial technology and introduces further safeguards to prevent conflicts of interest on the boards of commercial banks, as well as increasing capital requirements. Moreover, in another positive development, Romania has removed the tax on the total assets of commercial banks that was introduced through an emergency order in 2019.

A 600 MW ELECTRICITY INTERCONNECTOR LINKING MONTENEGRO TO THE ITALIAN POWER NETWORK BEGAN OPERATING IN NOVEMBER 2019

In Ukraine, steps have been taken to safeguard the ongoing clean-up of the banking sector. In particular, the Ukrainian parliament has approved a law preventing former owners of banks that have recently been nationalised or liquidated (as a result of the cleaning-up of the financial sector) from reclaiming ownership or receiving monetary compensation. At the same time, the recent (and unexpected) resignation by the Governor of the National Bank of Ukraine has raised concerns about the central bank's ability to operate independently and ensure adequate supervision of the sector.

Latvia, meanwhile, finished implementing the FATF's 40 recommendations in February 2020, thereby making its financial crime prevention system more robust. And Uzbekistan has adopted a banking sector reform strategy for the period 2020-25, which foresees the privatisation of six state-owned banks, an increased role for non-bank financial institutions and simplified issuance of securities by commercial banks. In addition, Uzbek legislation on banking activity and the Central Bank of Uzbekistan has been substantially amended, strengthening the central bank's supervisory powers. Moreover, in April 2020 Uzbekistan consolidated the regulation of payment system providers in a single law, which also introduced the concept of electronic money.

Integrated

A few economies (including Kosovo, Tajikistan, Ukraine and Uzbekistan) have seen their ATQ scores for integration improve over the last year, mainly reflecting reductions in the cost of cross-border trading.

Integration scores have improved for many economies over the period 2016-20, with significant increases being observed in Armenia, Egypt, Greece, Montenegro and Tajikistan on account of continued improvements in the performance of logistics, greater inflows of capital other than foreign direct investment (FDI), improved conditions for attracting FDI and greater financial openness. At the same time, scores have declined significantly in Hungary, Latvia and Mongolia over that period as a result of a sustained drop in FDI inflows as a percentage of GDP (Hungary and Mongolia) and a deterioration in the performance of logistics (Latvia).

Many countries have pushed ahead with reforms in this area. In 2019, for example, the Ukrainian government approved a reform plan for the railway sector and put the relevant legislation before parliament. Proposed reform measures include the restructuring of the national rail operator Ukrainian Railways and preparations for an IPO, the establishment of separate infrastructure and transport management companies, and moves to open the sector up to competition. In April 2020, Ukraine also adopted a law on river transport with a view to opening that sector up to foreign vessels and simplifying registration procedures. In Uzbekistan, meanwhile, the government has outlined plans to restructure and modernise

the air and rail transport sectors, as well as embarking on a reform of its customs regime. The government intends to reduce the processing time for customs declarations to one day as of November 2020 (down from three days at present), introduce risk-based inspection mechanisms and increase the use of online customs declarations.

Progress has also been made with a number of major infrastructure projects in the EBRD regions. In Kazakhstan, for example, a construction project building a ring road around Almaty was brought to a financial close in August 2020, with its total financing standing at US$ 585 million (making it Central Asia's largest public-private partnership). Once the project has been completed, the road will direct traffic away from Almaty, Kazakhstan's largest city, reducing traffic congestion and pollution. In another important public-private partnership, the Bulgarian government signed a 35-year concession agreement with a consortium of French, German and Austrian companies in July 2020 in order to upgrade and operate the country's main airport in Sofia, with improvements to infrastructure and operations at the airport facilitating the expansion of the country's international air network. In Ukraine, meanwhile, the government signed long-term concession agreements with strategic foreign investors in 2020 for the upgrading and operation of two Black Sea ports (Kherson and Olvia), following the adoption of a new law on concessions in 2019. The Ukrainian government has also announced plans to privatise or offer concession arrangements for several more ports.

BOX S.1.

Implementing reforms in times of crisis

The Covid-19 crisis has resulted in rising unemployment, a decline in consumer demand and liquidity constraints for both businesses and households. In such circumstances, the government can play a key role by limiting the lasting economic damage caused by the crisis. In these kinds of situation, structural reforms (which are often regarded as yielding benefits primarily in the long term) could potentially be overlooked in favour of short-term stimulus measures. This raises an important question as to whether crises alter the costs and benefits of structural reforms and whether they warrant the postponement or overhaul of such measures. With that question in mind, this box summarises empirical evidence on the implementation of reforms during crises.

While there is a well-established consensus regarding the beneficial impact that structural reforms have on the economy in the longer term, the short-term effects of structural reforms are more difficult to assess.[2] Product market reforms, for instance, can lead to both positive and negative outcomes in the short term, depending on the speed with which resources and human capital are reallocated from unproductive firms that exit the market to more efficient new entrants. Meanwhile, reforms aimed at making the labour market more flexible may have a contractionary effect in the short term as labour market frictions make it more difficult to immediately replace less productive employees.[3] In contrast, reductions in unemployment benefits have no immediate negative effects on labour force participation, are less costly to implement and increase competition in the labour market.[4]

Available evidence suggests that the short-term effect of structural reforms may depend on the prevailing economic conditions. Using a theoretical framework, Cacciatore et al. (2016) show that any negative short-term effects of labour market deregulation may be amplified if those reforms are implemented during adverse productivity shocks, whereas product market reforms are less sensitive to market conditions (as larger mark-ups resulting from the reduced number of firms in the market may incentivise higher levels of production). Empirical evidence[5] also suggests that deregulation of the labour market triggers more severe negative short-term effects in weak economic conditions, whereas such conditions have little bearing on the impact of product market reforms.[6] Nevertheless, product market reforms that are implemented during downturns may potentially have adverse effects in the short term if inefficient firms exiting the market are not replaced by new entrants as a result of weak market prospects or a lack of access to credit.[7]

At the same time, however, certain reforms may produce additional benefits in times of crisis (as is the case, for instance, with reforms that remove administrative barriers and reduce the cost of starting a business).[8] Reforms in sectors such as retail trade, telecommunications and professional services often result in declining prices and cause output and employment to rise at a faster pace, thus having an expansionary effect even during periods of falling demand.[9]

Expansionary fiscal and monetary policies can help to mitigate the negative short-term impact of structural reforms during economic contractions. Increases in public spending on infrastructure can, in particular, produce short-term productivity gains in times of contraction.[10] The short-term benefits of structural reforms have also been shown to increase when government policymaking is more credible, as that encourages firms and households to respond more quickly to new rules and regulations and accelerates the positive effects of reforms, which may otherwise take longer to materialise.[11]

In conclusion, therefore, some structural reforms may potentially have a contractionary effect in the short term, which could be amplified in weak economic conditions. Pairing reforms with increases in public spending, measures aimed at improving credit conditions and action with a view to fostering trust in public governance can help to alleviate the short-term costs of structural change, while preserving its long-term benefits.

[2] See Bouis et al. (2020).
[3] See Cacciatore et al. (2016).
[4] See Duval and Furceri (2018).
[5] See, for instance, Duval and Furceri (2018).
[6] See Bouis et al. (2012).
[7] See Lee and Mukoyama (2015) and Barlevy (2003), as referred to in Sánchez et al. (2016).
[8] See Ciriaci (2014).
[9] See Bertrand and Kramarz (2002), and Faini et al. (2006).
[10] See Duval and Furceri (2018), and Dabla-Norris et al. (2015).
[11] See Adjémian et al. (2007), as referred to in Sánchez et al. (2016).

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