The territorial impact of COVID-19: Managing the crisis across levels of government

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COVID-19 has governments at all levels operating in a context of radical uncertainty. The regional and local impact of the COVID-19 crisis is highly heterogeneous, with significant implications for crisis management and policy responses. This paper takes an in-depth look at the territorial impact of the COVID-19 crisis in its different dimensions: health, economic, social and fiscal. It provides examples of responses by national and subnational governments to help mitigate the territorial effects of the crisis, and offers ten takeaways on managing COVID-19's territorial impact. Finally, the paper offers a forward looking perspective to discuss the crisis' implications for multi-level governance as well as points for policy-makers to consider as they build more resilient regions.

In 2020 COVID-19 affected almost all countries and more than 50 million people around the world. It has governments operating in a context of radical uncertainty, and faced with difficult trade-offs given the health, economic and social challenges it raises. By spring 2020, more than half of the world's population had experienced a lockdown with strong containment measures. Beyond the health and human tragedy of the coronavirus, it is now widely recognised that the pandemic triggered the most serious economic crisis since World War II. Many economies will not recover their 2019 output levels until 2022 at the earliest (OECD, 2020[1]). A rebound of the epidemic in autumn 2020 is increasing the uncertainty. The nature of the crisis is unprecedented: beyond the short-term repeated health and economic shocks, the long-term effects on human capital, productivity and behaviour may be long-lasting. The COVID crisis has massively accelerated some pre-existing trends, in particular digitalisation. It has shaken the world, setting in motion waves of change with a wide range of possible trajectories (OECD, 2020[2]).

This paper highlights the strong territorial dimension of the COVID-19 crisis. Subnational governments – regions and municipalities – are at the frontline of the crisis management and recovery, and confronted by COVID-19's asymmetric health, economic, social and fiscal impact – within countries but also among regions and local areas. For example, the health of populations in some regions is more affected than in others. Large urban areas have been hard hit, but within them deprived areas are more strongly affected than less deprived ones. Over the past few months, the health impact has spread towards less populated regions in some countries. In the United States for instance, the highest increase in the number of deaths occurring in October were in the rural counties not adjacent to a metropolitan areas. The various risks vary greatly depending on where one lives. This regionally differentiated impact calls for a territorial approach to policy responses on the health, economic, social, fiscal fronts, and for very strong inter-governmental coordination.

Many governments at all levels have reacted quickly, applying a place-based approach to policy responses, and implementing national and subnational measures for in response to the COVID-19 crisis:

- On the health front, many countries are adopting differentiated territorial approaches, for example on policies surrounding masks or lockdowns.
- On the socio-economic front, governments are providing massive fiscal support to protect firms, households and vulnerable populations. They have spent more than USD 12 trillion globally since March 2020. Many countries, and the EU, have reallocated public funding to crisis priorities, supporting health care, SMEs, vulnerable populations and regions particularly hit by the crisis. In addition, more two thirds of OECD countries have introduced measures to support subnational finance – on the spending and revenue side – and have relaxed fiscal rules.
- Many governments announced large investment recovery packages – already much larger than those adopted in 2008 – focusing on public investment. These investment recovery packages prioritise three areas: strengthening health systems; (ii) digitalisation; (iii) accelerating the transition to a carbon neutral economy.

This paper provides good practice examples on policy responses to help mitigate the impact of the crisis on regions and municipalities in all OECD countries, and beyond. Below are ten early takeaways on managing COVID-19's territorial impact, its implications for multi-level governance, subnational finance and public investment, as well as points for policy-makers to consider as they build more resilient regions.

- Introduce, activate or reorient existing multi-level coordination bodies that bring together national and subnational government representatives to minimise the risk of a fragmented crisis response.
- Support cooperation across municipalities and regions to help minimise disjointed responses and competition for resources. Promote inter-regional or inter-municipal collaboration in procurement especially in emergency situations. Promote the use of e-government tools and digital innovation to simplify, harmonise and accelerate procurement practices at subnational level

- Cross-border cooperation should be actively pursued and supported at all levels of government, in order to promote a coherent response recovery approach across a broad territory (e.g. border closure and reopening, containment measures, exit strategies, migrant workers).
- Consider adopting a "place based" or territorially sensitive approach for measures to fight the pandemic
- Strengthen national and subnational-level support to vulnerable groups to limit further deterioration in their circumstances and to strengthen inclusiveness, including by simplifying and facilitating access to support programmes, ensuring well-targeted services, introducing adequate and/or innovative fiscal support schemes, and identifying the needs for revising fiscal equalisation policies.
- Foster continuous dialogue between national and subnational governments regarding COVID-19's fiscal impact on subnational budgets using shared evidence and data and taking into account the differentiated impact of the crisis. Help subnational governments reduce the gap between decreasing revenues and increasing expenditures during the COVID-19 crisis to avoid underfunded and unfunded mandates and possible sharp cuts in subnational spending. Special grant schemes could help close these gaps.
- Explore and introduce other temporary or permanent, fiscal tools and measures, including tax arrangements, easier access to external financing (debt), and more flexible, modern and innovative financial management tools. Focus on reviewing subnational financial management and strengthening expenditure and revenue effectiveness, as a means to contribute to restoring fiscal stability over the medium and long terms.
- Integrate a territorial dimension in national investment recovery strategies and involve subnational governments in their implementation early on, and not only municipalities but regions as well.
- Draw some lessons from the 2008 crisis in the implementation of investment recovery strategies to avoid some mistakes which were made at that time. Among the risks to avoid are to atomise the allocation of the funding in a myriad of small infrastructure projects to spend the money rapidly at the expense of long-term priorities (e.g. sustainability and resilience).
- Use public investment across at all levels of government to support COVID-19 recovery over time: avoid using it as an adjustment variable; minimise fragmentation in the allocation of investment funds targeting COVID-19 responses; ensure allocation criteria are guided by strategic regional priorities; integrate social and climate objectives into recovery plans designed by all levels of government; and consider introducing a resilience-building criteria for the allocation of public investment funding for all levels of government.

The territorial impact of COVID-19

Introduction

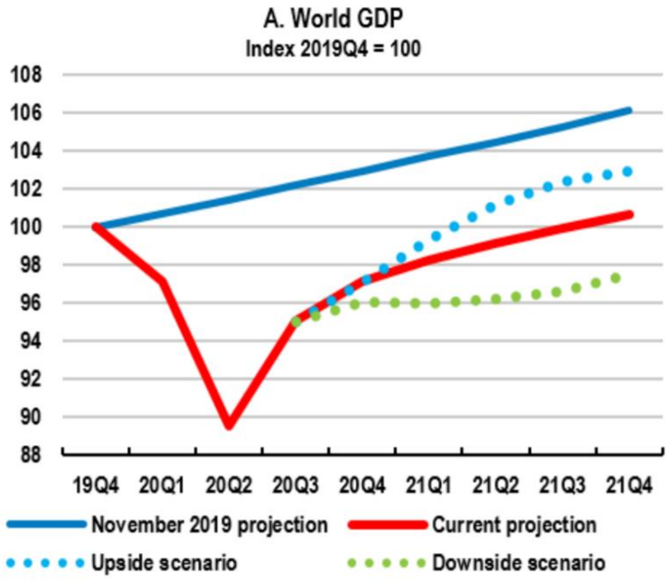
The COVID-19 crisis has governments around the world operating in a context of radical uncertainty, and faced with difficult trade-offs given the health, economic and social challenges it raises. Within the first three months of 2020, the novel coronavirus developed into a global pandemic. Schools and universities were closed in spring 2020 for more than one billion students of all ages. By November 2020, COVID-19 spread to almost all countries and affected more than 50 million people around the world, resulting in more than 1.25 million deaths. More than half of the world's population has experienced a lockdown with strong containment measures – the first time in history that such measures are applied on such a large scale.

Beyond the health and human tragedy of COVID-19, it is now widely recognised that the pandemic triggered the most serious economic crisis since World War II. All economic sectors are affected by disrupted global supply chains, weaker demand for imported goods and services, a drop in international tourism (OECD, 2020[3]), a decline in business travel, and most often a combination of these. Measures to contain the virus' spread have hit SMEs and entrepreneurs particularly hard (OECD, 2020[4]). Unemployment levels and the number of aid seekers have increased, sometimes dramatically. Many countries "exited" virus containment measures to mitigate the impact of the economic crisis only to face a rising wave of cases in autumn 2020, jeopardising recovery The exit strategy from the crisis is not linear, with possible "stop and go" strategies of lockdowns until a treatment or vaccine or cure is available.

Estimates released by the OECD in September 2020 indicate that real global GDP is projected to decline by 4.5% in 2020 before picking up by 5% in 2021. OECD unemployment is projected to rise to 9.4% in Q4 2020 from 5.4% in 2019. The projections assume that sporadic local outbreaks of the virus will continue, with these being addressed by targeted local interventions rather than national lockdowns; wide availability of a vaccination is not expected until late in 2021. (OECD, 2020[1])

Figure 1. Global GDP projections

Constant prices, Index 2019 Q4 = 100



Source: OECD (2020), OECD Economic Outlook, Interim Report September 2020

Given the multi-faceted nature and unprecedented scale of the COVID-19 crisis, comparisons with past crises, including the 2008-2009 financial crisis, have significant limitations. COVID-19 is proving unique in its generation of both a supply side and a demand side shock, and its impact on all sectors and regions of the world. The uncertainty is also much higher. Governments face a difficult trade off: managing the economic recovery and mitigating the impact of a second wave of the virus.

The COVID-19 crisis has a strong territorial dimension with significant policy implications for managing its consequences. Two central considerations for policy makers are:

- The regional and local impact of the crisis is highly asymmetric within countries. Some regions, particularly the more vulnerable ones, such as deprived urban areas, have been harder hit than others. Certain vulnerable populations, too, have been more affected. In economic terms, the impact of the crisis is differing across regions, at least in its initial stages. Differentiating factors include a region's exposure to tradable sectors, its exposure to global value chains and its specialisation, such as tourism.

- Subnational governments – regions and municipalities – are responsible for critical aspects of containment measures, health care, social services, economic development and public investment, putting them at the frontline of crisis management. Because such responsibilities are shared among levels of government, coordinated effort is critical.

The COVID-19 pandemic will have short- medium- and long-term effects on territorial development and subnational government functioning and finance. One risk is that government responses focus only on the short term. Longer-term priorities must be included in the immediate response measures in order to boost the resilience of regional socio-economic systems.

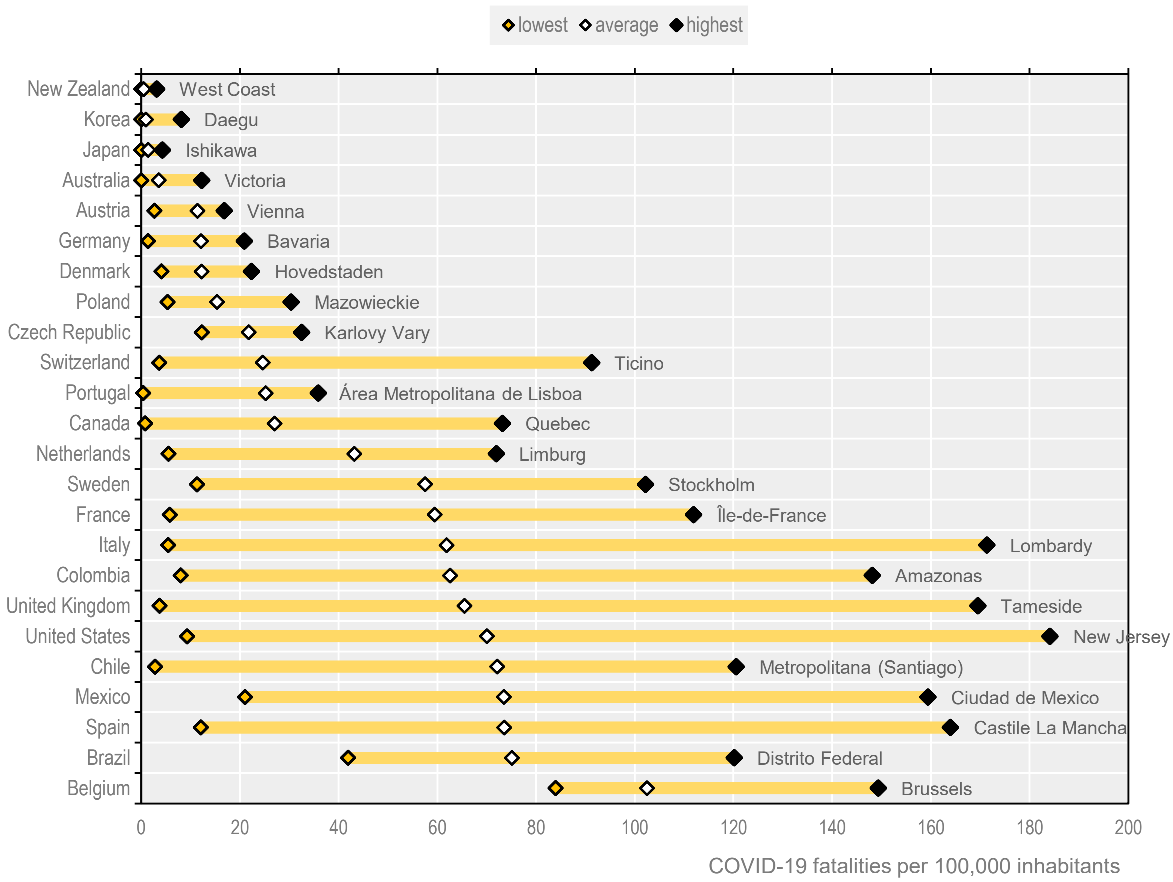
The territorial impact of the health crisis

COVID-19, like all pandemics, has a spatial dimension that needs to be managed (McCoy, 2020[5]). By November 2020, it is clear that the impact of the COVID-19 crisis differs markedly not only across countries, but also across regions and municipalities within countries, both in terms of declared cases and related deaths. In the People's Republic of China (hereafter 'China'), 83% of confirmed cases were concentrated in Hubei province. In Italy, the country's north was hardest hit, and one of the wealthiest region in Europe, Lombardy, registered the highest number of cases (47% as of November) (Italian Government Covid-19 Data Platform, 2020[6]). In France, the regions of Île-de-France and Grand Est were the most affected with 34% and 15% of national cases respectively (French Government Covid-19 Data Platform, 2002[7]). In the United States, New York the largest share of federal cases (14.6%), followed by Texas (8%). In Canada, the provinces of Quebec and Ontario accounted for respectively 61% and 31% of total cases as of November (Canadian Government Covid-19 Data Platform, 2020[8]). In Chile, Metropolitan Santiago accounted for 70% of cases as of November (Chile Ministry of Health, 2020[9]). In Brazil, Sao Paulo registered 25% of cases as of November (Brazilian Government Covid-19 Data Platform, 2020[10]). In India, the State of Maharashtra registered 21% of confirmed cases in India and in Russia, Moscow represented 24% of total cases as of November.

COVID-19-related mortality rates also exhibit a strong regional concentration (Figure 2). Within-country, COVID-19 deaths per 100 000 inhabitants can vary greatly, particularly in most hard hit countries. For example, in Italy, Calabria is the least affected region with 5.5 deaths per 100 000 inhabitants against 171 per 100 000 inhabitants in Lombardy, the most affected. Similarly in the United States, Vermont recorded 9.3 deaths per 100 000 inhabitants versus 184 in New Jersey. In Brazil, Minas Gerais recorded 41.8 deaths per 100 000 inhabitants while Distrito General death toll reached 120 per 100 000. Regions in South Korea and New Zealand were less affected overall. Sejong recorded 0 deaths per 100 000 while Daegu recorded 8.1 deaths per 100 000.

Figure 2. Within-country differences in COVID-19 fatalities

COVID-19 fatalities per 100,000 inhabitants, NUTS-2 (TL2) regions as of November 2020



Note: The 24 countries are OECD countries plus Brazil. Among the 37 OECD countries, Estonia, Latvia and Luxembourg have no regions at NUTS 2 level; there are no data at NUTS 2 level for Iceland, Ireland, Israel, Finland, Greece, Hungary, Lithuania, Norway, Slovak Republic and Slovenia. For New Zealand, data is available by District Health Boards. For Canada and Japan, one province (Prince Edward Island) and one prefecture (Iwate) respectively are missing. For the United States, only the 50 States are considered. Data were retrieved between 24 October and 2 November.

Source: (Australian Broadcasting Corporation, 2020[11]; Austria Federal Ministry of Social Affairs, Health, Care and Consumer Protection, 2020[12]; Belgium Infectious Diseases Data Exploration Platform, 2020[13]; Brazilian Government Covid-19 Data Platform, 2020[10]; Canadian Government Covid-19 Data Platform, 2020[8]; Chile Ministry of Health, 2020[9]; Colombia National Institute of Health, 2020[14]; Czech Republic Ministry of Healthcare, 2020[15]; Dutch Ministry of Health, Welfare and Sport, 2020[16]; French Government Covid-19 Data Platform, 2002[7]) (Italian Ministry of Health, 2020[17]; Japanese Covid-19 Data Platform, 2020[18]; John Hopkins University Centre for Systems Sciences and Engineering, 2020[19]; Mexican Government Covid-19 Platform, 2020[20]; New Zealand Ministry of Health, 2020[21]; Poland Ministry of Heath, 2020[22]; Robert Koch Institute, 2020[23]; South Korea Ministry of Health and Welfare, 2020[24]; Spanish Ministry of Health, 2020[25]; Statens Serum Institut, Denmark, 2020[26]) (Swedish Public Health Agency, 2020[27]; Swiss Government Covid-19 Data Platform, 2020[28]; United Kingdom Government Covid-19 Platform, 2020[29])

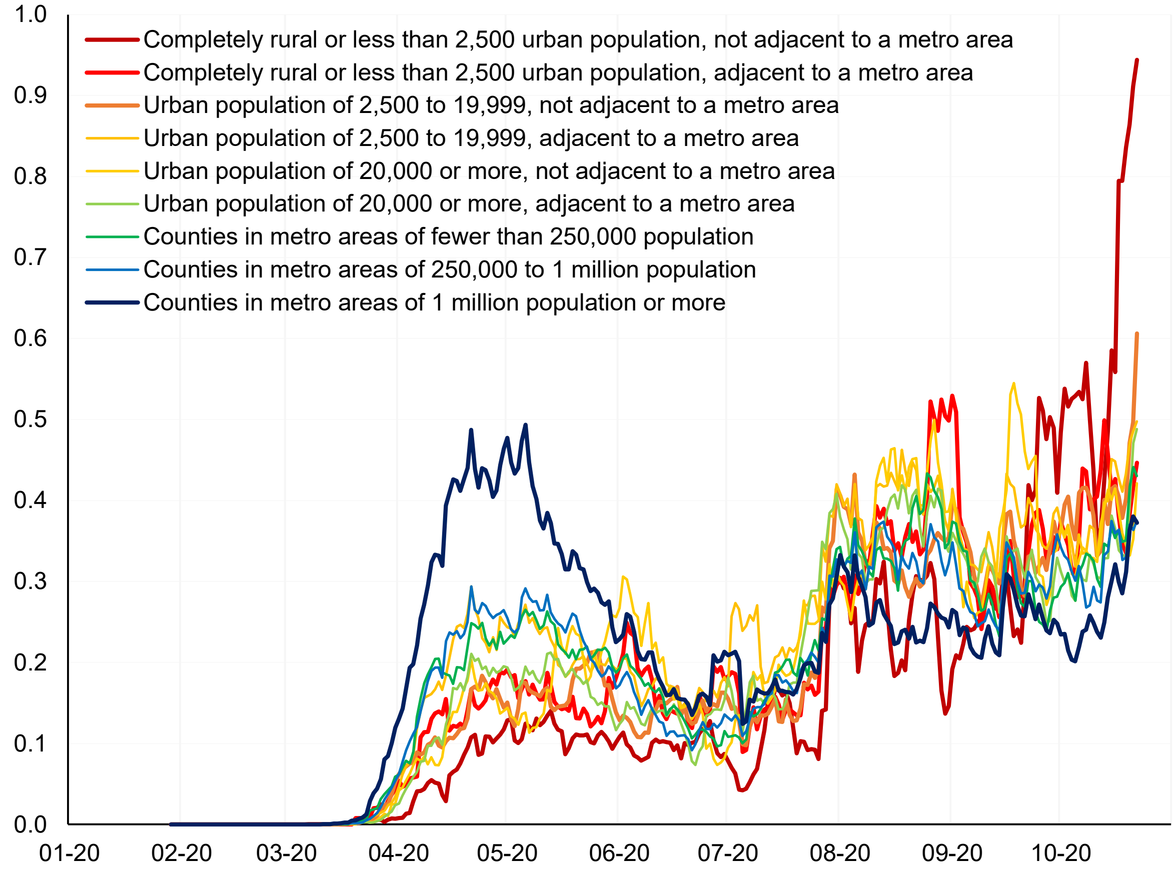
There are a number of factors that contribute to the differentiated impact of COVID-19, which also may explain the disparities observed in countries as diverse as Canada, Chile, Korea and the UK. One factor relates to how the first "clusters" of cases developed and highlights the difficulty in typifying or anticipating where the virus may start. In many instances, large cities, with their dense international links – including international markets, business travel, tourism, etc. – were often the entry points for the virus and were particularly affected. Contagion can spread more quickly in large urban areas, due to proximity, if preventive, protective or containment measures are not introduced early enough. However, it is not possible to establish a clear correlation between density and incidence of the disease. Some very densely populated Asian cities, such as Hong Kong (7.5 million), and Seoul (9.8 million) Singapore (5.6 million) and Tokyo (9.3 million) saw limited diffusion of COVID-19 thanks to early and very proactive measures, mask wearing and extensive testing (OECD, 2020[30]). It appears that the problem is more a combination of density plus other factors such as a lack of appropriate measures such as contact tracing, poor housing conditions, or limited access to health care.

Rural areas also experienced "first clusters", and regions with high numbers of elderly people were affected. Rural regions tend to be equipped with fewer hospital beds. Overall, metropolitan areas and their adjacent regions are better equipped in terms of hospital beds than regions far from metropolitan areas. In 2018, regions close to metropolitan areas had almost twice as many hospital beds per 1 000 inhabitants than remote regions. This gap has grown significantly since 2000 (OECD, Forthcoming[31]).

While often the virus first took hold in urban areas, over the past few months some countries saw the health impact spread towards less populated regions. In the US for instance, the highest increase in the number of deaths (as a share of a county's population) occurring in October 2020 were in rural counties not adjacent to a metropolitan areas. The latter are under strain as daily deaths have continued to increase, reaching 0.86 per 100 000 in October, compared to 0.11 in May 2020. Daily deaths rate in metro areas counties of above 1 million people peaked in May 2020 at 0.49 and have remained at or below 0.35 since then (Figure 3).

Figure 3. COVID-19 deaths per county group (rural-urban), United States

COVID-19 daily deaths per 100,000 population, United States by county, 7-day rolling average



Note: Counties are classified according to United States Rural-Urban Continuum Codes. Data on COVID-19 deaths span from January 22 to October 22, 2020.
Source: Author's elaboration based on data from: USDA, USA Facts

Density *per se* is not the problem. The problem is density associated with poverty, poor housing conditions and limited access to health care (Basset, 2020[32]). Poverty and access to hospitals are more important indicators than density. Within cities, some neighbourhoods are also more affected. These are often areas with lower incomes, such as the Bronx in New York City, or Seine-Saint-Denis in the Paris region. New York City Health Department data indicate that Manhattan, the borough with the highest population density, was not the hardest hit. Deaths are concentrated in the less dense, more diverse boroughs. Factors that do seem to explain clusters of COVID-19 deaths in the US include household crowding, poverty, socio-economic segregation and participation in the work force (Basset, 2020[32]).

Deprived areas are the most strongly affected

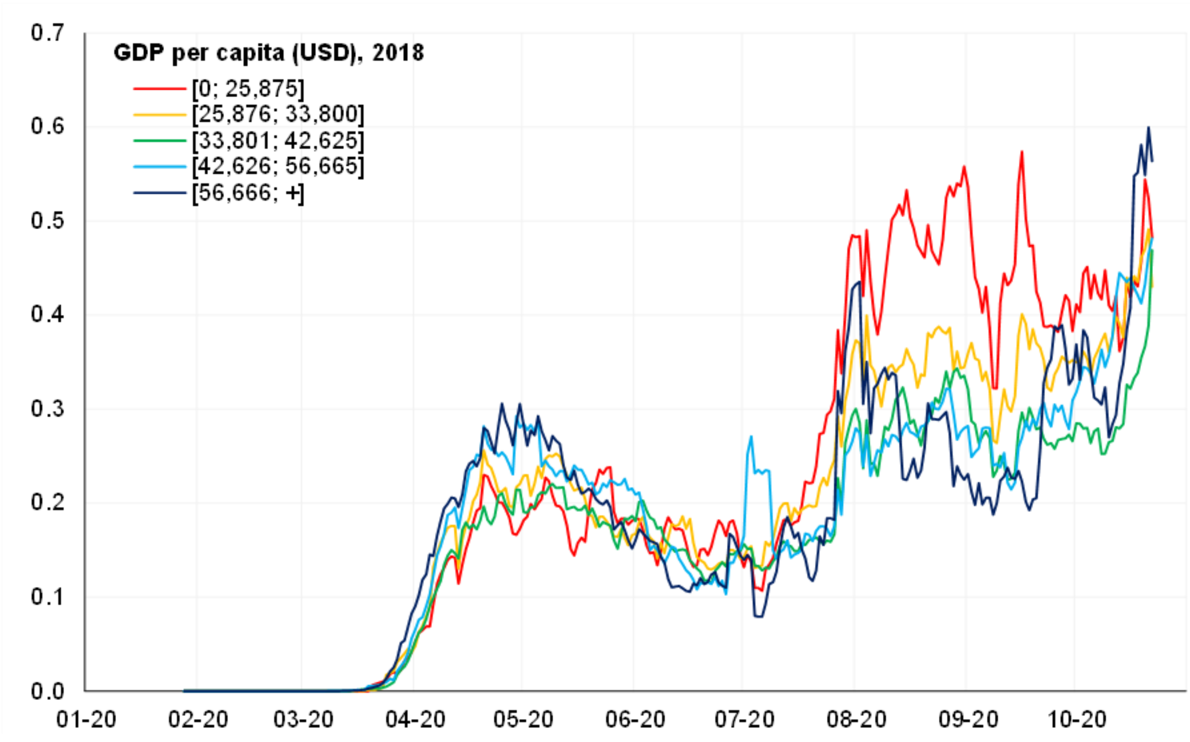
According to the United Kingdom (UK) Office for National Statistics (ONS), there is evidence that more deprived areas in England and Wales are experiencing a disproportionate rate of deaths due to COVID-19 compared to less deprived ones (Iacobucci, 2020[33]). The ONS study underlines that poverty and population density significantly increase the risk of death due to the coronavirus. For example, in Wales, the most disadvantaged areas had registered around 45 COVID-19 deaths per 100 000 people, while areas with less deprivation have experienced close to 23 COVID-19 deaths per 100 000 inhabitants (Iacobucci, 2020[33]) between January and April 2020.

In France, mortality rates are twice as large in municipalities in the first quartile of the national income distribution than in municipalities in higher quartiles (Brandily, 2020[34]). This heterogeneity maybe explained by municipal differences in housing conditions and occupational exposure.

In the US, lagging counties have recorded more deaths (60 COVID-19 deaths per 100 000 people) than wealthier ones (48 COVID-19 deaths per 100 0000). In the first income quintile of per capita GDP, new COVID-19 deaths were significantly higher than in other quintiles between August and October (Figure 4). While density associated with poor housing conditions plays a role in the spread of the virus, it is worth noting that mortality rates are also determined by the health system capacity, and pre-existing health conditions (e.g. high blood pressure, obesity, and diabetes), which themselves tend to be correlated to income and education.

Figure 4. COVID-19 deaths per county group (GDP per capita), United States

COVID-19 daily deaths (7-day rolling average) per 100,000 population, United States, by counties according to county GDP per capita (2018)

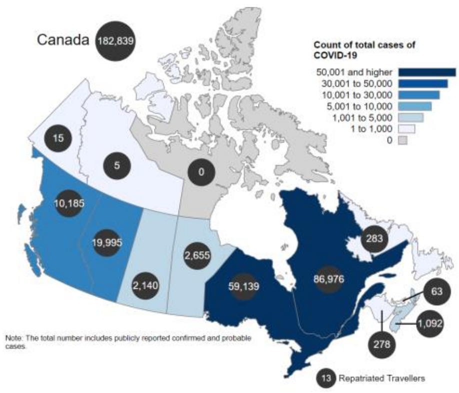


Note: United States counties are classified according to GDP per capita quintiles based on data from the BEA for 2018. Data on COVID-19 deaths span from January 22 to October 22, 2020.
Source: Author's elaboration based on data from: Bureau of Economic Analysis, Local Area Gross Domestic Product, 2018

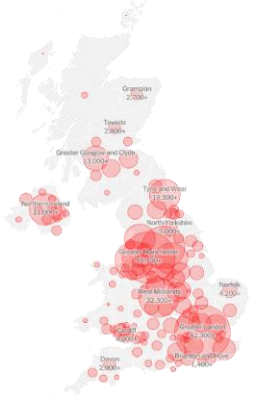
Figure 5. The asymmetric impact of the health crisis

Italy, total confirmed cases per 100,000 (October 12, 2020)

Canada, total confirmed cases (October 12, 2020)

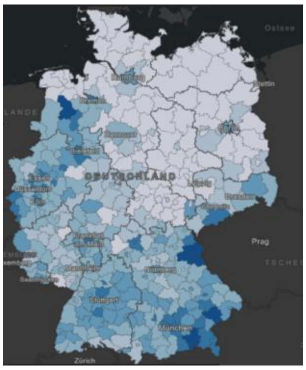


United Kingdom, total confirmed cases (October 12, 2020)

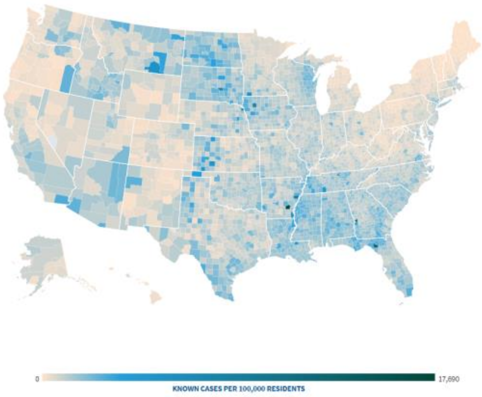


Mexico total confirmed cases (October 26, 2020)

Germany, total confirmed cases (November 8, 2020)



United States, total confirmed cases (October 26, 2020)



Note: For United Kingdom, Isles of Scilly cases combined with Cornwall

Source: (Italian Government Covid-19 Data Platform, 2020[6]); (Canadian Government Covid-19 Data Platform, 2020[8]); (BBC, 2020[35]) based on (United Kingdom Government Covid-19 Platform, 2020[29]); (Mexican Government Covid-19 Platform, 2020[20]); (BBC, 2020[35]) based on (United Kingdom Government Covid-19 Platform, 2020[29]); (New York Times, 2020[36]) based on (New York City Department of Health and Mental Hygiene, 2020[37]);

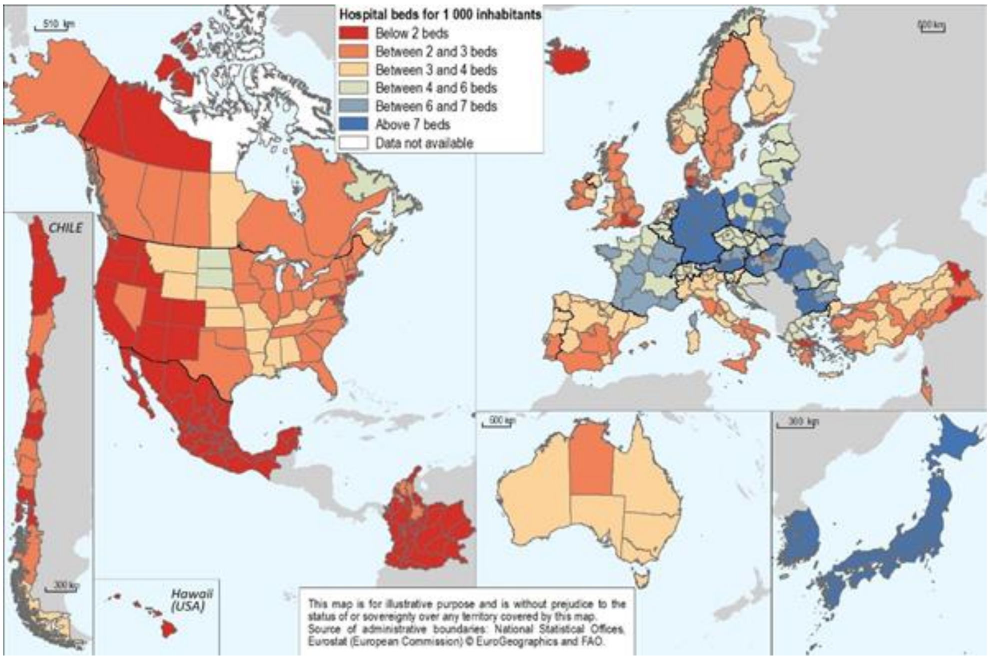
Most regions were underprepared for a crisis of such magnitude

Most countries, regions and cities were not well prepared for this pandemic for several reasons: i) they underestimated the risk when the outbreak emerged; ii) many did not have crisis management plans for pandemics (with the exception of Asian countries that battled the SARs pandemic, and some others, such as the Nordic countries, where crisis management plans are required); iii) they lacked basic, essential equipment, such as masks; and iv) they absorbed reduced public expenditure and investment in health care/hospitals. Since the start of the "Great Recession" launched by the 2008 financial crisis up until 2018, the number of hospital beds per capita decreased in almost all OECD countries, declining 0.7% per year, on average.

Not all regions are equally equipped to battle the crisis. Regional disparities in access to health care are quite high in some countries when measured by the number of hospital beds per 1 000 inhabitants (Figure 6). These disparities appear to be regardless of whether health care spending is decentralised. It should be noted, however, that the number of hospital beds alone is a limited measure for real health care capacity and quality. Much depends on health worker density and distribution, and the quality of hospital equipment. Some research suggests that regional disparities in health outcomes in Spain and Italy have not increased after the decentralisation of health care spending (Lopez-Casasnovasa, Costa-Font and Planas, 2005[38]; Bianco and Bripi, 2010[39]). Furthermore, a recent OECD Fiscal Federalism Network study showed that hospital costs are lower in countries with a higher degree of administrative decentralisation, even after controlling for particular treatments (Kalinina et al., 2019[40]). The decentralisation and concentration debates need to be distinguished for the different categories, notably basic health and intensive care. For the most advanced care, there are obvious quality arguments for concentrating (although not necessarily centralising) services. In such cases, however, there remains a need to ensure that travel times to care centres do not prevent service use.

Figure 6. Large regional disparities in access to health services

Hospital beds per 1 000 inhabitants by region, 2018

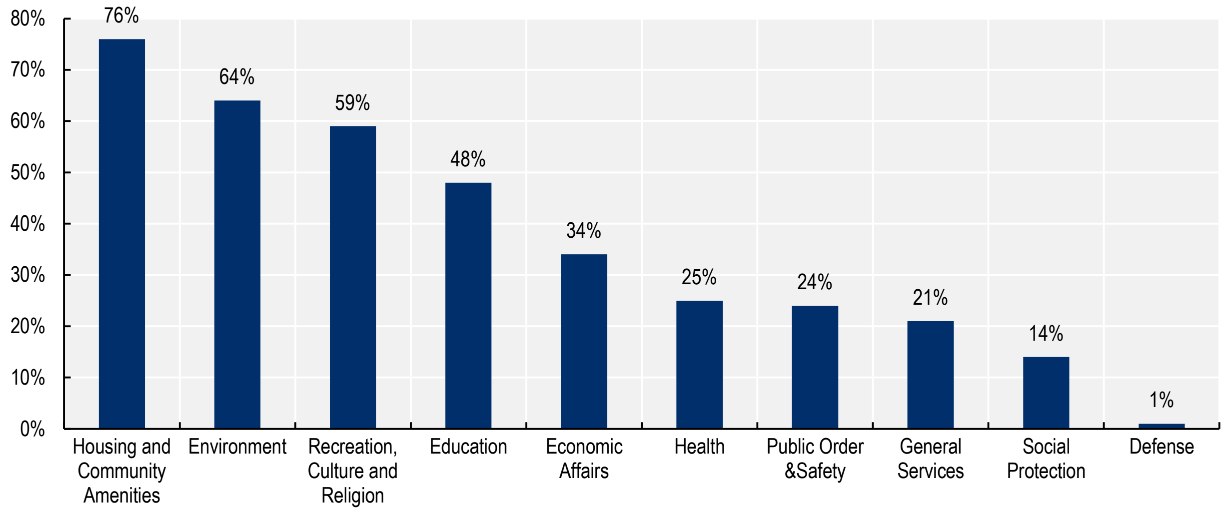


Note: data for Iceland and Quebec are from OECD Health Statistics.
Source: OECD Regional Database – oe.cd/2Wd

Subnational governments at the frontline of crisis management

Since the outbreak of the pandemic in early 2020, regional and local governments have been at the forefront of managing the COVID-19 health crisis and its social and economic consequences. Together with central governments and social security bodies, they have significant responsibilities in the different areas affected by the COVID-19 crisis. In many countries, subnational governments are responsible for critical aspects of health care, from primary care to secondary care, including hospital management, accounting for 25% of total public health expenditure, on average (Figure 7).

Figure 7. The share of subnational government in public expenditure by sector in OECD countries, 2017



Note: The OECD average (unweighted) is calculated for 33 countries (no data for Canada, Chile, and Mexico). The functional areas correspond the Classification of the Functions of Government (COFOG), which distinguishes 10 areas. The total of general government spending is non-consolidated.
Source: (OECD, 2018[41])

Since the beginning of the crisis, regions and cities are facing urgent social care demands from the elderly, children, disabled, homeless, migrants and other vulnerable populations – all of whom are directly and/or indirectly affected by the coronavirus. In many countries, subnational government are also responsible for welfare services and social transfers. In addition, subnational governments play a large role in delivering education, representing 50% of public education spending. Regional and local governments are managing the closing and re-opening of schools under very strict health measures.

Subnational governments are also ensuring the continuity of public services in a crisis context, adapting these as necessary, and protecting their own staff. Citizens expect seamlessness in essential public services, such as water distribution and sanitation, waste collection and treatment, street cleaning and hygiene, public transport, public order and safety, and basic administrative services, and the proper delivery of many of these are fundamental in managing the pandemic. In some countries, emergency services and police are managed by state, regions and municipalities, and they have been called upon during confinement periods to ensure control, security and rescue.

Regional and local governments are responding by maintaining essential services, if not at full service-levels then at adjusted ones, and by developing or providing better access to tele-services (tele-health consultations, tele-education). Finally, the emergency situation has led many subnational governments to take initiatives in areas outside the scope of their responsibilities, either upon request by the central government or because they decided to do so in response to emergencies that arose.

The territorial impact of the economic crisis engendered by COVID-19

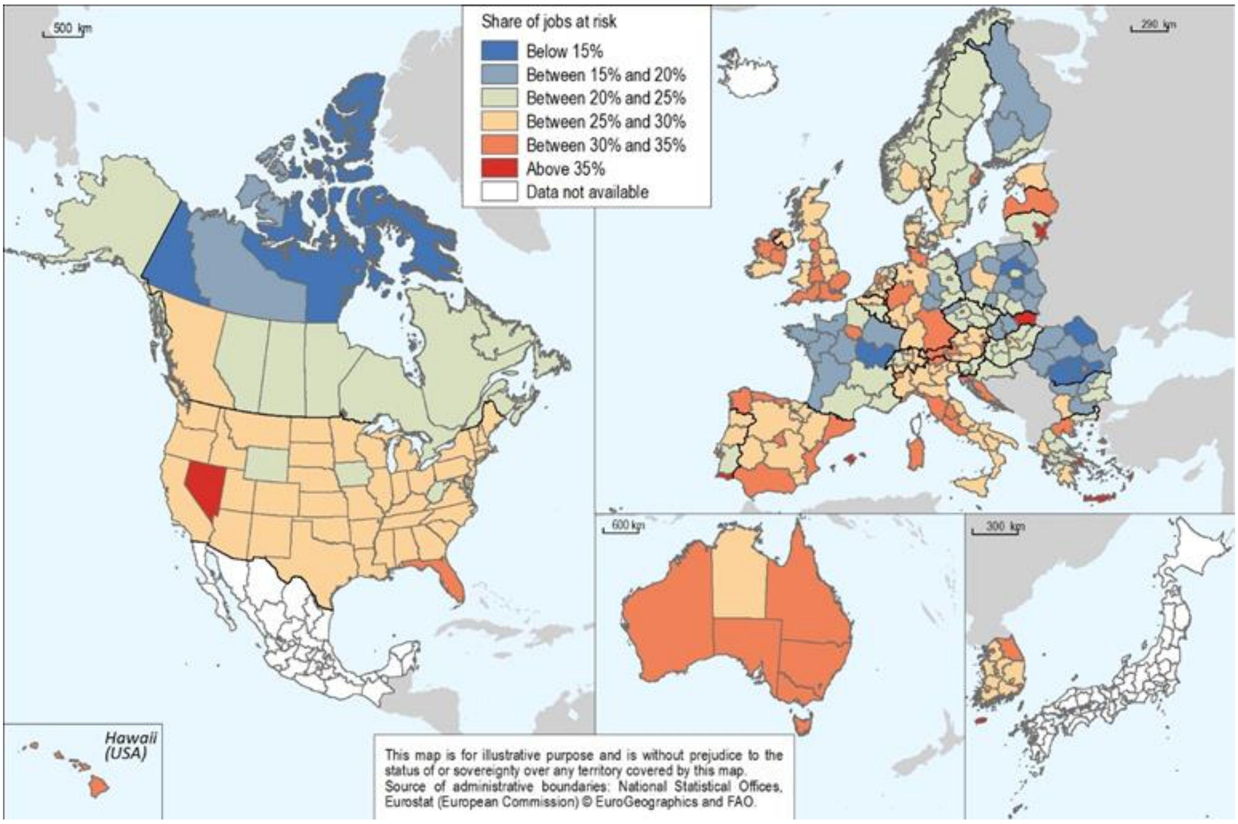
Many comparisons have been made between the COVID-19 crisis and the 2008 global financial crisis, but they differ radically in scope, origin (endogenous in 2008 versus exogenous in 2020), and consequences. Both crises are also very different in their impact on territories, with the 2020 crisis having a more differentiated impact than that of 2008.

The economic impact of the COVID-19 crisis differs across regions, depending on the region's exposure to tradable sectors and global value chains. For example, regions with economies that are heavily dependent on tourism will be more affected by the coronavirus than other regions. Capital regions or other metropolitan regions show a relatively higher risk of job disruption than other regions (OECD, 2020[42]). In the US for example, analysis of county-level infection by Brookings and economic data shows that the nation's COVID-19 case load not only remains heavily concentrated, but that the hardest-hit counties and metropolitan areas constitute the very core of the nation's productive capacity. According to Brookings, the 50 hardest-hit US counties "support more than 60 million jobs and 36% of its GDP" (Muro, Whiton and Maxim, 2020[43]).

The crisis' impact on regional employment may also vary significantly across regions within countries. Regions with large shares of non-standard employment can help explain within-country differences arising from the COVID-19 crisis. Evaluating the share of jobs potentially at risk from a lockdown is one way to assess the territorial impact of the COVID-19 crisis. These shares can be estimated based on the specific sectors of activity considered to be at risk in a region, following an OECD note on the economic impact of containment measures (OECD, 2020[44]).

Regional disparities in the share of jobs potentially at risk in the short term as a result of confinement measures are stark. In May 2020, the OECD estimated that these shares ranged from less than 15% to more than 35% across 314 regions in 30 OECD and 4 non-OECD European countries (Figure 8). In one out of five OECD/EU regions, more than 30% of jobs are potentially at risk during a lockdown (OECD, 2020[42]). In the short term, tourist destinations and large cities are suffering the most from COVID-19 containment measures. The importance of tourism and of local consumption – including large retailers, general-purpose stores, and businesses in the hospitality industry, such as coffee shops and restaurants – partially explains this. The extent to which activities have recovered during the high tourist season is an important factor to determine the actual economic decline in tourist destinations.

Figure 8. Share of jobs potentially at risk from COVID-19 containment measures



Source: (OECD, 2020[42]) [calculations done in May 2020]

The longer and more stringent the containment measures, the higher the risk for regional economies. In summer 2020, targeted (localised) lockdowns were adopted in a number of countries to minimise the costs of national lockdowns. In autumn 2020, some countries are going back to national confinement measures to mitigate the impact of a second wave of cases. Possible stop-and-go measures are expected in the coming months, until a vaccination is available. The full impact for 2020 is yet to be calculated. Previous OECD work shows that the recovery of OECD regions after the 2008 global financial crisis took years. In more than 40% of OECD and EU regions, even seven years after the start of the crisis, per capita GDP was still below pre-crisis levels.

Mitigating the impact of confinement and facilitating social distancing: the impact of telework

The extent to which occupations can be performed remotely is an important mitigating factor with respect to economic impact and cost of COVID-19 containment measures. Occupations amenable to remote working depend strongly on the nature of the tasks carried out, which can differ significantly even within the same workplace. For example, academic researchers in universities can often continue working during a lockdown or under social distancing requirements, while canteen staff working in the same university may be forced to cease or strongly reduce their activities.

The OECD recently estimated the share of occupations amenable to remote working in OECD regions based on the task performed by workers[1]. This work reveals that the potential for remote working is

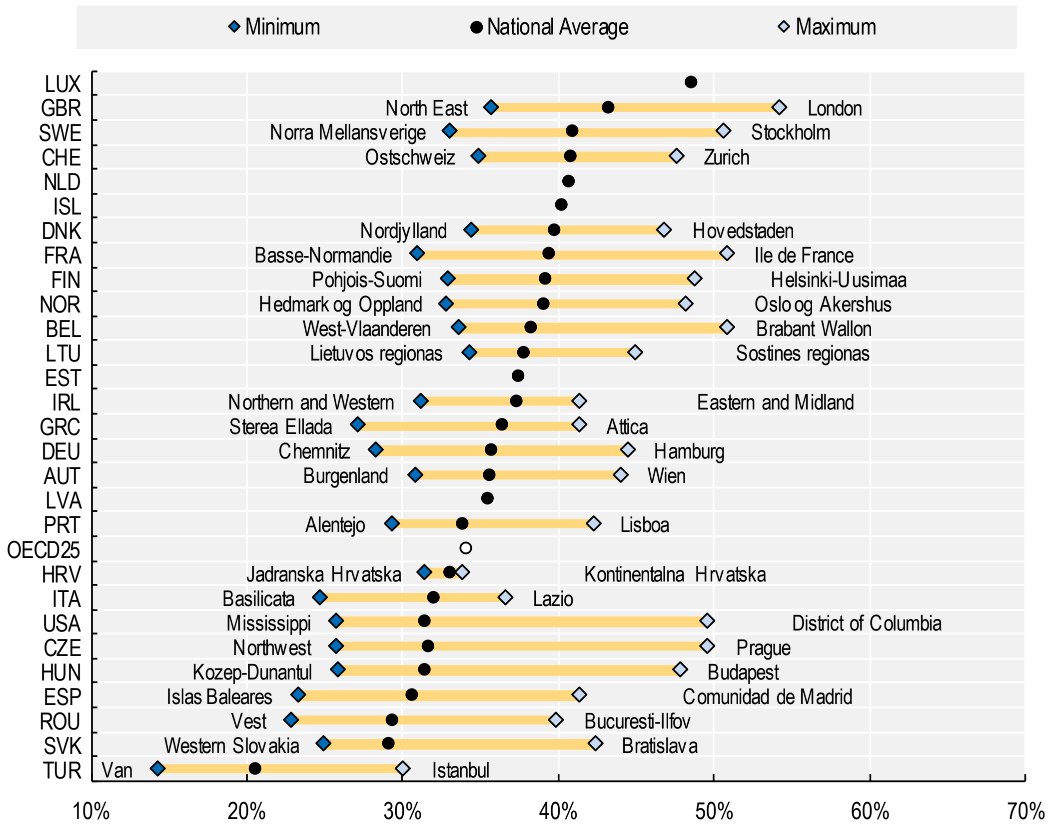
[1] The method is detailed in *Capacity for Remote Working can Affect Lockdown Costs Differently across Places* (OECD, 2020[45]).

unevenly distributed within countries. Urban areas a nine percentage point higher share of occupations that can be performed remotely than rural areas (OECD, 2020[45]).

In most cases large cities and capital regions offer highest potential for remote working within countries (Figure 9). Such a capacity might contribute to a territorial differentiation in resilience. On average, there is a 15 percentage point difference between the region with the highest and lowest potential for remote working in a given country. This difference reaches more than 20 percentage points in the Czech Republic, France, Hungary, and the U.S., driven by comparatively high levels of potential remote working in their capitals. It is important to note that these findings hold under the assumption that all workers – regardless of location – have access to an efficient internet connection and to the necessary equipment. As a consequence, differences across space arising from disparities connectivity and available equipment might determine the extent to which the potential to telework translates into an actual opportunity.

Figure 9. The possibility to work remotely differs among and within countries

Share of jobs that can potentially be performed remotely (%), 2018, NUTS-1 or NUTS-2 (TL2) regions



Note: The number of jobs in each country or region that can be carried out remotely as the percentage of total jobs. Countries are ranked in descending order by the share of jobs in total employment that can be done remotely at the national level. Regions correspond to NUTS-1 or NUTS-2 regions depending on data availability. Outside European countries, regions correspond to Territorial Level 2 regions (TL2), according to the OECD Territorial Grid.
Source: (OECD, 2020[45])

A strong and asymmetric fiscal impact on subnational governments

The impact of the COVID-19 crisis and related policy responses (e.g. public health measures, lockdowns, emergency economic and social measures) on subnational government finance is significant. A June-July

2020, a survey jointly conducted by the OECD and the European Committee of the Regions (CoR) with 300 representatives of regional and local governments in 24 countries of the European Union (CoR-OECD, 2020[46])indicates that in the short and medium terms most subnational governments expect the socio-economic crisis linked to COVID-19 to have a negative impact on their finances, with a dangerous "scissors effect" of rising expenditure and falling revenues. Beyond the European Union, other surveys report the same negative effects of COVID19 on subnational finance. For example, the US National League reports a severe and long-lasting impact on US cities with a loss of own-source revenue reaching 21.6% in 2020 (US National League of Cities,, 2020[47]).

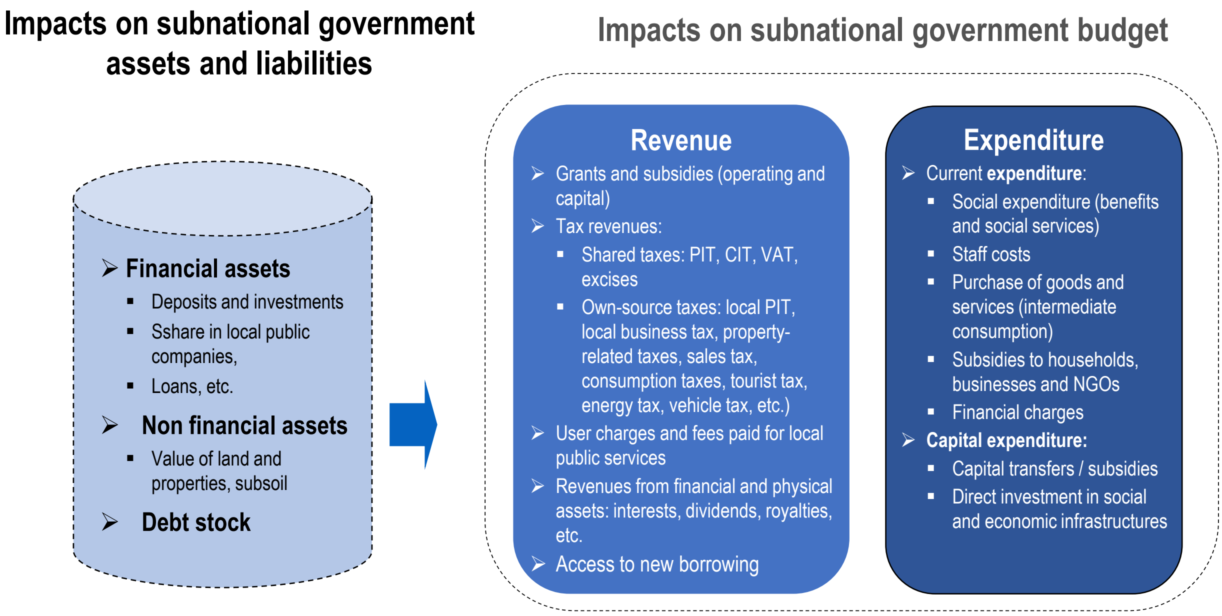
The impact of COVID-19 on subnational finance is differentiated among countries, among levels of government, among regions and among municipalities. The varying effects on subnational finance depend on five main factors, all of which need to be taken into account to analyse and compare the fiscal impact of COVID-19 on regions and municipalities:

1. the degree of decentralisation particularly the assignment of spending responsibilities as the role of regions and cities in managing the crisis can vary depending on the scope of their responsibilities;
2. the characteristics of subnational government revenues, in particular their degree of sensitivity to economic fluctuations;
3. “fiscal flexibility” i.e. the ability of subnational governments to absorb exceptional stress, their capacity to adjust their expenditure and revenues to urgent needs;
4. the fiscal health or financial conditions i.e. the current budget balance and debt situation of a given local government, the level of cash treasury and set-aside reserves;
5. the scope and efficiency of support policies from higher levels of government.

It is extremely difficult quantify the impact of the COVID-19 crisis on subnational finance as there are many uncertainties surrounding its severity, duration, variability across territories, and the effectiveness of the support mechanisms introduced by international, national and subnational public authorities. Moreover, the new waves of infections and new lockdowns may continue to strongly affect subnational government finances.

With new waves of infection, the evolution of the crisis reveals itself to be non-linear. Countries must manage combined shocks and their cascading effects in parallel, as well as implement recovery plans. Many countries have introduced expansionary fiscal measures. Withdrawing them too quickly and introducing tight fiscal consolidation measures is risky as it could result in public investment becoming an adjustment variable. This happened after 2010, leading to a strong and persistent drop in public investment and hampering growth in many in many OECD countries. The effects of this “systemic” crisis on subnational finance occur at two levels: on subnational government “stocks” (assets and liabilities) and on “flows” i.e. on subnational government expenditure, revenues and access to new borrowing (Figure 10).

Figure 10. The cascading effects of the COVID-19 crisis on subnational government finance



Source: Authors' elaboration

The impact on subnational government assets and liabilities

The effects on stocks are on the assets owned by subnational governments and on their liabilities. Physical or financial assets and liabilities will likely be affected but this will depend on a variety of factors, such as the evolution of real estate prices, insurance reserves, pension funds, local company values, etc. For example, in the US, the crisis and the stock market collapse have exposed the fragility of public pension systems, exacerbating the solvency crisis of many pension systems and jeopardising the future retirement benefits of state and local public-sector workers. Public pension plans closed in fiscal year 2020 with virtually no change in their average funded ratio despite the high volatility in asset prices in the first half of the year. However, decreasing state and local governments revenues will hamper their ability to make their required pension contributions in the near term (SLGE, 2020[48]).

Local public companies are also exposed to the COVID-19 crisis. Some categories suffered from the cessation or slowdown of activity, particularly in the tourism, culture, leisure and transport sectors. Business failures and threats to capitalisation and equity affect subnational governments as shareholders (FEPL, 2020[49]).

Subnational government budgets will continue to be strongly affected

Subnational governments face strong pressure on expenditure and reduced revenue, thus increasing deficits and debt. While the crisis has already put short-term pressure on health and social expenditures and on different categories of revenue, the strongest impact is expected in the medium term. National governments, associations of local governments, and individual entities have started estimating the short and medium term fiscal impact, in order to prepare and adjust budgets, and to design appropriate support measures (Box 1). As already underlined, these estimates are still tenuous and need to be regularly updated, given the context of uncertainty. COVID-19's second wave adds to the uncertainty as new confinement measures will again negatively affect subnational government finance. This second shock may be stronger for those subnational governments that drained all their fiscal reserves to resist the first shock; while they may still be under the effects of the previous shock.

Box 1. First insights into COVID-19's fiscal impact on subnational government

- In **Austria,** the COVID-19 crisis is strongly affecting state and municipal budgets. A 7%-12% drop in state tax revenues is forecasted. Behind this is a postponement of tax payments, which will result in tax collection being delayed. At the same time, it is expected that all state governments will be equally affected by the decrease as a result of Austria's fiscal equalisation system, which has a levelling effect across regions (S&P Global Ratings, 2020[50]). At the municipal level, it is estimated that the crisis will cost up to EUR 2 billion in 2020 because of additional spending needs. This corresponds to a 5%-11% loss in revenue compared to 2019 (Wiener Zeitung, 2020[51]). Contributing to this is an expected 10% decrease in the municipal share of federal taxes (sales tax, wage tax, corporate tax), and a 10% and 12% drop in municipal tax revenue (local and tourist tax, fees from services such as childcare, etc.).
- In **Canada,** municipalities may have lost between CAD 10 billion and CAD 15 billion in revenue over the first three quarters of 2020 and unanticipated costs including public safety measures and support for vulnerable populations (Federation of Canadian Municipalities, 2020[52]). Estimates show that provincial governments may have a revenue shortfall of CAD 35 billion in 2020/21 compared to 2019/20 (representing CAD 1 000 per person) (Tombe T., 2020[53]).
- In **Finland,** in April 2020, the Ministry of Finance estimated the cost and lost revenue effects of COVID-19 to municipalities to be between EUR 1.6 billion and EUR 2 billion for 2020 i.e. around 4% of total municipal revenues (Ministry of Finance of Finland, 2020[54]). The economic effect of COVID on municipalities will spread over several years. The negative effect of COVID-19 will amount to EUR 1.7 billion in 2021 according to the Association of Finnish Municipalities. The support from the central government will amount to EUR 2 billion in 2020 and at least EUR 0.9 billion during 2021 to compensate for lost tax revenue and extra spending. By the end of 2020, it appears that COVID-19 will not reduce municipal tax revenues as sharply as was predicted in the spring. The relatively good development of municipal tax revenues is partly due to the fact that the state increased the share of municipal corporate tax in 2020 and 2021 as one of its first support measures, particularly benefiting the largest cities.
- In **France,** according to the Cazeneuve report \, at the end of July 2020, net lost revenue among subnational governments could reach EUR 5 billion in 2020 (i.e. 2.4% of subnational operating revenues) while net additional spending would reach EUR 2.2 billion in 2020 (Rapport Cazeneuve, 2020[55]). Among revenues, tax revenues will be the most affected (70% of revenue lost), the other being user charges and fees. Among subnational governments, the loss in revenues will be larger in municipalities (46% of subnational government net losses), followed by *départements* (36%) and regions (18%). Net revenue loss accounts for around 2% of municipal operating revenues but 2.7% of *départements* operating revenues and 3.1% of regional operating revenues. Tax revenues most impacted are the tax on real estate transactions (DMTO), the tax on business value-added (CVAE), the tax on transport, the value-added tax (VAT, though this will be limited thanks to a guarantee mechanism) and the tax on energy consumption (TICPE).
- In **Germany**, many state governments will see a sharp deterioration in their budgetary performance in 2020, given falling revenues and rising expenditure. Behind this are packages adopted by the regions to support local economies and the wish to maintain, and even increase, public investment. It is expected that most states will revert to debt financing to cover their budget deficits, increasing their borrowing needs (S&P Global Ratings, 2020[50]). Data published by the Federal Ministry of Finance in May 2020 indicated a loss of tax revenue of about 11% for the Lander and 15% for the municipalities compared to estimates made in

November 2019. The local level is especially affected by a 25% drop in local business tax receipts, a tax that represents 44% of municipal tax revenues. According to the Association of German municipalities, the municipal share of income tax will also fall by 7.4% but transfers from the state governments have increased by 20%. Overall, the funding gap between income and expenditure of municipalities is estimated at EUR 10 billion in 2021, depending on the measures that are taken to mitigate the decrease of municipal revenue in 2021 and 2022 (Association des Régions de France, 2020[56]),

- In **Iceland,** a report released in August 2020 estimates that municipal revenues will decrease significantly in 2020 due to the COVID-19 crisis, with a total shortfall of over ISK 33 billion, accounting for 8.5% of total municipal expenditure in 2019 (and 1.1% of GDP). Municipal tax revenues, their largest single source of revenue, will shrink significantly. In general, the impact of COVID-19 is the most significant in tourist areas, and in municipalities which assume the most expenditure on social services and financial assistance sectors (Ministry of Transport and Local Government, 2020[57])
- In **Italy**, the Association of Italian Municipalities (ANCI) developed three scenarios for the loss of municipal revenues due to COVID-19. A *low risk scenario* with a loss of revenue among municipalities of about EUR 3.7 billion (down 9% compared to 2019). This is based on a relatively rapid exit from the emergency beginning in May 2020, where the largest losses would be concentrated on the sectors directly exposed to the crisis, with other sectors recovering relatively quickly in 2020 or by 2021. A *medium risk* scenario, with an estimated municipal revenue loss of about EUR 5.6 billion (a decrease of 14% from 2019). Finally, a *high risk* scenario estimating a loss of EUR 8 billion (a drop of almost 21% over 2019). In this scenario, COVID-19 triggers a major and long running national and international economic crisis that causes recovery difficulties for all economic sectors (ANCI, 2020[58]). Regional governments also face financial difficulties. Most of their expenditure is concentrated on health (85% on average), which will increase. To this is added a drop in receipts from the regional tax on productive output (IRAP), the regional surtax on the personal income tax and the regional tax on vehicles.
- In **Japan,** prefectural spending to contain the novel coronavirus, amounting USD 9.5 billion in July 2020, has drained the reserve funds of most of Japan's prefectural governments by more than half, limiting their financial resources to combat a second wave. According to an Asahi Shimbun survey, all 47 regions had already used 58% of their reserves (Asahi Shimbun, 2020[59])
- In **Switzerland,** individual cantons and cities may see noticeable differences in COVID-19's impact on their revenue and expenditures, depending on their economic structure and the resilience of their tax base. Cantons and municipalities tax revenue could drop by an average 6%-8% year on year in 2020 if the country's GDP contracts by 6.5%, as currently forecast. The drop will continue in 2021 as Switzerland's tax collection is spread out over several years. Cantons' health expenditure have significantly increased as they pay 55% of the invoiced cost of in-patient health care treatment for their residents, and are in charge of hospitals and implementing public health measures. Cantons have also started to support local economies. The crisis will generate additional borrowing needs by around 20%. However, most Swiss subnational government had balanced budgets before the crisis (S&P Global Ratings, 2020[60]).
- In the **UK**, local government finance is facing a difficult future. Recent analysis estimate that local councils face a 7.9% increase in expenditure of compared to pre-crisis expenditure in 2020, and a 5.1% decrease in their revenue. On the expenditure side, local councils face a 12% expenditure increase for housing and homelessness, 10% for adult social care, 10% on finance and corporate services, and 9% in culture and leisure (Institute for Fiscal Studies,

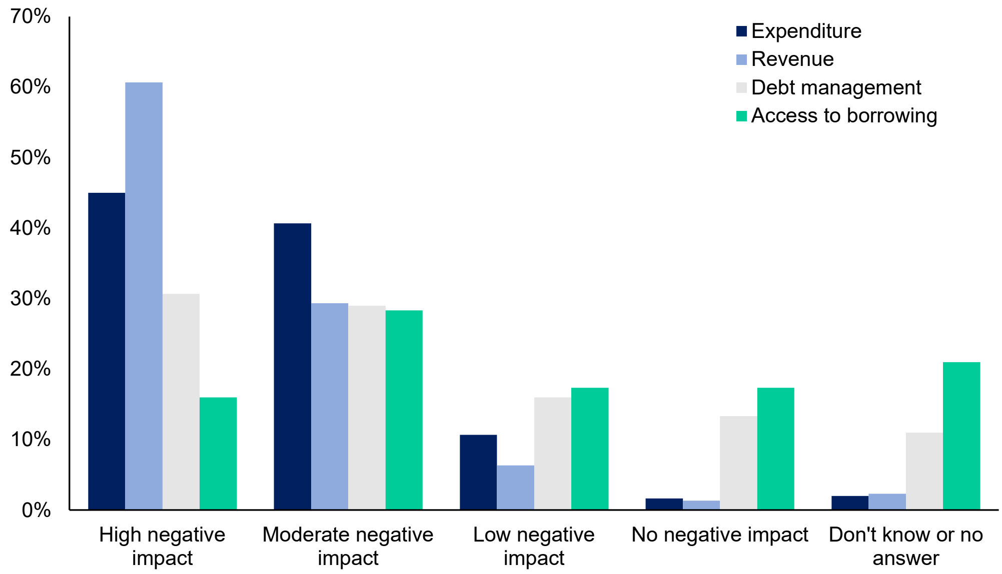
2020[61]). Income loss – council tax and business rates – account for 60% of projected income losses and the losses from fees, charges and commercial income account for another 40%.

- In the **US**, according to a recent study released in July 2020 by the Council of State Governments, states face a combined estimated revenue shortfall of between USD 169 billion and USD 253 billion in general fund receipts in fiscal years 2020 and 2021 as a result of the COVID-19 pandemic and its economic impact. According to another estimates, personal income taxes declined by 63%, sales taxes dropped 15.8% and corporate income taxes fell 63% (Urban Institute, 2020[62]). This revenue loss is only part of the "fiscal shock" that awaits legislators as in 2021, Medicaid spending will increase by an estimated USD 29 billion ((Council of State Governments, 2020[63]).
  - At the local level, recent research estimates a drop in municipal revenue of 5.5% (USD 34.2 billion) under the less severe scenario and 9% (USD 55.3 billion) under the more severe scenario (Chernick, Copeland and Reschovsky, 2020[64]). This drop occurs through the decline in own-source revenue but could also occur with the (expected) decline in transfers from states to local governments, and changes in the federal government's direct and indirect assistance to city governments. These losses could lead to significant cuts in critical public safety services, parks and recreation, and pay and jobs cuts. This could also affect infrastructure investment (US National League of Cities,, 2020[47]).

All subnational government transactions are likely to be highly affected by the crisis in the short and medium terms. A detailed analysis of the expected impact on expenditure, revenue, debt management and access to new borrowing permits identifying their contribution to changes in subnational government finance (Figure 11).

Overall, surveyed regions and municipalities in the European Union expect the crisis to have a slightly larger impact on revenue than on expenditure. Large municipalities expect a larger impact: about two third of respondents from cities of populations above 250 000 inhabitants forecast the impact to be highly negative, against 41% where the population is below 10 000 inhabitants ((OECD-CoR, 2020[65]).

Figure 11. Impact on subnational finances, by transaction



Source: (OECD-CoR, 2020[65])

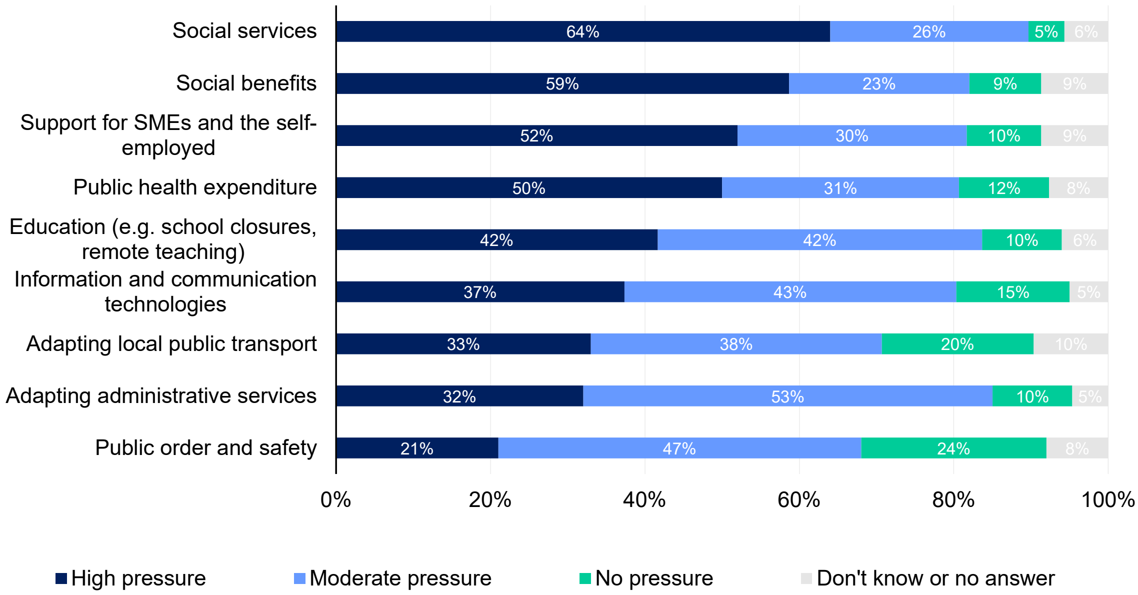
The impact on subnational government expenditure

This crisis is calling on regions and cities to increase their expenditure in many areas. The impact of this, however, will vary according to their spending responsibilities. In many countries, subnational governments are responsible for critical aspects of health care systems, including emergency services and hospitals. In 2018, health expenditure accounted for 18% of subnational expenditure in the OECD, on weighted average. Additionally, subnational governments have expenditure responsibilities in social protection, which is particularly affected by the COVID-19 crisis, including social assistance and social benefits (14% of subnational expenditure). Beyond health and social responsibilities, subnational governments are involved in key areas impacted by the crisis, including education (the first spending item at 24%), public administration (15%), economic development and transport (13%), public order and safety (7%), utilities (waste, water, etc.), etc. In the context of the crisis, subnational governments are confronted with a number of complex and costly tasks. They have first managed the full or partial closure of certain services and facilities and then their reopening while having to ensure the continuity of essential public services, adapt services either physically (public transport, collection of waste, cleaning of public spaces) or virtually (tele-health consultations, remote education arrangement, local tax payments, access to government information, etc.) and enable officials and employees to work remotely. Finally, in many countries, subnational governments are involved in delivering support policies for SMEs and the self-employed, as well as infrastructure investment.

Although some expenditure items are temporarily reduced (related to the slowdown of public services, the cancellation of events, and decrease in intermediate consumption, for example petrol) or deferred in time, most subnational spending items tend to increase in the short term (emergency expenditure), and also in the medium-term in response to exit strategies and recovery programmes.

According to the OCDE-CoR survey, anticipate significant expenditure increases in social services and benefits, support to SMEs and the self-employed, and public health. More moderate expenditure increases are expected in education, information and communication technologies, adapting local public transport, adapting administrative services and public order and safety. Regions in the EU are more likely than municipalities to experience increased spending on health services, support to SMEs and the self-employed, and adaptation of public transport, likely reflecting their broader responsibilities in these areas (OECD-CoR, 2020[65]).

Figure 12. COVID-19 pressure on subnational expenditures, by area



Source: (OECD-CoR, 2020[65])

The impact on health expenditure will be significant

In a number of OECD countries, states, regions, and municipalities are responsibility for public health services and hospital spending. Subnational governments account for about 24.5% of total public health expenditure in the OECD[2] (Figure 7) and 12% of subnational government expenditure[3]. However, the degree of decentralisation in the health sector varies markedly. The OECD developed the typology to indicate the level of decentralisation in the health sector in OECD countries (Box 2) based on the combination of three subnational expenditure spending ratios: *i)* as a share of total public health expenditure (Figure 7); *ii)* as a share of total subnational expenditure; *iii)* as a share of GDP.

[2] 24.5% refers to unweighted average for OECD countries. When taking weighted averages (by population), subnational governments represent 31.8% of total non-consolidated public health expenditure and 38% of consolidated public health expenditure.

[3] 12% refers to unweighted average for OECD countries. When taking weighted averages (by population), health expenditure accounts for 18% of subnational expenditure.

Box 2. Decentralisation in the health sector in OECD countries

Three groups of countries with high, medium and low levels of decentralisation in health provision are identified (Figure 13). Most federal countries (except Belgium and Germany) and some unitary countries (Italy and three Nordic countries) have highly decentralised health care sectors. At the opposite end, 15 unitary countries, plus Belgium and Germany, are in the group where health care is mainly managed by central/federal or social security funds. This interpretation can be nuanced, as health expenditure in unitary countries can be a delegated expenditure made on behalf of the central government, with little or no choice as to how expenses are allocated. In federal countries however, state governments can still have shared decision-making responsibilities with the federal government (OECD, 2019[66]; Beazley et al., 2019[67]; OECD, 2020[68]). The public part of health expenditure may also be funded by social insurance schemes, and not directly by the central or federal government. In Belgium, Luxembourg, Germany and France, social insurance accounted between 85-95% of public expenditure in 2017. It is also important to recognise that while health care provision is usually a public sector responsibility, the private sector often plays a large role in service production, side-by-side with public sector producers.

Figure 13. The level of decentralisation in health care in the OECD countries

	High	Medium	Low
Share of subnational government health spending	> 40% of total public health spending > 20% of total subnational government spending > 4% of GDP	15% - 40% of total public health spending 10% - 20% of total subnational government spending Subnational government health spending 0.5% - 4% of GDP	< 15% of total public health spending < 10% of subnational government spending < 0.5% of GDP
Countries	**Federal & quasi-federal**: Switzerland*, Spain, Australia, Austria, United States **Unitary:** Sweden, Italy, Denmark, Finland	**Unitary:** Poland, Norway, Latvia**, Lithuania, Estonia, Japan, Czech Republic	**Federal:** Belgium Germany **Unitary:** Korea, Slovenia***, Netherlands, Portugal, Slovak Republic, Hungary United Kingdom, France, Turkey, Luxembourg, Iceland, Israel, Greece, Ireland, New Zealand

Note: No data for Canada, Chile and Mexico; * Switzerland: subnational government health expenditure accounts for less than 20% of subnational government expenditure and 4% of GDP; ** Latvia: subnational government expenditure is 8% of subnational government expenditure; *** Slovenia: subnational government expenditure is around 1% of GDP and 12.4% of subnational government expenditure.
Source: OECD based on (OECD, Forthcoming[69])

Regional and local governments have differentiated responsibilities in health services. Therefore, this crisis will have differentiated impact within the subnational government sector. In most federal countries, health care is a major responsibility of state governments, which are responsible for secondary care, hospitals and specialised medical services. In unitary countries, where health care is almost exclusively a regional-level responsibility, the role of regional governments may be also significant (e.g. Denmark, Italy and Sweden). The role of municipalities in health care generally concentrates on primary care centres and prevention. However, in some countries, municipalities or inter-municipal cooperation bodies may have wide responsibilities in healthcare services and infrastructure.

While it is too early to present fiscal data, this health crisis has led to significant increases in subnational government health expenditure. The pressure on public health expenditure is particularly high for regions (69% versus 44% for municipalities), most likely reflecting their broader responsibilities in this area in many EU countries (OECD-CoR, 2020[65]). This is linked to spending to acquire healthcare equipment and consumables (masks, ventilators, tests, protective equipment, etc.), cover staff costs (employment of temporary medical staff, overtime payments, bonuses), pay for additional tasks such as the cleaning and disinfection, construction and conversion of temporary emergency facilities, medical transport, etc. Local governments are also distributing masks and participating in testing and contact-tracing programmes in partnership with regional and national governments.

The impact on social expenditure is significant and will be long-lasting

The COVID-19 crisis is placing significant pressure on social protection spending given its impact on population groups with diverse and frequently complex needs. These include elderly and dependant people, those with chronic or long-term illnesses, the poor and low-income families, the homeless, uninsured households, informal workers, migrants, youth, students and children at risk, people with disabilities, isolated people, and women and/or children at risk of domestic violence and indigenous population.

Among OECD countries, social protection represents 14% of total public social expenditure (Figure 7), though this is much higher in countries where subnational governments have significant social protection responsibilities (e.g. Austria, Belgium, Germany, Japan, the Nordic countries, and the UK). There are large disparities in social protection spending among OECD countries. For example, social protection expenditure accounts for 56% of subnational expenditure around 35% in Ireland and the UK but less than 10% in 10 OECD countries. This indicates that subnational governments are not mobilised in the same way for social services, despite the fact that local governments are often the first resort for citizens in need. Even if social protection is not a subnational government’s responsibility, it often has to respond to social emergencies.

During the emergency, subnational governments have undertaken proactive initiatives to provide social/community support to vulnerable populations (OECD, 2020[70]). In the longer term, social expenditure will certainly continue to increase as more welfare benefits are included due to the rise in unemployment and the number of aid seekers. Unemployment payments, guaranteed minimum revenue, family support, housing subsidies, emergency aid, ageing, etc. will add to the pressure on subnational government social expenditure.

The impact on economic affairs expenditure

Economic affairs[4] represents 13.6% of subnational spending in the OECD on average. Subnational governments in the OECD account for approximately 34% of total public spending in this area (Figure 7), although in some countries it is more than 50% (e.g. Australia, Belgium, Japan, and Spain), and in the US

[4] Economic affairs are mainly composed of transport but also including commercial and labour affairs, economic interventions, agriculture, energy, mining, manufacturing, construction, etc.

it has reached 69%. Some state and regional governments, as well as local governments took early action to support their local economies, focusing mainly on SMEs, the self-employed, and informal workers, as well as on sectors that were highly affected, such as tourism, trade, restaurants, etc. In the longer term, as major public investors, subnational governments may be further mobilised to participate in stimulus packages targeting public investment, in order to compensate for a decline in private investment (see Part 2).

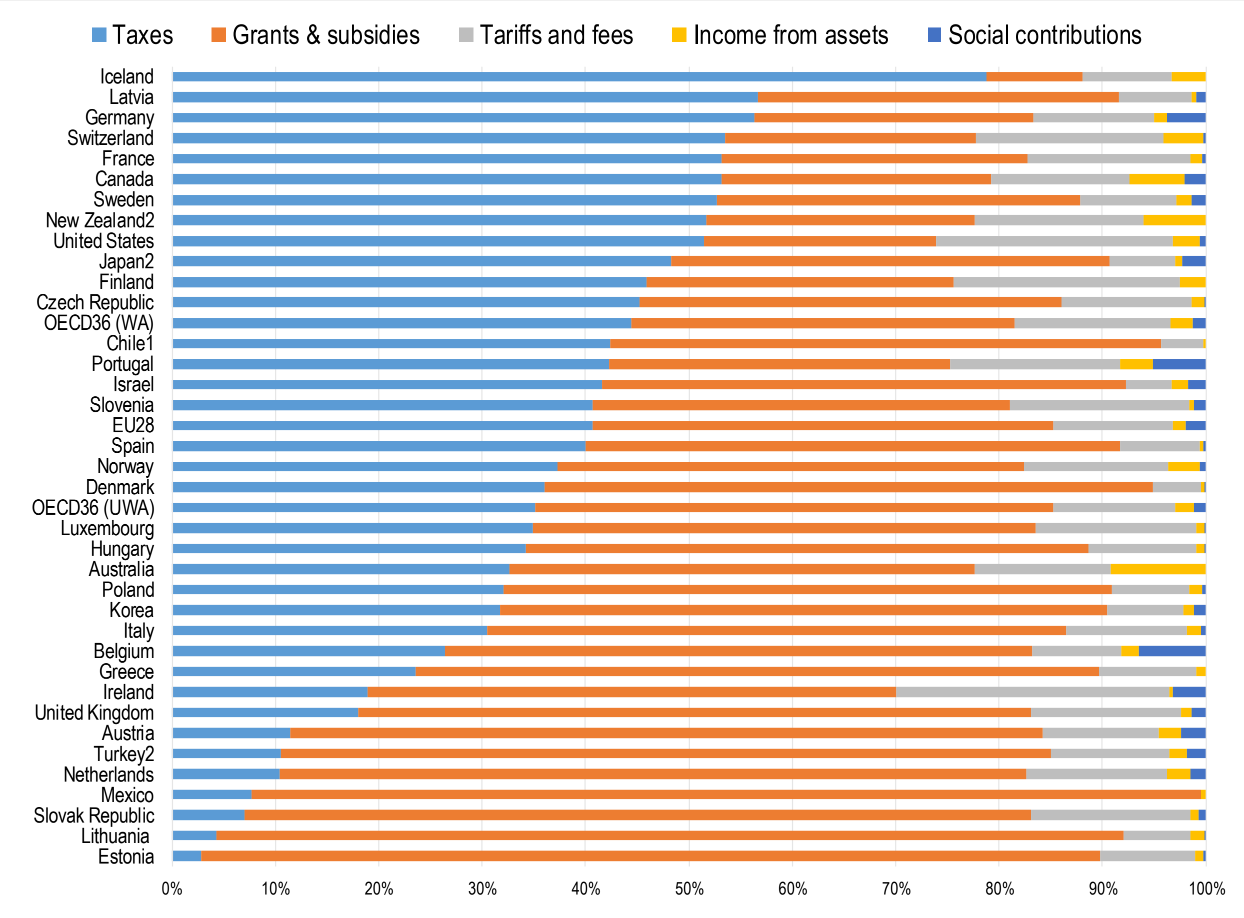
The impact on subnational government revenues

The COVID-19 crisis will likely generate a large drop in subnational government revenue. This would arise from drops in tax revenue, user charges and fees and income from physical and financial assets. The impact on subnational governance finance, however, will depend on the mix of these revenue sources. In countries where subnational governments are largely funded by central governments transfers (e.g. Estonia, Lithuania, Mexico, the Slovak Republic), the negative impact may be small, especially if the central government decides to maintain their level, or even increase them in order to help subnational governments cope with the increased costs resulting from the crisis[5]. However, in some countries, especially federal countries where most of transfers to local governments come from the state governments, there is some concern about the ability of states to sustain their transfers. (Chernick, Copeland and Reschovsky, 2020[64]). In countries where subnational government revenue comes mainly from taxes, user charges, fees and income from assets, the impact may be larger (Figure 14), although this depends on their degree of sensitivity to economic fluctuations and policy decisions.

[5] This can be difficult however, if central government grants are financed by national tax receipts, which themselves would have declined or which are indexed to GDP growth.

Figure 14. Sources of subnational government revenues vary across countries

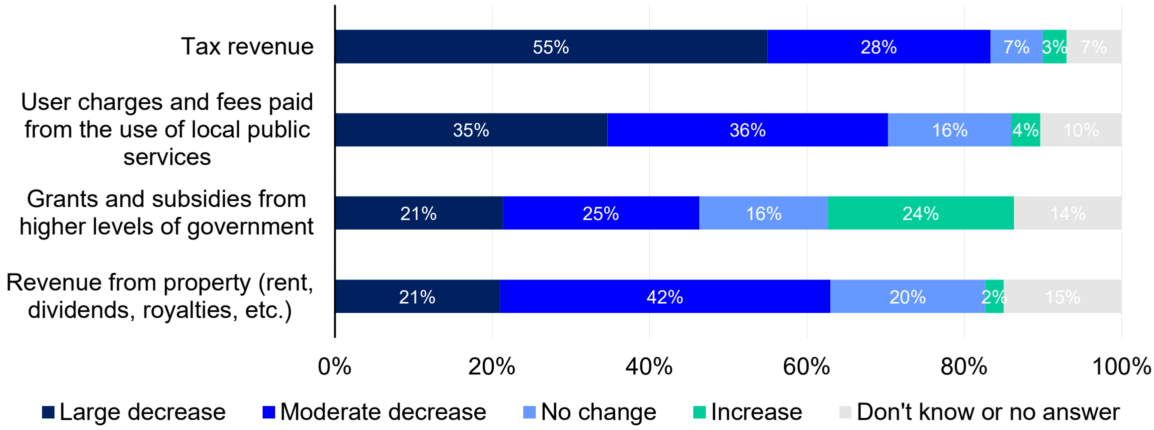
Breakdown of subnational government revenues by category (% of total revenue, 2018)



Note: 1. Australia and Chile: estimates from IMF Government Finance Statistics; 2. 2017 data
Source: (OECD, 2020[71])

Among subnational governments, tax revenue is anticipated to be the most affected revenue source, followed by user charges and fees (OECD-CoR, 2020[65]). Grants and subsidies, as well as revenue from assets are expected to decrease to a lesser extent. There is however, an expectation that grants and subsidies from higher levels of government will remain unchanged or increase (Figure 15) (OECD-CoR, 2020[65]).

Figure 15. Impact on subnational revenue, by revenue source



Source: (OECD-CoR, 2020[65])

The impact on tax revenue

The COVID-19 pandemic is expected to result in a strong drop in both shared and own-source tax revenue. Declining economic activity, employment and consumption arising from COVID-19, and particularly containment measures, will automatically reduce receipts from personal income tax (PIT), corporate income tax (CIT) and value added tax (VAT). In addition, measures such as tax breaks, exemptions, deferrals and a drop in rates that were decided within the framework of recovery packages by national and subnational governments as counter-cyclical tax measures, could amplify the mechanical decline in tax receipts. Many regional governments and municipalities have adopted tax relief measures to support firms and households. A majority of these include a number of tax measures that will result in decreased tax receipts for subnational government budgets. Increased delinquencies could also contribute to tax revenue decline. As subnational government revenues are often based on the previous year's activity (e.g. income taxes), most will see the situation worsen in 2021 and even 2022, regardless of the degree of national-level recovery. Beyond shared or own-source national taxes – many other subnational taxes may be affected by the economic decline and tax decisions as well. Among these are:

- Taxes on business. Examples include the municipal business tax in Germany (*Gewerbesteuer,* 44% of municipal tax revenue*)* and Austria (*Kommunalsteuer, 68% of municipal tax revenue*), the municipal trade tax in Luxembourg (*impôt commercial communal,* 91% of municipal tax revenue) and the "territorial economic contribution" in France, comprising a real estate tax (*contribution foncière des entreprises or CFE*) and a tax on business value-added (*contribution sur la valeur ajoutée des entreprises* or *CVAE*).
- Taxes on economic activities, such as the regional tax on productive output (IRAP) in Italy, the local income tax in Korea and Japan, and Japan's resident tax levied on individual and business income.
- Taxes linked to real estate activity, e.g. real estate transaction taxes, building permits and rights, etc.
- Taxes related to household and business consumption, e.g. sales tax, motor fuel taxes, taxes on energy products, taxes on cars, taxes on leisure, tourist tax, advertising tax, gambling tax, etc.
- Tax proceeds from commodity sectors.

The recurrent property taxes on land and building should be less affected as they are a less volatile source of revenue. However, if the property tax is calculated on the basis of the market value of property, there may be a risk of decline, but the reduction in property values will be reflected in budgets later (2021 or 2022). In addition, there is likely to be a drop in business-property tax revenues as a result of business bankruptcies. A drop in revenue could also come from exemptions and write-offs for some categories of tax payers in financial distress, as well as from increased delinquencies. Subnational governments will need to cope with property tax-payment deferrals. Potential delays that extend through a new fiscal year could pressure budgets and stress liquidity in countries where the property tax is the main source of municipal tax revenue (e.g. Australia, Canada, Estonia, Ireland, Israel, Lithuania, the Netherlands, the US and the UK) (OECD, Forthcoming[72]).

The impact on user charges and fees

Subnational governments may also suffer from a large decrease in user charges and fees resulting from the closure of public facilities (e.g. cultural, recreational, educational and sport venues like swimming pools, golfs, etc.) and reduced demand for local public services, such as public transport, school meals, car parks, tolls, kindergarten fees, administrative fees, etc. Drops in such revenue could be compounded by a rise in delinquent or unpaid fees (e.g. garbage collection, sewage, water provision, etc.). For example, in the US, the public transport sector is experiencing dramatic revenue drops, while also seeing significantly increased costs as a result of COVID-19. According to a study prepared for the American Association of Public Transport, US transit agencies are facing an overall funding shortfall of USD 48.8 billion between Q2 2020 and the end of 2021. Nationally, transit ridership and fare revenues were down in April 2020 by 73% and 86% relative to April 2019, respectively (APTA/EBP, 2020[73]). 76% of municipalities and 63% of regions are forecasting lower revenues from user charges and fees. User charges and fees, resulting from the delivery of local public services, are a more important source of revenues for municipalities than for regions.

The impact on assets-based revenue

Income from physical and financial assets could be also affected. This can include drops in rental revenues, lost dividends from local public companies, less revenues from sales of land, and lower royalty revenues resulting from the downturn (e.g. decreased prices for raw material, and lower production). Subnational governments dependent on revenue from oil producers may also experience a substantial revenue decline (e.g. in Australia, Canada, Mexico, Norway, and Russia) (S&P Global Ratings, 2020[74]). About two thirds of subnational governments are anticipating a decline in revenues from assets.

The impact on subnational government budget balance and debt

A strong decrease in revenues, combined with a continuous increase in expenditure (e.g. in social spending and investment) could result in a scissor effect, leading to subnational government deficits, as was the case in 2007-2008 (OECD, 2020[75]; OECD, 2013[76]). This situation could increase subnational government debt, while a crisis in debt capital markets could affect the current subnational debt stock. For example, in Norway, the coronavirus outbreak has led to turmoil in the capital markets, and some municipalities face difficulty refinancing their loans. The Government of Norway proposed to Norway’s Parliament to grant the Norwegian financial agency for Local Governments *Kommunalbanken* (KBN) an additional NOK 750 million of equity capital “to help the markets to function as well as possible and to prevent municipalities’ refinancing of short-maturity securities from contributing to further stress in the markets”. This capital increase would enable KBN to lend up to an extra NOK 25 billion to the local government sector (KBN, 2020[77]).

Short-term borrowing to bridge delays in revenue and cover a lack of liquidity has already significantly increased in some countries. Many governments have facilitated the access to short-term borrowing and credit lines, including specific COVID-19 credit lines. Long-term borrowing is also expected to significantly increase, in particular as a result of subnational government activity recovery programmes and public investment stimulus plans. In addition, several governments have relaxed regulatory constraints on long-term borrowing and eased access to long-term borrowing, notably on capital markets (e.g. in China).

Some estimates expect subnational borrowing to grow in 2020 and decline a bit in 2021, with annual borrowing increasing 10% on average to reach about USD 2.1 trillion worldwide. A significant increase in subnational debt is expected in Australia, Canada, China, Germany, and Japan because subnational governments, particularly regions and large cities, will likely apply a countercyclical fiscal policy to support local economies, maintain employment, and increase (or at least sustain) investment in infrastructure (S&P Global Ratings, 2020[78]). In China, local government debt issuance could reach a record of nearly CNY 3 trillion for the first five months of 2020, compared to CNY 1.9 trillion in 2019 (SCMP, 2020[79]). The recovery policies will spur annual average regional and local government borrowings by 6%-9% in Germany and Japan and by 20% in Canada in 2020-2021 (S&P Global Ratings, 2020[78]). The increased borrowing will lift global outstanding debt of local and regional governments to a new record high of about USD 14 trillion by the end of 2021. In this framework, a substantial increase in bond issuance is expected, especially in China and developed markets, with the exception of the US. Global issuance could reach USD 1.7 trillion in 2020-2021 (S&P Global Ratings, 2020[78]).

Going forward, subnational government borrowing will depend on the depth and longevity of the crisis, the availability of additional transfers from the central government, and the appetite of subnational governments to pursue a counter-cyclical financial policy. It will also depend on the fiscal capacity of subnational government to access new borrowing. Many regions and municipalities are already weakened by lower fiscal performance and creditworthiness. In some cases, the capacity to borrow is limited by the current level of indebtedness of subnational governments. All other things held equal, the higher the debt of a subnational government, the higher the interest rate that it must pay to service the debt, which can further reduce their room to manoeuvre in critical situations, in particular more difficulty to roll out debt. (OECD, 2020[68])

Asymmetric and time-delayed effects

Asymmetric effects are observed at different scales: between countries, between levels of government within country and between individual entities. Between countries, the effects largely differ to depending on their multi-level governance framework, and particularly the importance of the economic and social role of subnational governments. In countries where the level of decentralisation is high, the impact on subnational government expenditure will be higher, particularly in spending areas most affected by the crisis (i.e. health, social protection, education, utility services, economic development, etc.). This is also true for revenue. This is confirmed by the OECD-CoR survey which shows that subnational governments in medium and highly decentralised countries are more likely to anticipate experiencing higher losses in revenue as a result of the COVID-19 crisis than in more centralised countries (OECD-CoR, 2020[65])

Moreover, extent of the impact also differs according to subnational fiscal health before the crisis. In a number of countries, the fiscal situation of subnational governments was relatively good before the COVID-19 crisis (e.g. the Czech Republic Denmark, and Switzerland). They enjoyed good fiscal health and had sufficient reserves and liquidity to face the crisis. In Switzerland most cantons and municipalities had balanced budgets before the crisis and are robust enough to absorb the higher 2020 deficits (S&P Global Ratings, 2020[60]).

In multi-tiered countries, there are also an asymmetric impact between levels of governments (Box 3). Depending on their spending responsibilities and revenue structure, the regional level may be more affected than the local level, and vice-versa. In countries with three subnational government levels, the intermediate government level may be also affected depending on its responsibilities and resources (e.g. *départements* in France). There may be effects that are delayed over time depending on the level of government. For example, the immediate impact may be stronger for municipalities than for regions, but it may be greater in the medium term for regions than for municipalities. Again, these staggered effects depends on the structure of their expenses and their revenues. For example, in many countries it is estimated municipalities will feel the financial shock mostly in 2020, as the loss of revenue mainly comes from the decrease in tariffs and user charges and/or local taxes, but it may be temporary (tourist tax) or delayed (deferrals). Municipalities could be spared in the future compared to regions, whose revenues depend more on taxes sensitive to economic activity, consumption or personal income. The fiscal shock on many regions could be delayed to 2021, and even 2022.

Finally, the impact may be differentiated at an individual level between regions or between local governments in the same country. There are different reasons for this, such as geographic localisation (e.g. located in an area particularly hit by the health or socio-economic crisis, in urban or more rural areas, in large metropolitan areas or smaller cities, isolated or close to borders of highly affected countries, etc.), its socio-demographic profile (importance of elderly or vulnerable groups, etc.) and its economic activities (tourism, manufacturing, mining, etc.). All these characteristics have implications for the nature of subnational expenditure and revenues, and then on the degree of fiscal exposure to the crisis.

Some market sectors that are currently experiencing the shock will be able to count on carry-over effects for the rest of the year (consumer durables), or a possible rebound over time. In other sectors, for which there is no possible carry-over, the lockdown results in deadweight losses (services and consumer non-durables such as transports, air transport and arts and entertainment (McKinsey & Cie, 2020[80])). Some substitution effects are taking place at the moment (e-commerce, home delivery, online cultural products, etc.) but they will not compensate for non-recoverable losses.

In the end, subnational governments will be more or less vulnerable to the crisis depending on their economic profile, the resilience of their local economies and the resilience of their tax base. For example, touristic regions and municipalities, be they urban or rural, are particularly affected by domestic and international travel restrictions, the closure of hotels, exhibition and congress centres, tourist sites (museums, natural parks, leisure establishments, etc.), restaurants and cafes, festivals and other cultural facilities. Additionally, since the deconfinement, the impact of hygiene and social distancing measures on touristic activities and attendance also have an incidence. Coastal regions and ski resorts in Austria, France, Italy, and Switzerland, as well as urban tourist destinations suffer from travel disruptions, closure of facilities and reduction in tourist attendance (Box 3 below). Port cities are particularly hit by the crisis, not only because of declining cruise activities, but also because of the strong slowdown in port activities as a whole (maritime transport, fishery, shipyards, etc.), despite the fact they kept terminals open to boats and ensured a minimum level of continuous activity. By contrast, regions and cities where non-market activities are significant as well as those depending on food industry have suffered less.

The state of the local government fiscal health prior to the crisis also play a role on the differentiated degree of resilience to the crisis. Some subnational governments may have a low level of indebtedness and important cash reserve. In France, for example, the good financial health of large cities at the end of the 2019 fiscal year allows them to have, in the immediate future, sufficient cash to meet the commitment of exceptional expenses. On the other hand, the coming months could reveal difficulties for some due to the increase in expenses and lower revenue (France-Urbaine and INET-CNFPT, 2020[81]). In the US, the level of preparedness for a recession is mixed, with certain states possibly lacking sufficient reserves to absorb the fiscal stress beyond the immediate short term. Some states are most exposed to pressure derived from exogenous shocks given their comparatively weaker credit metrics, including lower reserve levels, cyclical revenue streams, and elevated fixed costs e.g. pensions, debt service, other postemployment benefits (Standard&Poors, 2020[82]).

Finally, the existence of strong and efficient horizontal or vertical equalisation mechanisms may mitigate the differentiated impact of COVID-19 among subnational governments. For example, according to S&P, individual Swiss cantons and cities may see noticeable differences, depending on their economic structure and the resilience of their tax base to the economic shock. However, the Swiss national fiscal equalisation scheme will have difficulties to level differences within the year, as it is far less extensive than the German or Austrian schemes. The Swiss scheme employs a look-back period of four to six years to calculate relative equalisation entitlements. Meanwhile, Germany's system of interstate revenue equalisation transfers will ultimately spread the revenue shortfalls across all the states (S&P Global Ratings, 2020[60]). Although equalisation systems might help mitigate regional disparities, the effect could be limited and dependent on the equalisation system's distribution formula. In addition, as many equalisation systems are funded either by appropriations from central government revenues or horizontal transfers among subnational governments, both of which may be susceptible to contractions in economic activity, there are some concerns about the sustainability of equalisation systems. According to a survey by OECD Network on Fiscal Relations, 8 out of 17 country respondents anticipate a fall in total equalising transfers, whereas only Canada anticipates an increase to one of its two equalising transfers (i.e. the Territorial Financing Formula). Overall, this suggests that equalisation systems may have a pro-cyclical impact on subnational finance (OECD, 2020[68]).

Box 3. The differentiated impact of COVID-19 among subnational governments

- In **France**, the impact of COVID-19 on municipal revenue will be very uneven. While for 69% of municipalities the loss of operating revenues will be less than 1%, for 5% of municipalities, it will exceed 3%, and even 10% for 58 municipalities. Municipalities located in the Ile-de-France region and in coastal areas will be among the most negatively affected (Partenaires Finances locales, 2020[83]). It is estimated that nearly 4 000 touristic municipalities are classified as "at risk" because of the sensitivity to certain revenues such as tourist tax or from casinos, horse racing and other seasonal activities (Sénat,, 2020[84]). In France, the tourist tax will likely drop by 40% in 2020. Overseas territories are also considered at risk. Subnational governments in (Guadeloupe, Guyane, La Réunion, Martinique, and Mayotte) are particularly affected because their revenues are especially sensitive to economic fluctuations *(* e.g. a local VAT on imports, tourist tax, etc.) and they have high social expenditures (AfD, 2020[85]). Similarly, some *départements* will suffer more than others from rising social spending. Finally, French Metropolitan cities will suffer from the strong decrease of one of their main source of revenues, a contribution paid by companies to finance public transport, called *Versement Mobilité*, which will decline by 20% in 2020.
- In the **UK**, forecasts concerning England's local revenues vary significantly across councils. For example, income loss may account for less than 5% of pre-crisis expenditure for 30% of local councils, while it may decrease by up to 20% of pre-crisis expenditure for 17% of local councils. Most affected councils are shire districts, which are particularly reliant on income from fees and charges on transport and from commercial activities, whose revenue are expected to decrease by 23% of their pre-crisis level. (Institute for Fiscal Studies, 2020[61])
- **In the US**, the impact on states and local governments varies among state and local governments, with several risk and resiliency factors explaining why:
    - Concentrated economic activities, particularly in leisure, tourism, energy, and trade are a risk factor. States most dependent on tourism are likely see credit pressures due to revenue losses, spikes in unemployment, and reduced economic activity, and may face a significant lag during the recovery. For example, Hawaii and Nevada are considered to be the most severely affected states based on tourism's share of their economies (S&P Global Ratings, 2020[86]).
    - The level of budget reserves and liquidity and the possibility to access alternative sources to address short-term cash needs (lines of credit, rainy-day-funds, and other liquidity facilities). For example, a number of US states lack sufficient reserves to absorb the fiscal stress beyond the immediate short term, although most states, following the global recession of 2008, prioritized building up rainy days funds for a potential downturn. Average state reserves grew by 170% to about 13% of budgeted expenditures between 2009 and 2019 (National Association of State Budget Officers, 2019[87]).
    - The importance of volatile sources of revenues in budget also puts immediate pressure on subnational governments. For example, the largest revenue shortfalls are expected for cities more reliant more on transfers from states, and more reliant on local sales and income taxes than on property taxes which are less volatile ((Chernick, Copeland and Reschovsky, 2020[64]).
    - Additional risk factors include pension fund investment performance, the level of debt, increased Medicaid expenditures, remaining unemployment benefits, as well as the level of preparedness for a recession (Council of State Governments, 2020[63]).

Managing the territorial impact of the COVID-19 crisis and recovery

The economic, fiscal and social impact of the COVID-19 crisis on territories is differentiated, and its diverse risks vary greatly depending on location. This regionally differentiated impact calls for a territorial approach to policy responses on the health, economic, social, fiscal fronts, and for very strong inter-governmental coordination.

Many governments at all levels have reacted quickly. A combination of national and subnational measures contribute to an effective response to the COVID-19 public health and economic crisis. Leadership and coordination by national government is critical. Subnational governments – regions and cities – have also launched a wide range of actions to manage the public health and economic impact (OECD, 2020[70]). Effective coordination mechanisms among levels of government are essential. "Strong coordination between all actors in charge of the response at central and regional levels is the basis of an effective response" (WHO, 2020[88]).

On the health front, many countries have adopted territorial approaches, for example on policies surrounding masks or lockdowns. On the economic front, governments have provided massive fiscal support to protect firms, households and vulnerable populations. They have spent more than USD 12 trillion globally since March 2020. Many countries, and the EU, have reallocated public funding to crisis priorities, supporting health care, SMEs, vulnerable populations and regions particularly hit by the crisis. In addition, more two thirds of OECD countries have introduced measures to support subnational finance – on the spending and revenue side – and have relaxed fiscal rules.

While immediate fiscal responses concentrated on protecting workers, unemployed and vulnerable populations, many governments also announced large recovery packages – already much larger than those adopted in 2008 – focusing on public investment. These investment recovery packages prioritise 3 priority areas accelerated by the crisis: (i) strengthening health systems; (ii) digitalisation; (iii) accelerating the transition to a carbon neutral economy

Given the territorial differentiation of COVID-19's impact, it is crucial for recovery strategies to have an explicit territorial dimension. Although this seems to be more visible in some countries, it is still a challenge in many. It is also crucial to actively involve subnational governments in the implementation of these strategies early on, and not only municipalities, but regions as well.

This section focuses on six categories of measures taken by national and subnational governments to offer territorial responses to the crisis and the recovery:

1. Health care responses
2. Economic and social responses
3. Using digital tools
4. Supporting subnational public finance
5. Public investment recovery strategies
6. Inter-governmental coordination

A territorial approach to the health crisis

The importance of a place-based approach in the response to the health crisis has consistently grown for over the past months. In many countries specific measures regarding masks, school and restaurant closures, and full lockdowns are adopted for specific localities or territories, rather than applied nationally in order to limit the economic impact. Testing and tracing are at the heart of all crisis management strategies, as recommended by the WHO. Effective testing strategies, combined with social distancing, are ways to limit the large costs of confinements

Testing and tracing

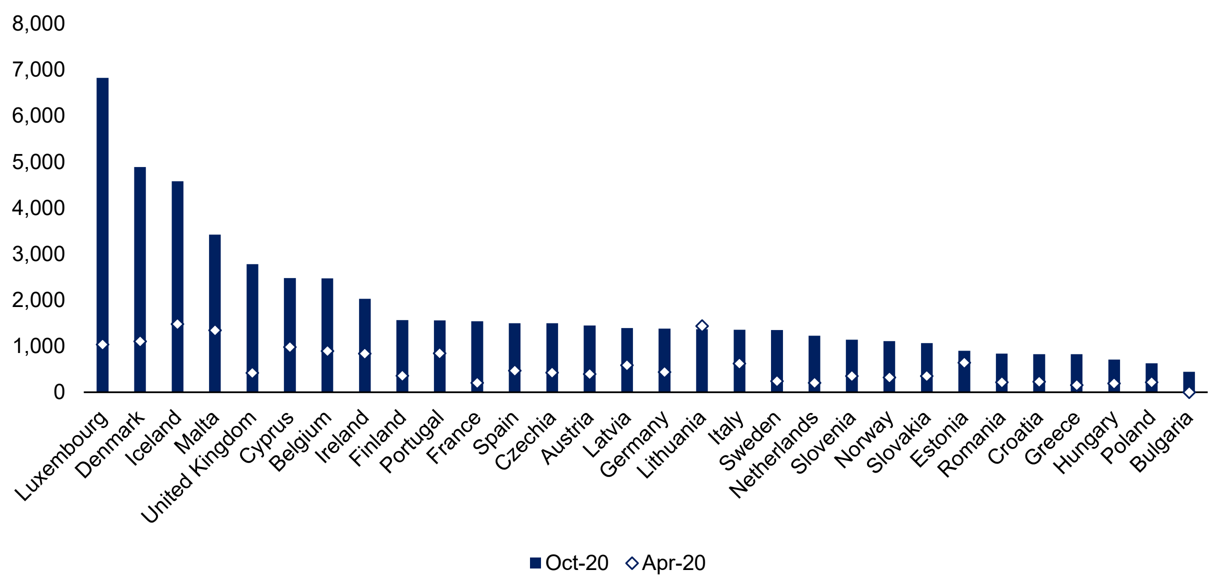
Testing is an essential component of exit strategies from containment. Since the pandemic's early stages, the WHO recommends massive testing to fight the coronavirus (WHO, 2020[89]). Frequent virus testing helps identify and isolate people who are infectious before the symptoms develop and prevent the risk of second waves. To reduce the risk of new waves of COVID-19 outbreaks, the OECD highlighted that 70%-90% of all people who have been in contact with an infected person need to be traced, tested and isolated if infected (OECD, 2020[90]). This requires a massive increase in testing and can be costly. Yet, the challenges and costs associated with doing so pale in comparison to the costs lockdowns. (OECD, 2020[90]).

The WHO recommends massive testing to fight the coronavirus (WHO, 2020[89]) by identifying infectious people and isolating contagious contact-cases before symptoms develop. Testing and contact tracing was at the core of Korea's successful strategy in to manage the first wave of infections and prevent a second one, with local governments responsible for COVID-19 screening stations allowing for quick and safe testing and monitoring of those in self-quarantine. European countries have considerably increased their capacities and generalised testing for suspicious cases between April and October 2020 (Figure 16). In the EU27, official data shows that more than 6 million RT-PCR tests are taken every week in October compared to 1.5 million in April (ECDC, 2020[91]).

Subnational governments play a leading role in implementing the "track, isolate, test and treat" strategy. In more decentralised contexts, while central governments need to ensure financial resources and coordination, the actual policy delivery will be the responsibility of regional and local governments. In countries with more centralised health service delivery, local and regional governments contribute to organising testing and isolation measures. In either context – decentralised or centralised – it is important to leave room for local initiatives and experimentation. Doing so contributes to managing the pandemic's asymmetric impact, which often requires quick local-level reactivity to identify and control clusters.

Figure 16. European countries have increased testing capacity

Average weekly number of tests per 100 000 inhabitants



Note: ECDC publishes weekly RT-PCR testing rate based on several data sources. The main source is case-based data submitted by Member States to TESSy, however, when not available, ECDC compiles data from public online sources.
Source: European Centre for Disease Prevention and Control https://www.ecdc.europa.eu/en/publications-data/covid-19-testing

Regional disparities in testing capacities could put the national testing strategy at risk if people that have potentially been exposed to the virus in some regions are not identified early enough to break the contamination chain. For an effective contact tracing strategy, tests results must be handed over as early as possible, which requires that test kits and reagents are available. Contact cases must be contacted as quickly as possible. The multiplication of cases prompts an increasing share of tests results to be handed over late, making it more difficult to timely trace and isolate potential contagious people.

Social distancing

Social distancing is at the core of crisis management. National health authorities and the WHO set out detailed recommendations to limit contagion. Among these are the need to ensure minimum distances between people. Advice on physical distancing affects public transport, schools, and urban mobility. One of the biggest challenges for local governments has been to organise the return to school under the best possible conditions, respecting social distancing rules amid soaring cases. Also, the use of protective equipment to prevent the transmission of the virus has considerably increased. Many subnational and national governments are recommending the use of masks in public transport, shops, and other commercial or public spaces.

The timing of restriction measures matters at least as much as their duration. During the first outbreak in March 2020, countries that acted early managed to limit COVID-19 fatalities. Large-gathering adjustments (WHO, 2020[92]) and mandatory face mask covering (WHO, 2020[93]) need to be in place where the level of transmissions increase and place additional strain on the healthcare system. This requires accurate data and efficient testing strategies at the local level. To limit the spread of the virus and restore economic activity, the WHO recommends radically increasing testing as a means to better target social distancing.

Local and national lockdowns

Many countries have adopted measures of localised lockdowns, to limit the huge costs of national confinements. This is true in Aberdeen (Scotland), Auckland (New Zealand), Barcelona (Spain), Melbourne (Australia), certain provinces in India, and some German districts, for example. Such a differentiated territorial approach can avoid the huge costs of a national confinement, while providing more targeted responses to the problems where they occur. In federal countries, policies are defined at the state level and thus are differentiated by definition. Effective coordination between local authorities, health agencies and the central government are essential to manage local outbreaks.

Country Examples

- In **China**, on 17 February, the State Council published the guidance that subnational governments should adopt a differentiated territorial approach to organise the recovery plans (except for Hubei Province, the most affected province and Beijing, the capital). The Provincial governments should identify municipalities and counties in high, medium and low risk, and update them continuously, and adopt measures accordingly. In practice, many provinces have categorised their counties (municipalities and districts) into different levels (four or five in many cases), according to the number of confirmed cases, new cases, cluster of cases, and other indicators.
- In **France**, on 11 May 2020, the government announced a progressive exit from a very strict lockdown subject to conditions of decreased coronavirus infections. The deconfinement took differentiated territorial approach, classifying *départements* as green or red regions, depending

on whether the virus was under control. Inter-departmental travel to and from red zones was limited to imperative professional or personal reasons for the first three weeks. A second phase of deconfinement started on 2 June. The Ministry of Health and Santé Publique France introduced a measure of vulnerability to the virus by *départements* to allow *préfectures* to restrict mass gatherings and decide where face masks are mandatory. In September, as the number of cases rapidly rose, the *prefecture* of Bouches-du-Rhone imposed forced closures of restaurants and bars and made wearing a face mask mandatory in the municipalities of Aix-en-Provence and Marseille. Beginning on 17 October 2020, the central government gradually extended restrictions to other areas with local nightly curfews in 54 *départements* deemed at high risk, including the Paris area. On 27 October, only 5 *départements* remained on the moderate risk list while 95 *départements* were on the high risk list. On 28 October, the central government decided to impose a nationwide lockdown on the mainland and Corsica starting on 30 October 2020, for at least 4 weeks. Testing, tracing and isolating remain the main strategy until a vaccine is available.

- In **Germany**, coronavirus testing has increased considerably since the beginning of the crisis, and the country can now carry out half a million tests per week. It will be able to increase testing to 200 000 tests per day. The dense network of laboratories across Germany helped organise the testing relatively quickly and on a large scale. RKI, the federal health agency, revised its testing strategy on 3 November 2020 to focus on the vulnerable population rather than systematically testing all suspect cases. Exit measures are recommended at the Federal level but implemented with a varying schedule in the different *Länder*. In Germany, the first local lockdown was put in place in Berchtesgadener Land in Bavaria in the third week of October. On 28 October 2020, the federal government and *Länder* agreed to introduce new lockdown measures limiting large gatherings to 10 people and ordering the closure of restaurants and bars starting on 2 November 2020, for at least 4 weeks.
- In **Italy**, testing all 3 300 residents of the town of Vò-Euganeo facilitated taking containment measures that eventually stopped all new infections. Vò-Euganeo was one the first centres of Italy's coronavirus outbreak, and the location of Italy's first virus-related death on 22 February 2020. Testing all residents regardless of whether they were exhibiting symptoms resulted in effective quarantining the infected and their contacts once infection was confirmed. This helped the health authorities build a full picture of the pandemic situation and completely stop the spread of the illness in the town. Testing occurred in two rounds. The first round was carried out on the town's entire population in late February, finding 3% of the population infected. Half of the carriers were asymptomatic. All of those infected were isolated. The second round was carried out 10 days later, with results indicating that the infection rate had dropped to 0.3%. Asymptomatic individuals identified in the second round were quarantined. Based on Vò-Euganeo's experience, the Veneto region extended the use of tests (RFI, 2020[94]), and its approach has successfully controlled the pandemic. Its approach included:
    - *Extensive testing*: People with symptoms and people who were asymptomatic were tested whenever possible.
    - *Proactive tracing*: If somebody tested positive, everybody they live with was tested or, if tests unavailable, they were required to self-quarantine.
    - *Emphasis on home diagnosis and care*: Health care providers went to the homes of people suspected of being ill with COVID-10 and collected samples so they could be tested, keeping them from being exposed or exposing others by visiting a hospital or medical office.

- *Monitoring medical personnel and other vulnerable workers*: doctors, nurses, caregivers at nursing homes, and grocery store cashiers and pharmacists were monitored closely for possible infection

- On 8 October 2020, Italy's Lazio region decided to put the province of Latina under special measures, including a 14-day lockdown with restrictions on restaurants and bars, religious ceremonies, a ban on visitors at hospitals and care homes but travelling to or from the province was still allowed. Italy is divided into three zones to manage the outbreak at the regional level. On the basis of the increased pressure on hospital beds, the central government imposed new lockdowns in and travel bans from six regions (Lombardy, Piedmont, Aosta Valley, Calabria, Puglia and Sicily), starting on 6 November 2020.

- In **Japan**, local governments are in charge of implementing the testing strategy through local institutions, and local outpatient and testing centres. These are responsible for testing, deploying medical workers to Outpatient Services for Returnees and Contact Persons, and providing drive-through and walk-through medical care facilities in large tents and prefabricated buildings (Prime Minister of Japan and His Cabinet, 2020[95]; Government of Japan, 2020[96]).
- In **Korea**, specific Subnational Centres for Pandemic Countermeasures were established in local governments to implement containment measures and help coordinate local measures with central authorities. Local governments play a large role in the Korean massive testing strategy for combating the coronavirus, including setting up the roadside testing facilities (Chung and Soh, 2020[97]; Business Insider, 2020[98]). Multiple municipalities, led by Goyang, have set up "drive-thru" COVID-19 testing pods where medical staff in protective clothing take samples from people in automobiles. A localised outbreak in Daegu was dealt with specific control measures and tracing jointly by the Ministry of Health and Welfare and the local government.
- In **Spain**, the deconfinement strategy in June was gradual and asymmetric across Autonomous Communities, and coordinated along with the regional authorities. Areas where the virus was still circulating could remain under local lockdown during the summer: the government of Catalonia placed the county of Segria under lockdown in July. As new cases surged in October, the central government imposed a state of emergency in the Madrid area. Partial regional lockdowns imposed in Catalonia and Navarra were followed by a nationwide curfew.

- In the **UK**, the government is providing a funding package of GBP 300 million for local authorities to develop tailored outbreak control plans, working with local NHS and other stakeholders. Plans will focus on identifying and containing potential outbreaks in places such as workplaces, housing complexes, care homes and schools. As part of this initiative, local authorities will need to ensure testing capacity is effectively deployed to high-risk locations. Data on the virus' spread will be shared with local authorities through the Joint Biosecurity Centre to inform local outbreak planning, so teams understand how the virus is moving, working with national government where necessary to access the testing and tracing capabilities of the new service (UK Government, 2020[99]). In October, more than half of the people in the UK were under local lockdowns. In England, the government set three tiers of local COVID alert levels (medium, high and very high) to ensure that the right measures are taken in the right places to manage outbreaks (UK Government, 2020[100]). In very high alert areas, stringent measures apply and can locally be reinforced with additional measures in consultation with local authorities. Cross-boundary decisions are implemented at local authority level (UK Government, 2020[101]). Liverpool City and Greater Manchester regions were under tier 3 alert in October while London, Essex, Elmbridge and York remained under tier 2. Local authorities pay for COVID-19 marshals in England to enforce social distancing rules although they do not have powers of arrest. From 5 November, tougher national restrictions have been imposed in England with stay at home orders. Devolved governments in Wales and Scotland have applied additional restrictions, including a national lockdown in Wales. (UK Government, 2020[102]).

- In the **US**, as of 28 October 2020, seven state governments started reversing their reopening and another three paused the lifting of restrictions. California classifies counties in four tiers (minimal, moderate, substantial and widespread infectious risk) in order to decide where and how to reopen. It uses county adjusted case rates, positive test rates and an equity index to exempt small counties from the most disadvantageous measures (LA Times, 2020[103]). New York's governor imposed targeted two-week lockdowns for schools and non-essentials businesses in Brooklyn and Queens, New York City's hardest hit neighbourhoods in October (The New York Times, 2020[104]). The Colorado state government introduced a new framework to open the state on a regional basis in September (Colorado Department of Public Health & Environment, 2020[105]).

Pointers for action

- To reduce the risk of new wave of COVID-19 outbreaks, the OECD highlighted that 70%-90% of all people who had contact with an infected person would need to be traced, tested and isolated if infected (OECD, 2020[90]).
- To allow for an effective contact tracing strategy, contact cases must be contacted as quickly as possible and tests results must be handed over as early as possible, which requires that test kits and reagents are available..
- When relevant, introduce flexibility in the rules according to the severity or spread of the virus in a region, for example through localised approaches to lockdowns, .
- Encourage local initiatives and experimentation to better match exit-strategy implementation with local or regional characteristics and populations, thereby managing the differentiated impact of the pandemic.
- Clearly and regularly communicate the exit strategy to citizens, establishing easily understood and explicit guidelines for behaviour, and creating platforms for questions, answers and exchange.

A territorial approach to the economic and social crisis

Support to SMEs and the self-employed at regional and local levels

Across the OECD, small and medium-sized enterprises (SMEs) account for 99% of all businesses and between 50% and 60% of value added. SMEs are particularly vulnerable during the crisis (OECD, 2020[4]). In addition to SMEs, the self-employed represent a considerable share of total employment in a number of OECD countries. Amounting to slightly less than 15% on average, self-employment is particularly prevalent in Greece, Italy, and Turkey where it exceeds 20% (OECD, 2020[4]). The self-employed are often less protected by unemployment benefits compared with standard workers.

The restrictions put in place to tackle the epidemic directly and indirectly affect local businesses and the self-employed. Some businesses, such as restaurants and cafes, close during lockdowns, while other small and medium sized businesses and self-employed can continue operating but with considerably reduced demand. Some have laid-off or even dismiss their personnel. In many countries, local businesses were able to restart in large scale in June 2020, however new lockdowns across Europe, and targeted lockdowns elsewhere, hamper the recovery, particularly in the service sector.

To help avoid running into liquidity bottlenecks and bankruptcies among local business and self-employed workers, most national governments have taken strong actions to support SMEs and micro-businesses, self-employed, artisans, liberal professions, retailers. This is especially the case in highly affected regions, for example those where there is a predominance of SMEs, such as in Northern Italy (OECD Trento Centre for Local development, 2020[106]) or whose economies depend significantly on tourism, culture, leisure and recreation, transport, construction, wholesale and retail trade, accommodation and food services, real estate, professional services, and other personal services (e.g. hairdressing), etc. (OECD, 2020[107])

Many subnational governments also took early action to support their local economies by supporting SMEs, artisans, retailers and self-employed affected by the crisis. Emergency measures taken by regional and local government cover a wide range of areas, from financial support to more indirect support schemes, including:

- Financial support: non-repayable grants, concessional loans at low or zero interest rates, liquidity loans, facilitating access to external financing through guarantees, deferring loan instalments,
- Dedicated measures to support start-ups (which are often the most affected (bridge financing, guarantees, loans, tax measures, liquidity support, direct equity investment, capital risk funds, etc.)
- Fiscal support: deferring tax and fees collection, granting exemptions and tax reliefs
- Administrative support: introducing more flexibility in administrative procedures, relaxing certain restrictions easing regulations and permits required from businesses,
- Public procurement: simplification and acceleration of procedures
- Temporarily lowering rents (deferment or reduction of rent payments for tenants when premises belongs to subnational governments) and advancing payments to service providers
- Technical assistance and support services to local economic actors: free or reduced consultancy services for businesses, promotion of webinars and similar training activities to contribute to business development, collaborative online platforms e.g. to promote "buying local" and regional/local marketplaces, creating labour pools, etc. (EU Committee of the Regions, 2020[108]).

In several countries, support packages for the self-employed has been delegated to subnational governments because they are best informed about local conditions and needs. Since such support is comparable to social welfare for families and individuals, for which subnational governments are responsible in normal times, subnational governments are appropriately organised to carry out these measures (OECD, 2020[109]).

In the EU, based on the OECD-CoR survey, 30% of subnational government respondents indicated that they were providing large direct support to businesses and self-employed (e.g. subsidy schemes, regional funds for capital risks), in addition to coping with the health emergency. Moreover, 28% declared that they largely provided technical assistance and support services to local economic actors, 26% that they have already granted tax incentives and relief to businesses and self-employed (e.g. exemptions, reduced or deferred rent payments for the business premises owned by local governments) and finally 25% indicated that they supported them indirectly, by offering advantageous credit lines, guarantee schemes or repayable advances, for example (OECD-CoR, 2020[65]). In this area, regional governments and large municipalities (OECD, 2020[110]) were more active than smaller ones, reflecting their broad responsibilities in economic affairs, particularly in the most decentralised countries.

Country examples

- In **Austria**, all nine *Bundesländer* set up aid packages for SMEs that complement and expand the measures taken by the federal government. These include non-repayable grants (Burgenland to cover fixed costs and rental costs, Tyrol hardship fund, Vienna, Upper Austria), guarantees and bridge loans to support the liquidity of SMEs (Burgenland, Styria, Vorarlberg, Vienna, Upper Austria), deferrals of states taxes and waives interest (Carinthia, Salzburg), coverage of consultancy costs for SMEs that need support to apply for federal support measures (Carinthia), coverage of infrastructure costs to switch to telework (Styria new "Telearbeit!Offensive" support programme) and digitisation of SMEs (Tyrol). In addition, Upper Austria has developed a start-ups support package consisting of a special consulting service by the regional start-up consulting and support council "tech2b Inkubator" and a deferral of active start-up loans from "tech2b Inkubator" (OECD, 2020[107]).

- In **Belgium**, the Brussels capital, Wallonia and Flanders regional governments adopted several measures such as non-repayable subsidies for companies that have to close during the lockdown, tax deferrals (Brussels, Flanders) and waiver of utility payments (e.g. energy bills) (Wallonia, Flanders), guarantees on bank loans and easier access to credit, prohibition of evictions (Flanders) (OECD, 2020[107]; EU Committee of the Regions, 2020[111]).
- In **Canada**, the federal government established the Regional Relief and Recovery Funds (RRRF). With nearly CAD 1 billion committed the RRRF will help to mitigate the financial pressure experienced by businesses and organisations to allow them to continue their operations, including paying their employees and support recovery business projects. RRRF are channelled to the different localities through the national network of six Regional Development Agencies. Provinces have also developed their own support programmes. For example, the provincial government of British Columbia, as part of its COVID-19 Action Plan, launched income supports, tax relief and funding for people, businesses and services in response to the COVID-19 pandemic. As a next step, it has develop an Economic Recovery Plan, called “StrongerBC” focusing on supporting businesses among other objectives. StrongerBC introduces new supports to help businesses in B.C. reopen, adapt, hire, rehire, and grow. Supports include a new Small and Medium Sized Business Recovery Grant, a 15% Increased Employment Incentive tax credit, a 100% PST rebate to buy select machines and equipment, and fast-track skills training programs. British Columbia has also granted Rebate on Select Machinery and Equipment on the temporary provincial sales tax (PST) program to help corporations recover from the financial impacts of COVID-19 (Government of British Columbia (Canada), 2020[112]).
- In **Finland**, municipalities are responsible for delivering lump sum aid to the self-employed who can apply for support from the municipalities where they are located. The aid is to ensure that the company can continue to operate profitably after the crisis caused by the coronavirus. Additionally, municipalities will be compensated by the central government for the support they pay to the self-employed. Many municipalities also try to help their local SMEs and self-employed by deferring fee collection, easing regulations and permits required from businesses, temporarily lowering rents and advancing payments to service providers. For example, the City of Helsinki decided to suspend the rents of commercial and other business premises leased from the City up to three months.
- In **France**, joint action was taken between national and regional governments to manage the crisis as part of the new Economic Council *Etats-Régions* established in December 2019. This included regional task forces that incorporate development banks (BPI) in order to accelerate support measures for businesses. In addition, regional governments unlocked EUR 250 million (in addition to EUR 750 million allocated by the State) to participate in the National Solidarity Fund for artisans, retailers and small businesses. This National Fund has two components: i) monthly aid to very small enterprises, self-employed people, micro-entrepreneurs and liberal professions experiencing turnover losses of more than 50%; ii) a one-time additional payment for the most fragile small businesses. Almost all French regions have developed support programmes for SMES and the self-employed (BPI France, 2020[113]). Several regions have additional regional funds that complement the National Solidarity Fund set up by the French government and the regions. For example, The region Pays de la Loire created a Territorial Resilience Fund (*Fonds Territorial Résilience*). The Region Grand Est has set up Platform called “To be Stronger Grand Est” (*Plus Forts Grand Est*) to facilitate the connection between around 50 innovative companies and communities, companies, associations, healthcare establishments etc.

in the regional to identify innovative products and service that could help overcome the crisis and rebound (regional governments websites and (BPI France, 2020[113])

- **In Germany**, almost all Länder implemented support programmes targeting micro-enterprises, SMEs and the self-employed. Some of these, such as the "Corona Emergency Aid Programme", are topping up the federal emergency aid programme. Among the main instruments are direct non-repayable grants (Hesse Thuringia, Schleswig-Holstein, Brandenburg, North Rhine-Westphalia, Hamburg, Bavaria), loans (Rhineland-Palatinate, Saxony, Schleswig-Holstein), liquidity loans or grants (Baden-Württemberg, Bremen, Mecklenburg-Western Pomerania), guarantees (Baden-Württemberg) or a mix of all these (e.g. Saxony-Anhalt Lower Saxony (Deloitte, 2020[114]). Baden-Wûrttember also supports start-ups affected by the COVID-19 crisis though development loans and its Start-up BW Pro-Tect". This programme, an expansion of the "Start-up BW Pre-Seed" early -stage funding, helps bridge short-term liquidity bottlenecks until the next financing round (Baden-Württemberg State Government (Germany), 2020[115]).
- **In Greece,** the Thessaly regional government provides a support package of EUR 160 million (through the Thessaly NSRF 2014-2020) to support local companies manage the impact of the COVID-19 crisis. This package includes EUR 80 million through the programme "Reinvest and Invest in Thessaly", EUR 50 million for employees of closed companies, and EUR 30 million as a non-repayable subsidy to strengthen the working capital of small businesses affected by the coronavirus pandemic (ΑΠΕ-ΜΠΕ, 2020[116]).
- In **Italy,** simplification measures were introduced by 14 regions to streamline administrative and regulatory procedures for SMEs. These include deferring the application deadlines for public funding programmes and for reporting on investment plans subject to public incentives, and simplifying public procurement (OECD Trento Centre for Local development, 2020[106]). Many regional governments also established and strengthened complementary regional sections to the National Guarantee Fund for SMEs established by the central government. Many regions have adopted specific measures to support their SMEs, which be divided into six policy macro-areas: facilitating access to bank credit and reducing related cost; public financing; simplified procedures; labour and welfare; tax relief and planning and budgeting (OECD Trento Centre for Local development, 2020[106]). Among examples are Liguria which adopted specific measures to support tourism, trade and craft SMEs; Sicily with the "Sicily Fund" to increase SMEs liquidity, bank guarantees, bank moratoria and late payment schemes; Piedmont (e.g. Finpiemonte single fund and "Bonus Piemonte); Friuli-Venezia Giulia (subsidised loans, suspended payments on revolving funds, non-refundable grants for the tourism, commercial and craft sector, development of smart (tele)working plans); and Campania with its "Plan for the Socio-economic Emergency" focusing largely on micro-enterprises, SMEs and self-employed, etc. (OECD Trento Centre for Local development, 2020[106]; EU Committee of the Regions, 2020[111])
- In **Mexico**, 26 of the country's 32 federative entities designed fiscal measures to support companies and vulnerable populations face the economic impact of COVID-19 mitigation measures. Mexico City launched the "Integral Program of Contingent Support and Economic Reactivation to Address the COVID-19 pandemic in Mexico City". It consists of an increase of MXN 500 million in the Social Development Fund that will serve to grant 50 000 credits of MXN 10 000 each to micro companies.
- In the **Netherlands**, as part of the third economic support package announced on 28 August 2020, it is planned for municipalities to offer new services to independent entrepreneurs, such as additional training and reorientation starting in January 2021. This is part of the Programme "Temporary Bridging Scheme for Independent Entrepreneurs" (Tozo) (Dutch Government, 2020[117]).
- In **Sweden**, support for SMEs and the self-employed (e.g. cash aid, loans and guarantees, and deferred tax payments) is the responsibility of central government agencies and ministries (Government of Sweden, 2020[118]). Meanwhile, regions and municipalities focus on giving "indirect" support to SMEs in their areas, such as providing expert support for restructuring the day-to-day business or preparing new business models (Region of Skane, 2020[119]). Municipalities have also

deferred SME payments of fees and invoices for municipal services, introduced free parking, eased permissions and regulations, and advanced payments to their suppliers.

- **In Spain**, regions actively support local economies and develop comprehensive responses to support SMEs and self-employed, complementing measures adopted by the Government of Spain, contained in Royal Decree-Law 8/2020. The Principality of Asturias for example provides a non-repayable aid to freelancers, grant a tax deferral for self-employed entrepreneurs, SMEs and micro-SMEs and a new credit line fully guaranteed by Asturgar to improve business liquidity to SMEs. The regional government of Madrid has passed a financial support plan of EUR 220 million for SMEs and self-employed, to help them cope with the economic impact of the crisis (economic aid and financing schemes). The Basque Country launched a set of measures including an extraordinary fund for SMEs and the self-employed, an emergency credit line at zero cost through the Basque Institute of Finance (IVF), a line of working capital guaranteed by the region at zero cost, refinancing and adaptation of the conditions on repayable advances, technical advice on the implementation of teleworking to freelancers and SMEs (EU Committee of the Regions, 2020[111]).
- In **Switzerland,** to secure bank loans to qualified start-ups, the cantons pay 35% of the guarantee to complement the federal guarantee (65%) (OECD, 2020[4]). (OECD, 2020[107]).
- In the **UK**, in addition to the support provided by the UK government in England, devolved administrations have received support to counter the effects of the outbreak, in particular help them support their regional economy. Wales set up an Economic Resilience Fund (ERD) whose third phase also includes a Lockdown Business Fund which will be delivered by local authorities to eligible small businesses. Impacted by the crisis (Welsh Government, 2020[120]). The Scottish government launched a helpline for small business to cope with the outbreak and set up a rescue package for business, which includes business rates relief for retail, hospitality and leisure sectors, grants to small businesses in sectors facing the worst economic impact of Covid-19, a Newly Self-employed Hardship Fund, a Pivotal Enterprise Resilience Fund (PERF), to support vulnerable SMEs which the government deems as vital to Scotland's economic future, or to the economies of local areas throughout the country (OECD, 2020[107]).
- In the **US,** in addition to the support measures included in the Coronavirus Aid, Relief, and Economic Security (CARES) package, many States and local governments have established their ow programmes for small businesses, including New Mexico, Ohio, Maine, Massachusetts, Michigan, New York, Oregon, Wisconsin and Florida. Several cities adopted measures to halt or defer financial burdens placed on small businesses such as paying utilities, taxes, or licensing fees by waiving for example financial penalties for late tax payment or deferring payment (Seattle, New Orleans, San Francisco). Other support measures are the creation a local relief fund with a blend of financing options such as Jersey City (redeployment of State Community Development Block Grant (CDBG) funds to small businesses), City of Philadelphia (Small Business Relief Fund to provide grants and zero-interest loans to impacted businesses), San Francisco zero-interest loan fund and city Resiliency Fund), Chicago (Small Business Resiliency Fund) or else Denver (Small Business Emergency Relief). Some cities also have created a central, online repository for resources and information for SMEs, providing enhanced consultancy support to businesses app or granted zero-interest emergency loans repayable (New York City, Los Angeles). (US National League if Cities, 2020[121]; OECD, 2020[107])

Pointers for action

- National governments are well positioned to ensure "equal treatment of equals", i.e. ensuring that similar SMEs in different parts of the country are treated in the same way, while regional and local are best informed of local circumstances and well-positioned to support their local businesses.

Given the role of subnational governments in supporting SMEs, it is vital that national and subnational governments coordinate the policy responses to avoid duplication and loss of transparency in public measures.

- Consider direct financial and fiscal support for local entrepreneurs and workers in the short-term, and turn to other forms of economic support in the medium- and long-terms, such as favourable pricing of land and buildings, eased loan and guarantee arrangements, easing permits and regulations, and equity financing.
- Consider developing further structural policies to help SMEs adopt new working methods, including teleworking, digital technologies and green practices to strengthen their resilience and that of the region.
- Adapt public procurement systems to provide adequate responses in the case of emergency and force majeure and support SME development.

Territorial approaches to support vulnerable populations

Vulnerable populations are doubly affected by the crisis. First, because they are often more at risk with from a health standpoint. Second, because they are particularly hard hit by the economic crisis. Subnational governments have undertaken proactive initiatives to manage the emergency and support vulnerable groups, including elderly people, people with chronic or long-term illnesses, disabled, poor households, homeless, underprivileged children and students, migrants, and other vulnerable populations, etc. Households without health insurance are also particularly vulnerable as they may be unable to access medical treatment, and may not be included in the case count. Indigenous communities are also particular fragile. Given the conditions in which these communities live, the threat of COVID-19 is aggravated due to factors ranging from poor health conditions and overcrowding, to the lack of access to adequate sanitation facilities. Indigenous populations are often also the most vulnerable in terms of economic consequences (Lustig and Tommasi, 2020[122]).

Social protection is a key responsibility of subnational governments (see section 1). In particular, municipalities, which are closer to the population, play a crucial role in social protection of the most fragile groups, which are physically and economically more exposed to the pandemic (OECD, 2020[110]).

Support measures to vulnerable groups are very diverse and include food/nutrition programmes for children and the elderly, meal and pharmaceuticals delivery, special care for the elderly and disabled people, emergency shelters and housing, vouchers to purchase essential goods, installation of sanitary facilities, exemptions or deferrals from rental payments for residents of social housing, mortgage payment assistance, waiver or relief of utility payments e.g. energy or water bill, emergency phone lines, engaging unemployed people in socially useful work, direct subsidies to pay for social services (e.g. early childhood services for children), prohibition of housing eviction, distribution of masks, etc. Subnational government expenditures related to social services and social benefits in EU regions and municipalities is anticipated to be the number one expenditure most impacted by the crisis (OECD-CoR, 2020[65]).

In some countries, local governments have worked with national government authorities, as well as with NGOs and community volunteers to meet the social challenges. In several countries, subnational governments also provide financial support to ensure the proper functioning of services provided by social economy organisations (EU Committee of the Regions, 2020[108]). These organisations have also been highly affected by the crisis, and they play a crucial role in in addressing and mitigating the impact of the COVID-19 crisis on vulnerable populations ((OECD, 2020[123]).

Country Examples

- **In Australia,** State and Territory governments announced fiscal stimulus packages amounting to AUD 11.5 billion (0.6 percent of GDP), which include cash payments to vulnerable households (IMF, 2020[124]).
- **In Canada,** while the federal government doubled the Reaching Home Program that provides funding for the homeless, provinces and municipalities are also establishing emergency funding through family and community support services. Indigenous Services Canada (ISC) is working closely with the Public Health Agency of Canada, other departments, and provincial and territorial counterparts to protect the health and safety of First Nations and Inuit communities to support them in responding to public health threats, including the novel coronavirus.
- **In France,** subnational governments, particularly the *départements* and municipalities, are monitoring and addressing the specific needs of vulnerable populations, including migrants. The *départements* have actively supported the most vulnerable since the beginning of the crisis to ensure the continuity of social services and protect and support the most vulnerable in the face of the health emergency. They support purchasing masks, reinforcing human and financial resources in retirement homes creating of emergency centres for youth and children in difficulty, setting up dedicated telephone numbers, etc. (Assemblée des Départements de France, 2020[125]). French cities are also major social actors, in particular through their municipal centres for social action (CCAS). For example, Rennes is implementing an emergency plan for the most disadvantaged, Nantes is strengthening aid to local NGOs that support vulnerable groups, and Toulouse, together with the national government, developed an emergency plan for homeless (France Urbaine, 2020[126]).
- **In Greece,** the Ministry of Interior Initiative, in cooperation with the Central Union of Municipalities of Greece and with the support of the Ministry of Digital Governance, launched #CitySolidarityGR to help vulnerable citizens access supplies and services offered by organisations that expressed interest in contributing to the effort. Also in Greece, under the current emergency measures, local authorities must create a record of citizens requiring assistance, including the indigent. Vulnerable households will be assigned care workers who will ensure that such households receive necessary medicines and household supplies, as well as ensuring access to basic sanitation and health services.
- **In Iceland,** the central government and local authorities established a contingency fund to provide scope for the necessary actions in social services and specific services for vulnerable groups to address the effects of COVID-19 (SAMBAD, 2020[127]).
- **In Ireland,** on 2 April 2020 the government launched The Community Call to link local and national government with the community and voluntary sectors. The Community Call is overseen and managed by Local Authorities, led by the county Chief Executives. The forum involves an extensive list of state and voluntary organisations, and initially focuses on the elderly and vulnerable groups (Government of Ireland, 2020[128]). Several Councils (e.g. Offaly and Cork) established a centralised community support programme with a single phone number and email address to coordinate the work of statutory and voluntary agencies that help people in vulnerable situations,.
- **In Italy**, the Government passed a EUR 25 billion package of economic measures to help Italian businesses and families, in March 2020. It includes an envelope of EUR 4.3 billion for municipalities allocated through the Municipal Solidarity Fund in the form of an instalment of the ordinary annual transfers to the municipalities. EUR 400 million were allocated to the 8 000 municipalities for food emergency to provide food/shopping vouchers for people in need.
- In **Korea**, the government plans to consider medical service accessibility a critical element in the National Minimum Standards for Living Infrastructure, scheduled to be introduced in 2020, so that medical services will not be neglected in lagging regions. These Standards, part of a central and regional governments support for vulnerable groups, are designed to ensure that all people across the nation have easy access to infrastructure that is essential to their daily lives.

- **In Portugal,** Lisbon provided financial support to various organisations that offer social support services to vulnerable groups (e.g. homeless, persons with disabilities, families with lower incomes, children, etc.), enabling them to ensure the continuity of their services throughout this crisis. The city increased the Social Emergency Fund for families, and created a network of volunteers to support the to performs various tasks that could support most vulnerable sectors of the population (i.e. senior citizens, persons with disabilities, patients under quarantine, etc.), including shopping for food and medication, pet care and maintaining social contact (e.g. as a way of preventing or detecting cases of domestic violence) (PES Group of the CoR, 2020[129]).
- In **Slovenia**, municipalities are encouraged to cooperate with a network of professional and voluntary social service providers within their jurisdiction to provide services to vulnerable groups.
- **In Spain,** local governments can allocate up to EUR 300 million from the 2019 budget surplus to finance expenses corresponding to social services, such as proximity home services, home telecare, homeless people assistance, purchase of individual protection equipment (masks etc.), or to guarantee income for families.
- **In the US,** the CARES Act included USD 4 billion for Emergency Solutions Grants to help local governments and homeless providers to take action to reduce the risk of spread of COVID-19 in the homeless community and those at risk of homelessness, as well as to respond quickly where the problem presents itself most severely. An additional USD 65 million was dedicated to the Housing Opportunities for Persons With AIDS program that provides support for a particularly vulnerable population; USD 5 billion in supplemental funds for the Community Development Block Grant (CDBG) was allocated to fill the gaps not covered by other sources, with a particular focus on serving low- and moderate- income households and an additional USD 200 million allocated to Indian Housing Block Grant (IHBG) for tribes and USD 100 million for Indian CDBG (ICDBG) imminent threat funding that can be targeted to tribes with the greatest need.

Pointers for action

- Consider providing additional grants to subnational governments to finance expenses corresponding to increased social service needs. In particular, establish temporary formula-based grants to compensate subnational government support given to vulnerable groups during the COVID-19 crisis. If necessary, such grants could be complemented with discretionary grants and other financial measures aimed at reducing financial burden of the most vulnerable populations.
- Clearly and regularly communicate the support available to vulnerable populations and how to access it, and simplify its allocation.
- Provide financial support to social economy or civil society organisations that help vulnerable populations and mobilise networks of volunteers.
- Ease administrative burden on services that ensure the continuity of core local services and are most effective in helping vulnerable groups (e.g. normative and fiscal regulations that hamper services for vulnerable groups). Ensure that measures are simple and speed up administrative processes during crisis and recovery.
- Develop programmes targeted at indigenous communities.
- Facilitate horizontal cooperation among municipalities to address the growth in vulnerable populations, and their shifting profiles.

Upscaling the use of digital tools in regions and cities

The COVID-19 crisis has accelerated several mega-trends and transformations, such as digitalisation. Digital government policy response to COVID-19 crisis spans different time horizons: react in the short term, resolve in the medium term and reinvent in the long term (UN, 2020[130]). Information-sharing, e-participation and two-way communication through the use of digital platforms permitted accurate reactions to the crisis in the short term. Public services, such as education and health care, shifted to a digital mode within in a few weeks' time. Meanwhile, remote working is proving effective to reinforce social distancing and mitigate the economic impact of the crisis. COVID-19 has accelerated the digitalisation of public administration and public services delivery in regions, cities, and rural areas. In the medium term, subnational governments should leverage this experience to upgrade government digital services and enhance digital partnerships with other levels of government and the private sector. Nevertheless, unprepared and incomplete digitalisation poses significant challenges for regional and local governments, and the capacity to deal these varies significantly. The current crisis may widen these disparities, as many subnational governments were not necessarily prepared to go digital. In more remote and rural regions, digitalisation is likely to be particularly challenging if adequate IT infrastructure is lacking. In the long-term, greater convergence in the access to digital infrastructure would help address the urban-rural divide and increase the resilience of healthcare and public service delivery (UN, 2020[130]).

Subnational governments and the use of digital tools to track the pandemic

Regional and local governments are increasingly mobilising digital tools to track and stop the spread of the coronavirus. Expanded use of digital tools for tracking and information purposes in the pandemic has served to: *(i)* inform decision-makers, helping them adopt appropriate measures and contain the pandemic; *(ii)* to communicate with citizens transparently, strengthening trust, which is key to ensure compliance with containment measures.

Digital tools have been crucial for regions and cities to better manage their immediate response to the crisis. Some new applications helped reduce the spread of COVID-19, and supported the gradual lifting of confinement measures by informing citizens if they were in proximity of people infected by the virus, and if so, encouraging them to inform health authorities, isolate and request support. Data tracking, as well as accurate and timely reporting, are essential components of crisis management, and can help prevent – or at least minimise – additional waves. Strong network effect may be at play as digital tools efficiency is increasing with the number of users.

The use of these tools has also raised challenging questions regarding data protection and confidentiality. While acknowledging the benefits that tracking apps may bring to crisis management, they also affect the privacy of information. While in many countries the legal framework does not permit this type of data use, in others the use has been easier to implement. In order to minimise the risks regarding privacy and data protection, the European Commission, for example, has developed guidelines and a toolbox for developing COVID-19 related apps aiming to guarantee sufficient personal data protection.[6]

Making use of digital tools for data monitoring and reporting is also proving essential to keep citizens well informed and improve the interaction between citizens and governments. Many jurisdictions have developed specific web sites to disseminate information on the crisis' development, communicating daily, for example, the number of cases and new measures adopted. Even when there is no dedicated website, most cities and regions around the world provide information about the pandemic situation on their own website, and provide links to their Ministry of Health's website, their country's national COVID-19 platform, or to the WHO website. The realisation of the potential benefits of digitalisation in this matter depends

[6] On 13 May 2020, EU Members States, with the support of the European Commission, adopted interoperability guidelines for approved contact tracing mobile applications in the EU.

crucially on the relevance, quality and user-friendliness of the information being generated by the digital systems and made available to the public. To ensure a good and efficient use, it is important to involve key stakeholders (CSOs and other groupings of users of public services) early in the process of designing these systems.

Accelerated digitalisation of services at the local level and digital divides across places

Confinement measures have accelerated the digitalisation of services, broadening the range of services provided on-line, including online administrative services, e-education and e-health. Trends towards the digitalisation of services were increasing even before the COVID-19 crisis. Across OECD countries, access to government services through digital portals has tripled since 2006 (de Mello and Ter-Minassian, 2020[131]). Prior to the crisis, the results of a survey on the use of digital information systems by local governments suggested that, on average, the degree of digitalisation was larger for local services in spatial planning, construction, tourism and culture and sports, and smaller for social services.

- **Digitalisation of education**: with more than 1.5 billion children outside of school during the confinement in spring 2020 (over 60% of the world's student population) according to UNESCO, the COVID-19 crisis led to a massive shift towards e-education and online courses since March 2020 (UNESCO, 2020[132]). In a number of countries, local governments have broad responsibilities for delivering education policy. This puts them in the lead with respect to the digitalisation process, including in the current crisis context. Before the crisis hit, some regions and cities were spearheading the digital transition of education, particularly in Europe's northern and western cities. Northern European regions, for example, provide a very wide range of digital services with online applications for admission, online monitoring of progress, and online learning materials (de Mello and Ter-Minassian, 2020[131]). With schools being closed, cities have been increasingly promoting the use of digital tools to continue classes. The challenge for local governments is twofold, as on the one hand they need to ensure online classes, and on the other they need to ensure equal access for all – a striking challenge especially in more disadvantages areas. Some cities (e.g. Fuenlabrada, Gdansk the Hague, and Madrid) are working to ensure equal opportunities for all pupils by providing low-income families with digital devices for their children to follow online school courses from home.
- **e-Health services:** in a context in which social distancing is a critical containment and prevention factor, e-health services offer important benefits, and their use has increased significantly since March 2020. This is especially true of e-prescriptions and telemedicine. In the US, some preliminary research shows that as the number of COVID-19 cases increases, so does the population's interest in telehealth. Local and regional governments can encourage such developments, especially in countries where health care is more decentralised. While e-health may be also a way to deal with territorial inequalities in access to health, support from the central level is crucial to ensure that the distribution of e-health is balanced throughout the territory by supporting the development of institutional and technical capacities. Some barriers to wider use, like access to broadband, will be difficult to tackle in the short term, highlighting the need to strengthen health care provision in rural and low-resource settings (OECD, 2020[133]).

Digital divides across regions and across urban-rural areas

The pandemic has also helped reveal the digital divides within countries and has, in some cases, accelerated digital inclusion responses. In OECD countries, access to, and use of, the internet varies significantly within countries. Regional differences in the percentage of households with broadband access are strongly pronounced both in countries with a high ICT penetration, such as France, Israel, the United States and New Zealand, and countries with low average ICT access such as Mexico or Turkey (OECD, 2018[134]). In the US, for example, nearly 25% of 15 years old with disadvantaged backgrounds have no access to a computer. In the poorest regions of Italy, 42% of families have no access to a computer/tablet at home and 20% of 6-7 year-old children are in that same situation. In addition, substantial gap remains in access to high quality internet among urban and rural households. Across OECD countries, 85% of urban households vs 56% of rural households have access to high quality Internet (OECD, 2020[135]). This inequality gap risks being accentuated as some municipalities do not have the capacities to follow the digital transition in the short and medium term. To reduce this risk, local initiatives need to be accompanied by nation-wide initiatives to tackle the digital divide (de Mello and Ter-Minassian, 2020[131]).

e-Democracy at the local level

While there was a growing tendency among governments to adopt e-democracy tools (e-government, e-governance, e-deliberation, e-participation and e-voting), the pandemic has accelerated it. Regional and local governments, which were often reluctant to adopt such measures, have been forced by the circumstance to overcome this in order to ensure the continuity of their work. Proof of this is that many regional and local councils, for example, have moved to permit on-line debating and voting (de Mello and Ter-Minassian, 2020[131]).

Country examples

Use of digital tools to track the pandemic

- In **France**, the Ministry of Health is leading the *Programme Répertoire opérationnel des ressources* (ROR) to develop an automatic-updated data repository for health resources (such as the availability of beds in each hospital). The ROR is managed in a decentralised manner, so each region has an ROR solution, but these solutions are interoperable so that the exchange across regions is ensured. During the COVID-19 pandemic, this programme is further tailored to identify and map out care units dedicated to coronavirus cases and normal health care resources to ensure a normal provision of health care (Ministry of Health, 2020[136])
- In **Italy,** several regions developed different digital solutions for tracking and containing infection based on the analysis of movements and gatherings generated by anonymous data. For example, Lazio activated a portal for reporting gatherings called “Unique Alert System”. The Lazio Region also launched Lazio DrCovid, an app that provides secure bidirectional text-audio communications via smartphone between the citizen and their doctor. In some cases, it is also accompanied by diagnostic kits for home monitoring. Liguria, Lombardy, Sardinia and Umbria have started analysing phone records and interactions. Citizen health status is monitored in regions like Lombardy, which created the “LOM Alert” app. Piedmont has designed "COVID-19 Piedmont Region Platform" for the Regional Crisis Management Unit to track and monitor all the activities concerning patients with COVID-19. Puglia and Tuscany also have regional web platforms that support assistance, care and monitoring of patients from a distance.
- **Korea** has developed and operated the COVID-19 Smart Management System to support epidemiological investigation. This system is based on the country’s smart city data hub technologies for collecting and processing a large volume of urban data. Korea has implemented this system for a wide range of statistics analysis to backtrack the movements of infected persons, identify transmission routes, or locate an infection source in a large-scale outbreak. The location data of the infected persons before they were diagnosed is collected from mobile base stations, credit card transactions, etc. within the permitted range under the Infectious Disease Control and Prevention Act. With full consideration of privacy, information deemed necessary is provided anonymously to the public so that people themselves can check whether they have crossed paths with the infected persons, and get tested if necessary.

- In **Mexico,** the majority of the federal entities have activated contingent phone numbers to assist and inform permanently about COVID-19. In Chihuahua, Nuevo León and Querétaro, apps were developed to inform, register and guide people with symptoms or people already infected. In the case of Mexico City, the system "SMS COVID-19" was activated, in which the people with symptoms answer some questions that allow the identification of possible cases (acute or severe) of coronavirus.
- In **Norway,** the government launched a mobile application called Smittestop, to help health authorities limit the transmission of the coronavirus. Using the data provided by the application, the Norwegian Institute of Public Health can analyse movement patterns in society and develop effective infection control measures.

Informing and engaging citizens

- In **Estonia,** Järva Vald is using their community engagement app to info citizens on national and local level actions and guidelines to prevent and stop the spreading of the coronavirus. The engagement app publishes targeted question cards, feedback, calendar events, social media content and notifications. City officials can also detect how many users have seen the shared info and when (Open Government Parnership, 2020[137]).
- In **Korea**, an interactive and up-to-date webpage was created, mapping out COVID 19-cases within the country, as well as the places that patients reported having visited. Authorities identified high-priority cases and back-tracked the routes of infected persons thanks to artificial intelligence and data driven measures via location data collected from mobile base stations, credit card transactions and data-mining of CCTV footage, then published extremely detailed lists of their whereabouts. Massive testing has also been the major strategy for combating the coronavirus (Government of Korea, 2020[138]).
- **Norway** has developed digital solution to making the relevant data available to inform policy at both national and regional levels on COVID-19. The Norwegian National Institute of Public Health (NIPH) collaborated with The Norwegian Association of Local and Regional Authorities (KS) to generalize the use of the District Health Information Software 2 (DHIS2). This mobile phone application permits offline data capture, making it possible to generate analyses from data on health in real time (Skjesol and Tritter, 2020[139]).

Moving towards e-governance and digital services

- In **Canada**, the province of Ontario developed its own website where businesses can directly indicate their ability to furnish emergency products (e.g. ventilators, masks, etc.), submit innovative solutions to fight COVID-19 by supporting virtual mental health services, provide financial advice for small businesses, or submit a proposal for ideas, other products or services that could help Ontarians. Canada has also introduced legislation that permits municipalities to fully conduct Council, local board and committee meetings electronically in local and province-wide emergency situations, empowering the municipalities to respond quickly when in-person meetings cannot be held.
- In **Germany**, the city of Bamberg established an online platform with exercises and working materials for students. These serve a dual function, as they also relate to Bamberg's cultural heritage. Dusseldorf is also turning to the internet and telephone for education support, as well as having developed a hotline for the elderly and other high risk populations to get help and advice ((Eurocities, 2020[140]).
- In **Italy**, Bologna's Institution for Education and Schools (IES) has been offering online educational resources to families with children aged 0-6, to help and keep them entertained, educated and exercised without leaving the house. The municipality of Palermo, through its innovation office has created a "digital toolbox" that provides the tools, procedures and information necessary to work

online. It includes essential information for municipal staff to work remotely at home. Some of the information included in the toolbox includes instructions for the management applications to work remotely at home, tutorials for using digital signature, to manage video meetings, to draft and share documents with colleagues on Google Drive, among others (Eurocities, 2020[141]).

- In **Netherlands**, the law on digital decision making within municipality council meetings allows municipal councils to take legally binding decisions through a digital meeting.
- In **Spain**, legislative adjustments were made to permit representative and governing bodies of local entities to hold remote sessions by electronic or telematic means.

Addressing digitalisation challenges: bridging the digital divide

- In **Iceland**, the central government is taking measures to strengthen digital services and coverage within local authorities in the framework of the Second Phase of Economic Response Package to the COVID-19 Crisis. Vulnerable areas across the country are currently being identified and mapped (Government of Iceland, 2020[142]).
- In **Italy,** the city of Milan has used dashboards to understand where citizens were located on the city map and how they could connect them to private sector offering services. Based in this data, and in partnership with a telecommunications company, the city was able to provide free internet access to vulnerable families connected to the internet (UCLG, 2020[143]). On 4 August, the European Commission approved a EUR200 million voucher scheme to help low-income households' access high-speed broadband services and cover the provision of the necessary equipment. It aims to narrow the digital divide by supporting teleworking activities and granting increased access to educational services.
- In **Spain**, in September 2020, nine Spanish regions benefited from a EUR 1.2 billion reallocation from the European Regional Development Fund to strengthen their healthcare system capacity, support SMEs, and develop ICTs in education in response to COVID-19.
- In **Portugal**, in October 2020, the European Commission approved the reallocation of EUR 1 billion from EU Cohesion policy funds to support seven Portuguese regions, in response to COVID-19. Funds will support the digitalisation of schools, SMEs, and the tourism sector.
- In the **US**, several States have adopted measures to bridge the digital divide. The NYC Education Department is making 300 000 internet-enabled iPads available to the highest-need students via an online survey or hotline; the City of Los Angeles is partnering with the California Emerging Technology Fund and EveryoneOn to provide options for low-cost internet, access to computers, and digital literacy services to its residents through its Get Connected program, as well as device and digital training resources; The City of Louisville has created a free internet for students page outlining free internet offers to families with students by ISPs operating in the area. The City of San Antonio (Texas) has announced a plan to invest over USD 27 million to address the digital divide in the city (NDIA, 2020[144]).

Pointers for action

- Collect and share information and data among all levels of government in a timely, transparent, and regular fashion.
- Support data and information dissemination across jurisdictions to help manage the inter-jurisdiction disparities and uncertainties generated by a crisis, and to promote knowledge-sharing and good practice exchange.

- Strengthen the quality of micro-level data within and between regions to improve understanding of the crisis and its impact.
- Take advantage of the insights that digital tools and big data offer to track and stop the spread of the coronavirus, but give equal consideration to matters of data privacy and data protection.
- Use digital opportunities (e.g. e-health, e-education) to help ensure continued service delivery, being sensitive to territorial, economic, and social disparities in access. Encourage good practice exchange in this area among local authorities, and frequent users (e.g. medical professionals, teachers, students, etc.).
- Introduce measures to overcome the digital divide in crisis recovery strategies plans and investment plan and strengthen the support from the central level for the digitalisation processes especially for SMEs, poorer urban, and remote, rural communities.
- Create incentives for subnational government cooperation to build digitalisation opportunities across jurisdictions, for example through financing possibilities.
- Encourage the development of pilot projects on digitalisation at the local level to test, experiment and encourage innovation by local governments.

Supporting subnational finance

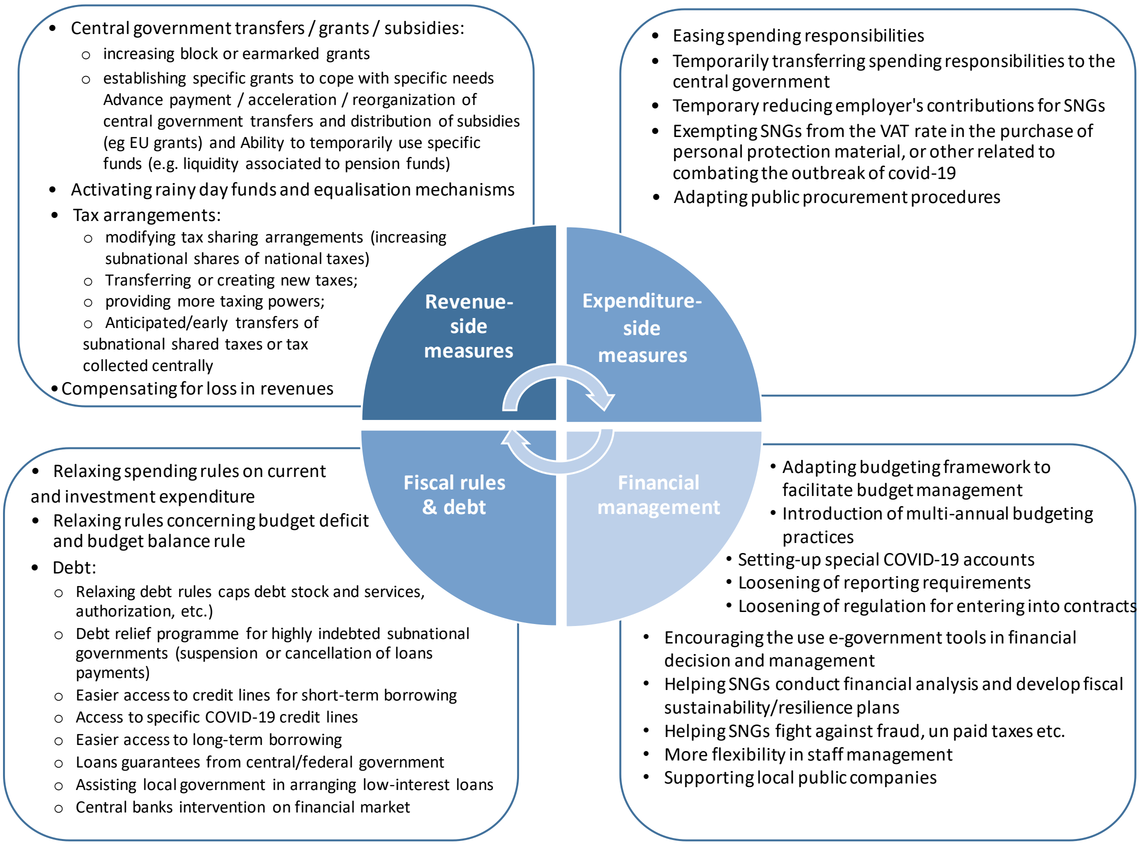
The expenditure effects of COVID-19 on subnational governments are considerable, especially in countries with decentralised service provision, and the revenue effects are even greater. Without sufficient compensation for the extra spending and the revenue losses caused by COVID-19, many subnational governments could be forced to implement sharp cuts on operating and capital spending. This could endanger the efforts for a coordinated recovery response, and weaken the equity and quality of service availability among subnational governments.

Many central governments have announced considerable fiscal measures to help subnational governments cope with the fiscal shocks. State governments in federal countries have also announced measures to support local governments. Two-thirds of OECD countries have adopted measures in support of subnational government finance.

The measures implemented in countries can be classified into four categories (Figure 17). They include revenue-side measures), expenditure-side measures (e. financial management measures and measures related to fiscal rules and debt, including to facilitate the use of debt for short and long term needs. Fiscal rules, whose purpose is to mitigate subnational fiscal risks through the imposition of constraints on fiscal policy, are susceptible to pro-cyclical tendencies if they are too rigid or subject to short time frames. During a crisis, it may be possible to relax such rules along two lines, either formal escape clauses that can be triggered by prescribed circumstances, and/or an effective suspension of the rules in practice when it is unreasonable to expect subnational governments to comply (OECD, 2020[68]).

Revenue-side measures and more flexible fiscal rules seem to be the more frequently applied measures, although measures to improve financial management are also quite widespread. For example, 46% of CoR-OECD survey respondents — report that some fiscal rules have been relaxed or are planning to be (18%) in the near term (OECD-CoR, 2020[65]).

Figure 17. Four main categories of fiscal instruments to support subnational finance



Source: Authors" elaboration

These measures can be further divided according to the time span of the effects. For example, subnational governments grant permit a relatively quick compensation of lost tax revenue and increased expenditure. Transferring or creating new taxes or providing more taxing powers to subnational governments are effective in the medium and long terms, but not always adequate for responding to immediate needs. Also transferring service responsibilities from subnational governments to central governments is likely to be slower than transferring additional resources to subnational governments to secure service provision. Some measures are meant to be temporary, others can be implemented in a more permanent way.

Increases in central or state government transfers are likely to be insufficient to fully offset decreased revenues from taxes, user charges and tariffs, and property income. Furthermore, in the longer term, central government transfers will probably be cut to rebalance public budgets and restore fiscal stability, for example through future austerity measures. While in the short term the support from higher levels of government may help fill the fiscal gap created by the crisis, subnational governments need to prepare for the crisis recovery phase, and possible consolidation plans. The crisis is likely to have negative medium and long term effects on subnational government finances. Reforms that ensure the stability, the operational capacity and the resilience of subnational finance are important, and should be carefully planned and implemented.

Support to subnational government finance can also be indirect, by supporting related entities, such as public transport agencies, energy companies and other utility companies. In Germany, the federal government will take over the costs of housing benefit for welfare recipients from the municipalities (EUR 4 billion) and support local public transport networks (EUR 2.5 billion) (BNP Paribas, 2020[145]). In Latvia, municipal capital companies, whose turnover has decreased by 50% due to the COVID-19 crisis, may receive a state budget loan to increase the company's share capital in order to finance its maintenance costs. In the US, the CARES Act includes USD 25 billion for transit agencies to compensate for part of the revenue gap.

The methods used to prepare these measures vary from country to country, depending on existing inter-governmental fiscal relations, and the culture and practices of dialogue and negotiation between the central and subnational governments. In countries where fiscal coordination is already well developed and effective, support measures have been developed and discussed between the different responsible ministries and representatives of subnational governments. In several countries, the discussions about urgent support, compensation schemes and other financial measures have been discussed and agreed upon with the national associations of subnational governments, resulting in formal agreements or more informal deals.

Country examples

- In **Australia,** the Australian Government, States and Territories signed a cost sharing arrangement at the start of the COVID-19 crisis to cover the public health costs incurred by States and Territories in treating the virus. On 29 May 2020, a new 2020-2025 health reform agreement was signed by the Commonwealth and the states and territories. It includes a guarantee to all states and territories that no jurisdiction is left worse off as a result of the COVID-19 pandemic (Federal Ministry of Health, 2020[146]). In addition, the Australian Government, in co-operation with the state jurisdictions and local government, is further examining and discussing methods of identifying the pandemic's impact at the small area level (sub-state regions, local governments) and developing targeted recovery and reconstruction assistance that might be required in the medium and longer term.
- In **Belgium,** regional governments announced support measures for local finance. Wallonia's municipalities are now allowed to increase their budget deficit, and encouraged to use their reserves or to borrow to boost local economic recovery (La Libre Belgique, 2020[147]). In Flanders, the Flemish Government adopted several measures to support municipalities, for example: a grant of EUR 15 million for poverty reduction as a result of the COVID19 pandemic; an emergency fund of EUR 87 million to support local authorities in the culture, youth and sport sectors; and a fund to stimulate sustainable mobility (e.g. local improvements for walking and cycling). Flexibility has been allowed for the local budgets (subject to monitoring coronavirus impact) (Flemish Government, 2020[148]).
- In **Brazil,** the federal government announced a package of measures for states and municipalities amounting to BRR 85.5 billion to face the impact of the COVID-19 pandemic. On April 1, the Ministry of Economy relaxed the rules for entering into contracts with states and municipalities and loosens rules around processes for payment of these contracts. On April 13, a new package of measures for states and municipalities was adopted bringing total support up to BRL 127.3 billion. It includes additional combination of direct transfers, suspension of debts with the federal government for six months and suspension of payment of debts with public banks in 2020 (BNP Paribas, 2020[145]).
- In **Bulgaria**, as part of the 2021 Draft Budget Proposal released in October 2020 the central government plans to provide additional transfers to municipalities to compensate their costs in relation to the adverse impact of the COVID-19 crisis. To this end, an additional BGN 15 million will be transferred to the municipalities in 2020, and BGN 30 million in 2021. (National Association of Municipalities of Bulgaria, 2020[149]).
- In **Canada**, the federal government announced a CAD 2.2 billion aid package to help municipalities. The aid will come via an advance through the Federal Gas Tax Fund. This is a fund that municipalities receive twice a year but the federal government is making the 2020/21 payment in full. Municipalities have been asking for CAD 10-15 billion to help them offset negative effects of COVID-19 layoffs, property tax, and other shortfalls like transit and road projects. The federal government said that the Federal Gas Tax Fund advance is just the first step in helping the cities and that it is necessary to discuss with provincial governments to decide what happens next. Provinces, which have jurisdiction

over the municipalities, have also started to provide exceptional support to municipalities. For example, on 27 July 2020, the Ontario government, in partnership with the federal government, provided up to CAD 4 billion in urgently needed one-time assistance to its 444 municipalities. This funding will help Ontario's local governments maintain the critical public services, including public transit, over the next six to eight months. This funding is part of the province's Made-in-Ontario plan for renewal, growth and economic recovery (Province of Ontario, 2020[150]).

- In **Colombia,** on 21 May 2020 the Colombian government announced a series of fiscal measures, including: more flexibility in the use of several sources of income to finance extraordinary operating expenditure (which are normally earmarked); the possibility to use resources from the National Pension Fund of Territorial Entities (Fonpet); the possibility to contract short-term borrowing (credit lines) that will not be counted in indebtedness ratios; and a relaxation of debt rules.
- In the **Czech Republic,** a bill to mitigate the impact of a decline in 2020 municipal tax revenues was adopted on June 8. Each municipality should receive a bonus of CZK 1 200 per inhabitant, wamounting to almost CZK 13 billion (EUR 0.5 billion) (Government of the Czech Republic, 2020[151]).
- In **Denmark**, fiscal rules have been temporarily eased for municipalities, as municipalities are allowed to exceed expenditure ceilings in case of coronavirus-related operating expenditures (Information, 2020[152]). To support investment, expenditure ceilings for investment are lifted. Following a concertation between the central government, the national association of local governments and Danish regions, it has been agreed that the regional transport companies will receive full compensation for additional expenses and loss of income as a result of COVID-19 throughout 2020. (KL, 2020[153])
- In **Estonia**, municipalities will receive a financial support package of EUR 100 million from the central government to compensate the loss of revenue, to cover extraordinary direct costs of the crisis borne by municipalities, and to finance additional public investment that can stimulate economic recovery.
- In **Finland**, the government decided in June 2020 to support municipalities and hospital districts with EUR 1.4 billion in the fourth supplementary budget of the state government. The compensation scheme for municipalities is based on formulas, which aim to take into account the extra costs and revenue losses experienced by municipalities. In addition to direct support to municipalities, the government will compensate directly to hospital districts the extra care costs caused by coronavirus treatments. This will ease the burden of individual municipalities because hospital districts are joint municipal authorities (Ministry of Finance of Finland, 2020[54]).
- In **France,** an emergency plan of EUR 4.5 billion will take into account the fiscal situation of the different levels of government and within the context of particular category e.g. touristic municipalities. The emergency plan will focus first on municipalities (EUR 1.8 billion) and departments (EUR 2.7 billion), to help them meet increased social spending requirements. The emergency plan comprises three main components: i) subnational governments will have the possibility to record COVID-19 related operating expenditure in a special account and to amortise them over three years or even to finance them through borrowing; ii) the current Support Grant for Local Investment (*Dotation de soutien à l'investissement local* or DSIL) will receive an additional EUR 1 billion; iii) guaranteed resources in 2020 for municipalities, based on government compensation for the loss in tax revenues and a portion of user charges (e.g. car parks), calculated by comparing the revenue in 2020 to the average for 2017 to 2019. Fiscal measures in favour of the regions have been announced in a State-regions agreement signed between the regions and the central government, which provides, among others, he transfer of a portion of VAT to the regions to replace the regional share of CVAE.
- In **Germany,** the federal and state governments have decided in September 2020 on an aid package to support cities and municipalities during the COVID-19 crisis. This measure aims to maintain municipalities' investment capacity in the coming years. In particular, German municipalities have been strongly hit by a decrease in trade taxes, their main source of revenue. According to this aid package, the central government should cover for half of the municipalities' local business tax losses for 2020, and Länder should cover for the other half. In addition, the central government will further contribute

to the costs of accommodation and heating of municipalities. The government also decided on a permanent higher federal share in municipal welfare spending, additional capital grants for Kindergarten, hospitals, public transport, digitalisation and local health services. This federal support comes on top of support provided by the *Länder* to the local governments. In particular, the *Länder* have decided to loosen the fiscal rules applied to municipalities by suspending the balanced budget rule, suspending the duty for cutback measures and for spending freezes. In addition, regulation for short term credits has been eased. For the *Länder*, the Federal Government compensates declining revenues and provides additional grants to compensate crisis spending.

- In **Iceland**, in the framework of the Supplementary Budget for 2020 the central government is providing municipalities with an extra grant of ISK 30 million to address the challenges posed by Covid-19 in social services and child protection. This grant is dedicated to the most sparsely populated municipalities of the country (Ministry of Transport and Local Governmment of Iceland, 2020[154])
- In **Italy,** financial support to local authorities has been allocated mainly by the decree-law n. 34/20 ("relaunch decree") and by decree-law n. 104/20 ("August Decree"). Some measures include compensations for additional costs incurred by municipalities, provinces and metropolitan cities facing the pandemic (EUR 3.2 billion). Most recently, the central government dedicated EUR 40 million to support those municipalities particularly affected by the health emergency exercise their social and economic functions. In addition, the fund allocates EUR 400 million to local public transport companies and regional railways. The Technical Committee allocated an additional EUR 1.7 billion and EUR 2.6 billion to regions and autonomous provinces, respectively, on the basis of the respective loss of tax revenues. These funds are targeted to finance essential expenses in health care, assistance and education and lost tax revenue (IRAP). Finally, a fund was established to support the financial recovery of municipalities with a structural deficit. The Decree N°34/20 also supports the debt of local authorities, by enabling municipalities to renegotiate or suspend mortgages and other forms of loans contracted with banks, financial intermediaries and *Cassa Depositi e Prestiti* during 2020, and established a fund of EUR 12 billion to ensure an advance of liquidity for the payment of certain liquid and due debts of regional, autonomous provincial and local authorities and national health service bodies in 2020. (Chamber of deputies, n.d.[155]).
- In **Korea**, the government implemented several financial packages to stimulate the economy, including measures to support local governments. The First Financial Stimulus Package of KRW 4 trillion included a policy support related to internal and local tax. The 2020 Supplementary Budget amounted to KRW 11.7 trillion including support to most severely hit areas for Daegu City and North Kyeongsang Province (MOEF, 2020[156]; Government of Korea, 2020[138]). Support to local governments, in particular for the recovery, are also included in the Korean New Deal.
- In **Luxembourg,** in a circular of May 2020, the Ministry of Interior indicated the possibility of activating several mechanisms to limit municipal budget deficits and offset and cope with spending needs, including the use of rainy days funds and borrowing.
- In **Mexico,** the Stabilisation Fund for Federal Entities (*Fondo de Estabilization de Ingresos de las Etidades Federativas* (FEIEF) is a rainy day fund managed by the federal government. It provides additional revenues to federated entities when grants from the central government are reduced in times of fiscal stress. Its resources come from oil revenues and federal contributions, which are declining. In addition (Fitch Ratings, 2020[157]). However, the government is considering additional measures to ease the financial pressure on state and municipal governments, including federal transfers and modifying some regulations to allow greater access to financing on capital market.
- In the **Netherlands,** the government and the association of municipalities (VNG) concluded agreements on the compensation of various additional costs and lower income due to the coronavirus measures. For the moment, this involves approximately EUR 1.5 billion. In some areas, specific agreements have been made about how compensation levels from fellow authorities will move with the crisis, such as compensation for loss of income, extra costs of regional municipal health services

(GGD) and safety; extra costs arising from the Temporary COVID-19 Act, including in Supervision and Enforcement; extra costs related to public transport; and temporary self-employment income support and loan scheme (Tozo).

- In **Norway**, municipalities were compensated for the effects of the COVID-19 outbreak with a total of NOK 6.5 billion. This includes a compensation scheme of NOK 1 billion for pre- and after-school care and day care. Compensation to county authorities amounts to NOK 1.5 billion, related to loss of revenue in public transport (Government of Norway, 2020[158]). In April 30, the Norwegian Association of Local and Regional Authorities (KS) estimated the extra expenditure and revenue loss in 2020 would amount to NOK 12.5–20 billion for municipalities and NOK 5.5–6.8 billion for county municipalities (KS, 2020[159]).
- In **Portugal**, municipal expenditures incurred to combat the COVID-19 crisis will fall outside the debt limits provided for in the Local Finance Law. The relaxation of balanced budget rules and spending rules were also approved. Furthermore, the authorisation of short-term loans was simplified and recourse to medium long term borrowing was facilitated (i.e. no prior authorisation needed from the municipal assemblies). In addition, local authorities can request advanced/early transfers of their portion of state taxes. Support to municipal treasuries also includes the possibility of using accumulated fiscal year balances of past years.
- In the **Slovak Republic,** the Lex Korona Package announced on March 31 provides support measures to cities, municipalities and higher territorial units (regions) in order to help them finance extraordinary expenses and fill the loss of tax revenues. Until the end of 2021, local governments will be able to use reserve funds, capital income and loans for their current expenditures. In addition, several budgetary rules have been softened, such as the possibility to receive advances from public funds, relaxation of fiscal discipline rules, including possibility to incur a budget deficit (Slovak Republic Ministry of Finance, 2020[160]).
- In **Slovenia,** the draft budget for 2021 mentions the adequate financing of municipalities, and highlights their needs. It recognises that the country's development is based on the development potential of municipalities, and their role in the absorption of European funds. In November 2020, the Committee on Internal Affairs, Public Administration and Local Self-Government discussed and approved the proposal for the Financial Relief of Municipalities Act (ZFRO). The basic proposal of the ZFRO is that the state will take over the financing of compulsory health insurance from municipalities for unemployed Slovenian citizens and foreigners. Other measures include additional funding for municipalities with Roma settlements, enabling municipalities to borrow for "soft" investment European projects, and the more flexible use by municipalities of investment subsidies from the state, to be used as current transfers ((ZMOS, 2020[161]; Republic of Slovenia, 2020[162]).
- In **Spain,** the Royal Decree-Law 8/2020 on extraordinary urgent measures to face the economic and social impact of COVID-19 includes a measure to support local finance. Local governments are allowed to use their surplus to finance expenses corresponding to social services. An Extraordinary Social Fund was also created. At the regional level, the "shock plan" presented by the government includes several measures to provide the Autonomous Communities with more resources to combat the coronavirus and mitigate the emergency's economic effects.
- In **Sweden**, in September 2020, the central government presented amendments to the 2020 budget and its budget proposal for 2021. It approved an additional SEK 10 billion in general transfers to municipalities (receiving 70% of the total subsidy) and regions (30%) for 2021 and SEK 5 billion for 2022. This is in addition SEK 5.5 million in support to municipalities to cover COVID-19-related costs in 2020, including enhanced crisis support, counselling and trauma support for staff working in health care and elderly care. The government is also investing SEK 250 million for 2021–2023 to establish a new municipal delegation. The purpose is to support individual municipalities and regions with major challenges (Ministry of Finance of Sweden, 2020[163]).

- In the **UK**, additional resources for devolved administrations are allocated to the three devolved nations to cover health expenditure, local government support, and public transport expenditure. The global envelope of almost GBP 7 billion of funding is broken down into GBP 3.5 billion for the Scottish Government, GBP 2.1 billion for the Welsh Government and GBP 1.2 billion for the Northern Ireland Executive. The devolved administrations decide how to respond to COVID-19 in their areas (COE, 2020[164]).
- In the **US**, in the framework of the Coronavirus Aid, Relief, and Economic Security (CARES) package of USD 2 trillion, USD 150 billion in grants were set aside to help state and local governments cover costs directly related to the coronavirus. It established the Coronavirus Relief Fund (CRF), of USD 150 billion, and the Education Stabilization Fund, of USD 30.75 billion, both of which provide funding to state and local governments. The CRF can be used in support of not previously budgeted expenditures related to the coronavirus that are incurred between March 1 and December 30, 2020 (Driessen, 2020). This may include for instance extra costs in the area of housing (homelessness and rental assistance), food assistance, and public health. In addition, the Families First Coronavirus Response Act, raised the share of Medicaid allocated to States by 6.2 percentage points. Furthermore, to help state and local governments manage cash flow stresses caused by the coronavirus pandemic, the Federal Reserve established a Municipal Liquidity Facility that will offer up to USD 500 billion in lending to states and municipalities (Federal Reserve, 2020[165]).

Pointers for action

- Foster multi-level and multi-stakeholder dialogue and fiscal coordination, including with national associations of subnational governments and other consultative bodies, on the crisis' fiscal impact, using shared evidence and data, and a forward-looking perspective.
- Help subnational governments reduce the gap between decreasing revenues and increasing expenditures resulting from the COVID-19 crisis to avoid underfunded and unfunded mandates and possible sharp cuts in subnational operating and capital expenditure, and help subnational governments participate in recovery plans:
    - Develop special grant schemes by central governments, and states in federal countries to help close fiscal gaps.
    - Explore fiscal tools and measures, including tax arrangements, easing fiscal rules and access to external financing (debt), and introduce more flexible, modern and innovative financial management tools. Some measures should remain temporary while others could be more permanent.
    - Focus on reviewing subnational financial management and strengthening expenditure and revenue effectiveness as a means to contribute to restoring fiscal stability over the medium and long terms.
    - Undertake a comprehensive subnational government finance review to improve fiscal resilience and flexibility, through a better balance in revenues sources (between taxes, grants, debt, and other revenue sources) and spending assignments, sufficient autonomy, and reactivity to adapt to spending needs and revenue shortfalls especially in times of crisis.
- Consider the differentiated impact of the crisis in national-level support to subnational governments:
    - Evaluate the degree of asymmetry and differentiate aid schemes to align with the asymmetric impact of COVID-19.
    - Distribute fiscal support to subnational governments in a transparent manner.
    - Consider giving greater weight to subnational governments with higher shares of elderly, children and poor, in order to account for the higher costs of service delivery during the COVID-19 emergency.
    - Review and strengthen existing equalisation mechanisms to smooth the impact of crisis and reduce regional and local disparities and promote greater social inclusion.
- Ensure that that COVID-19 assistance packages support subnational government services past 2020 and promote multi-year approaches:
    - Design support packages that can be implemented and adjusted over several years to account for time-delayed effects.
    - Assess the effectiveness of support measures.
    - Promote multi-year planning and budgeting at subnational levels to enable fiscal systems to adapt to changes in revenues and evolving spending needs.
    - Establish stabilisation or rainy day funds, or encourage subnational governments to do so individually.
- Improve the collection, dissemination and exchange of reliable and transparent fiscal data on subnational government finance (financial flows, assets and liabilities).
- Encourage subnational governments to conduct prospective/foresight fiscal analysis and to prepare fiscal emergency plans

Invest in ICT and e-government tools for fiscal and financial management and skilled financial managers to help financial decision and management, especially in times of fiscal crisis

Public investment recovery strategies

National investment recovery strategies

Immediate fiscal responses to COVID-19 focused on supporting firms and households. Since June, many national governments have announced large economic recovery packages, focusing largely on public investment. These investment recovery packages prioritise three areas: (i) strengthening health systems; (ii) digitalisation; (iii) accelerating the transition to a carbon neutral economy. The OECD and the IMF have made a strong call to scale-up public investment to address the challenges for COVID-19 recovery, and subnational governments play a key role as they are responsible for 57% of public investment in OECD countries.

Quality infrastructure investment is part of the answer to the COVID-19 crisis. National and subnational governments need to invest more – by better exploiting the existing and potential fiscal resources for investment and mobilising private investment. The IMF Fiscal Monitor estimates that a 1% GDP increase in public investment in advanced economies and emerging markets has the potential to push GDP up by 2.7%, private investment by 10%, and to create between 20 and 33 million jobs, directly and indirectly (IMF, 2020[124]). Local, regional and national governments also need to invest in a smarter way, by prioritising needs, focusing on post crisis priorities in health, digital and environment infrastructure and better managing public investment at all levels of government (OECD, Forthcoming[166]).

The demand for infrastructure was already high before the COVID-19 crisis, not only for new construction but also for operating and maintaining existing stock. The OECD estimates that USD 95 trillion in public and private investment will be needed in energy, transport, water and telecommunications infrastructure, globally, between 2016 and 2030 (OECD, 2017[167]). Cities and regions have important needs for maintenance and new investment in renewable energy, low-carbon buildings, energy efficiency, waste and pollution management systems, and clean public transport. Developed countries will have to invest heavily in infrastructure, in particular to **maintain, upgrade or replace existing (and often obsolete) infrastructure**. US infrastructure, for example, is in need of investment, according to the American Society of Civil Engineers, which estimates that the US needs to spend some USD 4.5 trillion by 2025 to repair the country's roads, bridges, dams and other infrastructure, such as schools and airports. Similar issues are evident in Europe. In Germany, for example, the KfW, Germany's state investment bank, calculated that municipalities need to spend at least EUR 138 billion to bridge the backlog of urgent infrastructural investments.

Investment recovery strategies need to be well targeted to a few priority areas, and how these strategies are managed largely determines their outcomes, as highlighted by the *OECD Recommendation on Effective Public Investment across Levels of Government* (OECD, 2014[168]). Recovery investment strategies should align with ambitious, long-term policies to tackle climate change and environmental damage. Post-crisis recovery strategies are a unique opportunity for governments to allocate recovery funds to sustainable initiatives and take measures to reduce the carbon-intensity of economic activities. Technologically advanced, sustainable and resilient infrastructure can pave the way for an inclusive post-COVID economic recovery (WEF, 2020[169]). It is also essential to look beyond physical infrastructure investment, and consider investment needs in skills development, innovation and R&D. It is particularly important to ensure that investments from stimulus packages do not impose large stranded asset costs on the economy in coming decades, for instance because they bet on declining technologies or place projects in high-risk flood zones (World Bank, 2020[170]). It is important for these investment recovery strategies to have an explicit territorial dimension. Although this seems to be more visible in some countries, for example in Australia, Canada or France, it is still a challenge in many. It is also crucial to actively involve subnational governments in their implementation early on, and not only municipalities but regions as well.

It is important to draw some lessons and avoid mistakes made with the 2008 crisis when considering investment recovery strategies associated with the COVID-19 crisis (OECD, 2020). While many public investment projects can be launched in the short-term, care must be taken not to focus on speed as the only criteria. The risks are also to atomise the allocation of the funding in a myriad of small infrastructure projects to spend the money rapidly, at the expense of long-term priorities (e.g. sustainability and resilience). In the implementation of investment recovery strategies in 2008-09, a large part of the funding was fragmented into small projects at the municipal level – rather than the regional level. For example, while Spain's 2008 investment recovery plan allowed for joint applications through the state fund for local investment, most municipalities did not use this option. Only six out of more than 1 000 associated municipalities applied for project funding (OECD, 2013[27]). For COVID-19 recovery, intermediary levels of government – regions, states, provinces – should be included in implementing national investment recovery strategies.

The European Union Recovery Plan

The EU has redirected a significant level of funds to help Member States tackle the COVID-19 crisis, for example:

- EUR 37 billion from the EU budget is available to support healthcare systems, SMEs and labour markets through the Coronavirus Response Investment Initiative;
- up to EUR 28 billion in structural funds from 2014-2020 national envelopes not yet allocated to projects are eligible for crisis response;
- up to EUR 800 million from the EU Solidarity Fund are directed at the hardest hit countries by extending the scope of the fund to public health crises.

The EU also adopted measures to ensure additional flexibility in the use of structural funds. Through the Coronavirus Response Investment Initiative Plus, Member States can transfer money between different funds to meet their needs. Resources can be redirected to the most affected regions, thanks to a suspension of the conditions on which regions are entitled to funding. Finally, Member States can request up to 100% financing from the EU budget between 1 July 2020 and 30 June 2021 for programmes dealing with the pandemic's impact.

The EU has enabled maximum flexibility in the application of EU rules on:

- state aid measures to support businesses and workers
- public finances and fiscal policies, e.g. to accommodate exceptional spending

Unlike in 2008, in 2020 the EU strongly mobilised cohesion policy to address the COVID-19 crisis, lifting or modifying the rules that apply to European Structural and Investment Funds.. As of October 2020, more than100 programmes were changed to respond to the COVID-19 crisis.

On July 21, the EU announced that EUR 390 billion would be distributed as grants and EUR 360 billion would be available in loans to Member States, in this way introducing the fiscal stimulus package of EUR 750 billion announced in late May 2020. To fund the package, the EU proposes borrowing up to EUR 750 billion on financial markets (European Council, 2020[171]).

Supporting subnational public investment

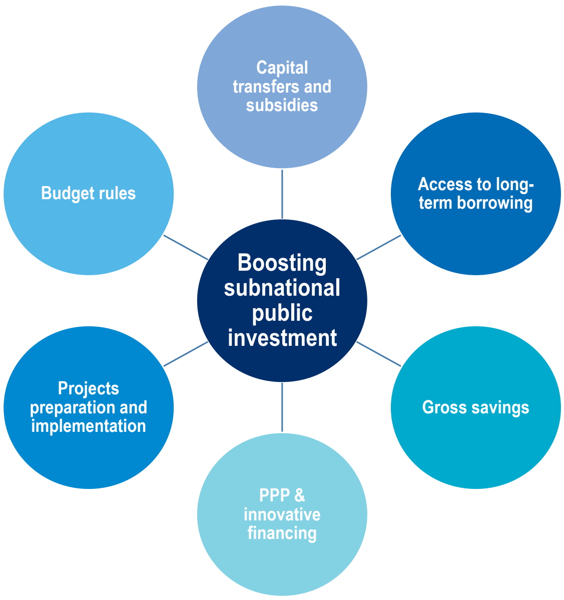
The risk of using public investment as an adjustment variable is high post COVID-19, given the contraction of self-financing capacities and increasing deficits (OECD, 2020[17]). The scissor effect on subnational public finance, i.e. an increase in expenditure and a decline in revenue, could lead to increased deficits and short and long-term debt. This may lead to fiscal consolidation plans in the medium term, as after 2010, leading to potential cuts in public investment and undermining recovery.

To a large extent, the fiscal impact of the COVID-19 crisis on subnational governments depends on the support provided by central or federal government to maintain, or boost subnational investment through stimulus packages (capital transfers), as well as to build the capacity of subnational governments to access long-term borrowing. While watching the sustainability of public finances over the longer-term, it is important for countries to avoid replicating the scenario that took place after 2010, when drastic cuts in subnational public investment created a pro-cyclical effect impeding the recovery. In some regions and cities, public investment projects are already cancelled or postponed.

In June/July 2020, 31% of EU subnational governments respondents to the OECD-CoR survey were active providing public investment stimulus measures (OECD-CoR, 2020[65]). Regions were more active at providing public investment stimulus than municipalities, with 40% of regions having done so to a large extent compared to 26% of municipalities COVID-19 exit plans and recovery strategies are being used by 42% of subnational government respondents to promote the greening of their agenda, and 28% are considering to do so. Regions (50%) and large municipalities are particularly interested. More than two-thirds of regional and municipal respondents state that the transition to a sustainable and low-carbon economy should shape long-term regional development policy to a large extent. This contrasts with the fact that less than 50% of respondents are considering the use of exit plans and recovery strategies to promote a greening policy or sustainability agenda. It is critical that subnational governments make the most of their recovery strategies by integrating green and climate priorities.

Different instruments are being activated to maintain, or even accelerate, public investment projects at the subnational level (Figure 18). In addition to improving self-financing capacity i.e. gross savings, these include various classical fiscal instruments: relaxing budget rules, increasing capital transfers and subsidies, easing the access to long-term projects on both credit and financial markets and supporting projects preparation and implementation. Other financing mechanisms may be activated in the future such as public-private partnerships schemes or equity financing.

Figure 18. Boosting public investment at subnational level



Source: Authors' elaboration

Country examples

National investment recovery strategies

- In **Australia,** the AUD 1 billion COVID-19 Relief and Recovery Fund supports regions, communities, and industry sectors that have been most strongly affected by the COVID-19 crisis. This includes a regional package of more than AUD 550 million to support regions to recover from the impact of COVID-19 (as part of the 2020-21 Budget), mainly targeted at regional tourism recovery, the improvement of broadband and health services in rural areas, primary industries, and agriculture. In addition, in June 2020, the Australian Government announced a AUD 1.5 billion stimulus package in response to COVID-19 for local road and community infrastructure projects to be delivered by local governments.
- In **Estonia,** part of the EUR 100 million government financial support package helps municipalities finance additional public investment that can stimulate economic recovery.
- In **Germany,** at the beginning of June, the federal government adopted a "package for the future". It targets investment in digital and clean technologies, education and the health sector. Additional spending will focus on R&D projects, e-mobility, e-government, and mobile and broadband networks. With the new package, the government uses the recovery as an opportunity to boost investment and address some of Germany's longer term challenges, such as digitalisation and climate change.
- In **Iceland**, the government and local municipalities are initiating a special investment programme within the framework of the economic response package to the COVID-19 crisis. The investment programme will focus on transport, public construction, and technology infrastructure. It also includes financial support for the tourism sector. Additional measures aim to facilitate municipal investment. These include a temporary VAT refund for work performed until end of 2020, special support for municipal sewage projects, and grants from the Local Government Equalisation Fund to finance construction projects to improve access for people with disabilities to municipal property, structures and outdoor areas. Municipalities are authorised to temporarily deviate from the budget balance and debt rules in order to have more leeway to investment (Parliament of Iceland, 2020[172]).
- **In Korea,** the Korean New Deal, announced on July 14, plans to invest KRW 160 trillion (to create 1.9 million jobs by 2025 based on two policies:, the Digital New Deal and Green New Deal, offering overarching policy support to strengthen employment and social safety net. The Korean New Deal includes projects such as the renovation of around 230 000 buildings to be energy-efficient and the production of 1.13 million electric cars over the next years (Korean Minister of Economy and Finance). The President announced that the Korean New Deal will take a regional approach to rebalance territorial development in regions outside of the greater Seoul. The government plans to add balanced regional development to the economic plan, including digital and green initiatives. Projects included will be developed by local governments and by state-run organizations located across the country. Local projects will include projects such as smart-city development and natural disaster management systems. Over 130 local governments are developing or implementing New Deal projects, such as Gangwon Province's project to develop hydrogen-fuel related technologies. The central government will support local governments in handling issues related to the Korean New Deal by establishing a body dedicated to balanced new deal programmes and aid local governments in hiring staff specialising in related issues. The central government will fund the majority of the spending, covering KRW 42.6 trillion, or 57%, while local governments will match those funds with a total of KRW 16.9 trillion. The remainder will come from private sector investment (The Korea Herald, 2020[173]).
- In **Lithuania,** the government established an economic recovery package that includes EUR 1 billion to "boost the economy". The Economic and Financial Action Plan supports accelerating investment programmes, speeding up payments and increasing the intensity of funding.

- In **Mexico,** the **Mexican Federation Expenditure Budget Project 2021** (*Proyecto de Presupuesto de Egresos de la Federación*, PPEF) details public investment expenditure, which amounts to around MXN 830 million. Of this, 85% (MXN 707.7 million) corresponds to budgetary physical investment; 2% (MXN 14.4 million) is dedicated to subsidies for the social and private sectors, and for the states and municipalities; and the remaining 13% (MXN 107.2 million) goes to other investment projects. Investments are made in programmes for urban enhancement, the (continued) construction of the General Felipe Ángeles airport, road construction, and the construction of the inter-urban train between México and Toluca (Mexican Secretariat of Finance and Public Credit, 2020[174]).
- In the **Netherlands**, the cabinet has released EUR 255 million to co-finance EU programmes dedicated to regional development, innovation, sustainability and digitalisation.
- **New Zealand's** Infrastructure Fund for Economic Recovery includes sustainable infrastructure projects such as flood protection, storm water infrastructure, cycleways and walkways, and transformative energy projects.

Specific measures to support subnational public investment

- In **Austria**, a EUR 1 billion package was established to support municipal investment by increasing federal capital transfers from 25% to 50% of municipal investment. It can be used for projects that start between June 2020 and December 2021, as well as for projects initiated after May 2019 but which were suspended directly as a result of the COVID-19 crisis (Parliament of Austria, 2020[175]).
- In **Canada**, the Safe Restart Agreement (July 2020), a federal investment of more than CAD 19 billion, helps provinces and territories to safely restart their economies. It focuses on several key priorities over a 6 to 8 month period, including: testing and contact tracing; healthcare system capacity; childcare for returning workers; sick leave; and support for municipalities, including for public transit. In addition, funds from the Regional Relief and Recovery Fund (RRRF), a federal initiative, are channelled to the different localities through the national network of six Regional Development Agencies (Government of Canada, 2020[176])
- In **China**, quotas for local government domestic bond issuance have been increased. In May 2020, the Ministry of Finance indicated that it would advance another CNY 1 trillion in the quota of local government special purpose bonds to fund infrastructure projects.
- In **Denmark**, the investment ceiling for municipalities and regions was lifted, a move that was estimated to increase public investments in 2020 by 0.1 per cent of GDP. Projects that can be started quickly and, as a benchmark, can be completed in 2020 are targeted as a means to support employment. Regions and municipalities are encouraged to bring forward investment projects which were planned for 2021 or 2022 (Denmark Stability Programme 2020).
- In **France**, as part of its emergency plan and recovery measures, the government will increase the current Support Grant for Local investment from EUR 0.6 billion to EUR 1.6 billion, placing particular emphasis on financing green and the health sector investments. The Association of French Regions proposes substituting "recovery contracts" for the "*contrats de plan Etat-Régions*" (Association des Régions de France, 2020[56])
- In **Italy,** a series of norms of the DL n. 104/2020 targets investment spending by local authorities for the 2020-2024 period. The resources allocated from the central government to municipalities for 2021 were increased by EUR 500 million for investments destined for public works in the field of energy efficiency and sustainable territorial development (Art. 47 of Legislative Decree N°104/20)
- In **Poland**, the government will establish special fund to finance public investment in local roads, digitalisation, modernisation of schools, energy transformation, environment protection, reconstruction of public infrastructure. The fund consists of national resources, independent from EU support. However, the flexibility proposed by the EU in the use of cohesion funds could be also mobilised.

- In **Portugal**, in October 2020, the European Commission approved the reallocation of EUR 1 billion from EU Cohesion policy funds to support seven Portuguese regions, in response to COVID-19. Funds will support the digitalisation of schools, SMEs, and the tourism sector.
- In the **US**, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) provides the U.S. Department of Commerce Economic Development Administration (EDA) with USD 1.5 billion for economic development assistance programs to help communities "prevent, prepare for, and respond to coronavirus." The EDA works directly state and local governmental entities, institutions of higher education, not for-profit entities, and federally recognised Tribes to catalyse locally developed strategies to build capacity for economic development based on local business conditions and needs. The EDA’s recovery grants will support a wide variety of assistance including: Planning and Technical Assistance to EDA's Economic Development Districts (EDDs), Tribal Grantees, and University Centers, and others; Capitalization and Recapitalization of Revolving Loan Funds (RLFs), which provide access to capital for businesses; Innovation grants and construction of infrastructure and other economic development projects

A number of states and regional governments are also developing initiatives to support public investment in their areas, and to support local government investment projects.

- In **Belgium**, the Flemish Minister for Mobility and Public Works announced EUR 2.2 billion in mobility investments for 924 different projects in 2020. The objective is to provide a social and economic boost to the road and hydraulic engineering sector, but also to the entire economy, as part of the COVID-19 recovery. The priorities are road safety, waterways and rail systems, public transport (hybrid buses, trams, e-bus charging systems) and climate and noise measures, including switching from lighting to LED, installing functional plants and noise barriers, tree control, etc. (Intelligent Transport, 2020[177])
- In **Germany**, Bavaria, Baden-Wuerttemberg or Hesse, North-Rhine Westphalia, Saxony-Anhalt and Saxony announced comprehensive packages that include measures to support infrastructure investment.
- **In Italy,** the Lombardy region has introduced a three-year investment plan worth EUR 3 billion. EUR 400 million is earmarked for local authorities and EUR 2.6 billion targets support for the local economy (including EUR 400 million for strategic investments). Of the EUR 400 million for local authorities, Milan and surrounding areas will receive EUR 51 million for public works (roads and schools); the remainder can be spent by other communities on energy efficiency, renewable energy, urban re-development and sustainable development, sustainable mobility, heritage, and hydro-geological works, for example. Separately, the region foresees using the “Lombardy Bond” to finance EUR 10 million for producing medical and personal protective equipment, and EUR 82 million in bonuses for health workers who have been involved in combating the epidemiological emergency (European Committee of the Regions, 2020[178]) (Varese News, 2020[179]) (First Online, 2020[180]).

Pointers for action

Implementation of national investment recovery strategies

- Investment recovery strategies should have an explicit territorial dimension to manage the differentiated impact of COVID-19 and to allow complementarities across sectors, as highlighted by the *OECD Recommendation on Effective Public Investment across Levels of Government* (OECD, 2014[168]).
- It is also crucial to actively involve subnational governments in their implementation early on, and not only municipalities but regions as well.
- Lessons from the 2008 crisis should be drawn and applied to the COVID-19 crisis and its investment recovery strategies in an effort to avoid the mistakes of the past. It
- Fund allocation criteria should be guided by strategic regional priorities, and care should be taken to avoid fragmenting fund allocation into a myriad of small infrastructure projects in order to spend the money rapidly, at the expense of quality investment and long-term priorities (e.g. sustainability and resilience).
- Align the short-term emergency responses with long term-economic, social and environmental objectives as well as international obligations (e.g. the Paris Agreement, the SDGs, etc.).
- Help target public investment strategies to green and inclusive priorities by introducing conditionalities.
- Encourage regional and local authorities to invest in digital infrastructure targeting full territorial coverage, and ensuring adequate weight is given to regional digital inclusion.
- Balance infrastructure investment with public investment in skills development, innovation, R&D, and other forms of “soft infrastructure”. .

Supporting subnational public investment

- Avoid using public investment as an adjustment variable in the wake of the COVID-19 crisis
- Upscale public investment to enhance regional resilience
- Identify the different levers to support subnational public investment. In addition to improving self-financing capacity, these include various classical fiscal instruments, such as relaxing budget rules, increasing capital transfers and subsidies, easing the access to long-term projects on both credit and financial markets and supporting projects preparation and implementation. Other financing mechanisms may be activated in the future such as public-private partnerships schemes or equity financing.

Inter-governmental coordination: an essential driver

International co-operation is proving essential for tackling this global challenge, and so is domestic coordination among levels of government, particularly for addressing regional and local socio-economic issues and long-term recovery. A coordinated response by all levels of government can minimise crisis-management failures. Effective coordination between national and subnational governments, and across jurisdictions, is required in all countries, be they federal, unitary, centralised or decentralised, and for all dimensions of the crisis – health, economic, social and fiscal.. In the OECD-CoR,, 71% of EU subnational government respondents surveyed in the European Unionhighlighted that the lack of coordination (vertical and horizontal) with other levels of government is among the biggest challenges they face in managing the health crisis (OECD-CoR, 2020[65]).

Vertical coordination among the national and subnational governments

Coordination among the national and subnational governments is the "first step of an effective response", as stated by the World Health Organisation (WHO) at the pandemic's outset. Non-coordinated action among levels of government can generate collective risks, such as "passing the buck", and conflicting responses. In places where subnational governments operate with high degrees of autonomy, policy responses are more likely to be fragmented. In countries where bottom-up coordination and communication is weak, there is a greater possibility of operating with one-size-fit-all measures that may not address local needs. These problems can be avoided or curbed through effective vertical coordination.

Many countries have experienced coordination challenges between national and subnational governments. Less than half (49%) of respondents representing subnational governments in the EU believe that vertical coordination mechanisms with the national government have been effective in managing the COVID-19 crisis in their country (OECD-CoR, 2020[65]).

Associations of regional and local governments are playing an important role in supporting vertical coordination. On the one hand, they act as interlocutors between national and subnational governments On the other hand, they continue to coordinate efforts, identify solutions, and support the implementation of emergency measures. Regular dialogue between the national government and these associations can be particularly valuable to address crisis-generated social and economic damage throughout a country.

Country Examples

Health responses: vertical coordination

- The **Australian Government** introduced a National Cabinet to address health and economic issues related to managing the COVID-19 crisis and recovery, bringing together the Prime Minister and the First Ministers of each Australian State and Territory. The National Cabinet is advised by the Australian Health Protection Principal Committee, a parallel group composed of all state and territory Chief Health Officers, and chaired by the national Australian Chief Medical Officer. In May, the National Cabinet released a three-step exit strategy, which provides a pathway for jurisdictions to move towards COVID safe communities in a way that best suits local specificities. States and territories are able to move between the steps on the pathway at different times, in line with their current public health situation and local conditions, and make decisions as to when each step will be implemented locally (Prime Minister of Australia, 2020[181]).
- **Canada** has developed a "whole-of-government action" based on seven guiding principles including collaboration. This principle calls on all levels of government and stakeholders to work in partnership to generate an effective and coherent response. These principles build on lessons learned from past events, particularly the 2003 SARS outbreak, which led to dedicated legislation, plans, infrastructure, and resources to help ensure that the country would be well prepared to detect and respond to a future pandemic outbreak (Canada, 2020[182]).
- In **Chile,** the government established the Social Committee for COVID-19 (*Mesa social por COVID-19*) formed by representatives of municipal associations (mayors), government authorities, academics and professionals from the health sector. The Committee meets twice a week to help strengthen the Action Plan COVID-19 (Government of Chile, 2020[183]). This Committee has been replicated at the regional level (Government of Chile, 2020[184]).
- In **Korea,** the government strengthened the "whole-of-government approach" in the fight against COVID-19. The Prime Minister chairs the Central Crisis Management Committee, on which are

represented all relevant central government ministries, as well as Korea's seventeen provinces and major cities (Government of Korea, 2020[138]).

- **In Portugal,** the Government established a contact line for municipalities to answer questions from other municipalities. The contact channel is operated by the General Directorate of Local Authorities (DGAL) of the Ministry of State Modernization and Public Administration. The DGAL published guidelines for municipalities, making these available on the Autárquicoa Portal. It also requested that municipalities, metropolitan areas and inter-municipal bodies prepare contingency plans in line with the guidelines issues by the DGAL.
- In **Spain,** the Conference of Presidents is a multi-lateral cooperation body between the Government of the Nation and the respective Governments of the Autonomous Communities. It has become the operative instrument for multi-level dialogue and facilitates communicating containment measures, and coordinating resources based on territorial needs.
- In **Turkey**, development agencies at the regional level are implementing the "Covid-19 Struggle and Resilience Financial Support Program" (resourced with approximately EUR 30 million). They will support projects that prioritise: (i) containing and mitigating the spread of the virus; (ii) emergency preparedness and public health responses; (iii) reducing the impact the epidemic on the country and regional economy. Agencies will also identify the social and economic impact of the epidemic in the provinces and will provide strategies for areas where intervention is required.

Economic and social responses: vertical coordination

- In **Australia,** the Prime Minister has announced a new National Federation Reform Council (NFRC) to replace Council of Australian Governments (COAG) meetings, with the National Cabinet to remain at the centre of the NFRC. The NFRC has been agreed to by Premiers, Chief Ministers and the Prime Minister. Once a year, National Cabinet, the CFFR and the Australian Local Government Association (ALGA) will meet in person as the NFRD to focus on priority national issues. It is intended that the new model will streamline processes, enabling improved collaboration, communication and effectiveness.

Coordinated fiscal responses

- In **France**, the Cazeneuve report promotes the creation of an observatory for the follow-up of the crisis and its impact on local finances based on a real-time sharing (updated every two months) of financial statements, and a common methodology for calculating the costs of the crisis.
- **In Italy,** the Ministry of Economy and Finance established a Technical Committee (*Tavolo tecnico*) in May 2020, chaired by the State Accountant General, and with mixed State/region membership. It is tasked with examining the impact of the COVID-19 emergency on fulfilling fundamental functions, with reference to the possible loss of revenue relating compared to the expenditure needs of each entity[7].
- In **Sweden**, County Administrative Boards are responsible for coordinating the state, the regions and the municipalities in terms of infection control aspects, and for ensuring that important societal functions are maintained in the country. To deal with the COVID-19 outbreak, the Public Health Agency of Sweden relies on these Boards to know about the specific challenges and conditions prevailing in each area. On July 1, 2020, the Swedish Government established a Corona Commission, responsible for evaluating COVID-19 actions by the Government, Government agencies, regions and municipalities, and for comparing the Swedish strategy to that of other countries. An initial report is anticipated in late November 2020, with a final report in February 2022 (Government Offices of Sweden, 2020[185]).

- [7] Source: https://temi.camera.it/leg18/temi/misure-di-finanza-locale-in-relazione-all-emergenza-covid-19.html

Pointers for action

- Introduce, activate or reorient existing multi-level coordination bodies in order to minimise the risk of a fragmented crisis response. Use such bodies to refine strategies, develop solutions, and agree on decisions with profound economic, social, and societal implications.
- Foster coordination across levels of government to agree on joint solutions and enhance acceptation of measures at all levels
- Mobilise coordination bodies to coordinate and communicate response, exit and recovery strategies throughout government and across a territory. Technical bodies that can help transform strategic thinking into operational plans should also be considered and consulted.
- Clarify roles and responsibilities among different levels of government to optimise crisis response, exit and recovery strategies, as well as resource deployment.
- Establish coherent guidelines for each level of government to follow, while also ensuring sufficient flexibility for adjustment to situations ‘on the ground’.
- Work with national associations of regions and/or municipalities to strengthen vertical coordination in a crisis context – for example to disseminate information, identify and share solutions to pressing problems, to support the implementation of emergency measures and agree on fiscal support packages. Encourage knowledge sharing among members

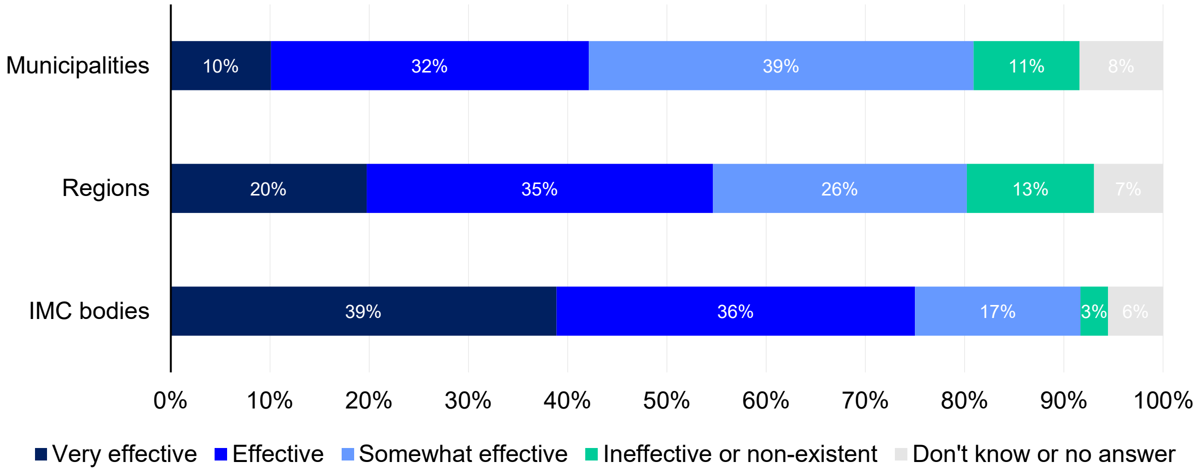
Supporting cross-jurisdiction cooperation

Horizontal cooperation across jurisdictions – be they countries, regions, or local governments – is just as important as vertical cooperation, particularly in in decentralised and federal countries, which have more differentiated approaches across territories. Externalities linked to the coronavirus are so high, that no single jurisdiction, or country, can manage these on its own. Coordination across regions is essential to avoid disjointed or contradictory responses, which pose a collective risk to a country’s population. For example, in federal systems, there may be limited incentive for cross-jurisdiction cooperation (e.g. sharing equipment, skilled personnel, etc.) if supporting a neighbour jeopardises one’s own ability to adequately respond to a crisis situation. Cooperation is an imperative – and not an option. The role of national governments is essential in minimising coordination failures and ensuring a coherent approach, even in federal countries.

Cooperation across jurisdictions is fundamental to limit the risks of new waves of infections or to mitigate the impact where cases have already rebounded. Information about new cases and clusters needs to be communicated extremely quickly to avoid propagation – across states and regions, and especially among municipalities belonging to the same functional area. Cross-jurisdiction cooperation also supports recovery efforts, including by avoiding a fragmented approach to public investment recovery strategies.

The assessment by EU subnational governments on the effectiveness of horizontal cooperation mechanisms is very heterogeneous across categories: 75% of inter-municipal groupings (IMC bodies) and 55% of regions consider they have been effective in managing the crisis compared to 42% of municipalities (Figure 19) (OECD-CoR, 2020[65]).

Figure 19. The effectiveness of horizontal coordination mechanisms among subnational entities



Source: OECD (2020)

Such cooperation extends across-borders, too. A critical issue emerged in cross-border regions where cooperation has been made more difficult because of borders closure, restrictions on mobility in particular for cross-borders workers, and the lack of effective coordination arrangements. In many cases, EU Member States have implemented uncoordinated border closures and unilateral measures. In the OECD-CoR, the lack of cross-border coordination was the strongest coordination issues. Around one-third of respondents reported that cross-border cooperation between subnational governments was broadly ineffective or non-existent, while only 22% found such cooperation effective or very effective (OECD-CoR, 2020[65]). However, several cross-border cooperation mechanisms did function well through the crisis and, arguably, allowed for increased resilience and paving the ground form reinforced cooperation (EU Committee of the Regions, 2020[108]).

Country examples

Many countries, regions, cities and associations of subnational governments have put in place specific measures to support horizontal and cross-border cooperation. A few examples are highlighted below.

Cooperation across municipalities

- In **Denmark,** municipalities have joined forces to purchase protective equipment for their personnel. With the Aarhus Municipality taking the lead, the Municipal Protective Equipment Purchasing Unit collaborative (*Kommunalt Værnemiddel Indkøb*) was created for joint procurement of protective equipment on behalf of Denmark's 98 municipalities (Aarhus Kommune, 2020[186]).
- **In France,** inter-municipal cooperation bodies have large responsibilities and budget, based on own-source tax revenues. In the front line of the crisis, inter-municipal groupings have multiplied initiatives to support their member municipalities, citizens, NGOs and local economic actors. Through their federative capacities, their skills and their technical or financial means, they often play a role as a platform, but also as operational actor in direct contact with the local needs (Assemblée des Communautés de France, 2020[187]).
- In **Israel,** local authorities share knowledge via the Ministry of the Interior, the Union of Local Authorities and the National Initiative 265 for Development and Knowledge-sharing to Advance the Digitization of Local Authorities. This website was developed in collaboration with the Ministry

of the Interior. Additional forums devoted to inter-local authority topics operate on an informal basis for exchanges of information and joint projects. This includes the advisory group of strategic planning and work plan managers in local authorities, which holds frequent consultations (Tel Aviv-Yafo Municipality, 2020[188]).

- In **Latvia,** eight municipalities have established strong common working relations during the ongoing pandemic in order to better deal not only with COVID-19 but also its aftermath. Thanks to their joint efforts and by sharing supplies among each other, South Kurzeme's municipalities managed to provide free protective equipment to seniors in the region (Stoyanov, A., 2020[189]).
- In **Sweden,** the four largest municipalities have joined forces with a guarantee for a credit of half a billion, which is issued by Kommuninvest to SKL Commentus. The credit will be used for the purchase of protective equipment for all Swedish municipalities and the equipment will be distributed based on the needs compiled by the County Administrative Board in their coordination assignments**.**

Cooperation across regions

- In **Belgium**, federal authorities and federated entities agreed on more intensive coordination in the overall distribution of personal protective equipment to the care sector, for example, by sharing information on reliable suppliers, stock levels, orders, deliveries, etc. They also created a solidarity stock, available to all federated entities to meet urgent and acute needs in their regions.
- In **Switzerland**, the Conference of Cantonal Governments (KDK) coordinates activities related to the COVID-19 crisis with the Federal Council and among cantons. In particular, the KDK is coordinating specialised conferences with all 26 cantons in order to meet regularly and discuss topics related to the crisis (Conference of Cantonal Governments (KDK), 2020[190]).
- In the **US**, there have been cross-region coordination initiatives among states. For example, the governors of New York, New Jersey, Connecticut established a common set of guidelines on social distancing and limits on recreation, which Pennsylvania subsequently joined as well (New York State, 2020[191]).

Cross-border cooperation

- Cross-border transfers of COVID-19 patients have been made possible in the context of pre-existing cooperation agreements among **France** (Grand-Est), **Germany** (Rhineland-Palatinate and Baden-Württemberg), **Switzerland** and **Luxembourg**.
- In **Germany**, the minister-president of Rhineland-Palatinate created a cross-border task force with **Dutch and Belgian** regions to coordinate actions against the novel coronavirus. In France, both the central government and the Grand-Est region are involved in this cooperation.
- The **European Region Tyrol-South Tyrol-Trentino** at the Italian-Austrian border faced several challenges posed by the mobility restrictions implemented by both the Italian and the Austrian national authorities, resulting from the lockdown and the closure of the borders. Despite the situation, the regions of Tyrol, South Tyrol and Trentino managed to maintain a very high level of cooperation during the crisis. A coordination unit was set up in February within the Euroregion. South Tyrol sent protective equipment to Tyrol and Trentino and hospitals in the Tyrolean towns of Innsbruck, Hall and Lienz took care of South Tyrolean patients in need of intensive care. In June 2020, the Euroregion executive board approved several new projects to reinforce cross-border cooperation, including a new Euregio2Plus-Ticket for public transport within the three regions, a joint health project to collect information on the psychological effects of isolation on the local population during the pandemic, new marketing strategies and standards for safe and healthy tourism environment. In addition, a new masterplan to guarantee lower CO_2 emissions and greenhouse gases by 2030 was approved, as was to develop renewable resources within the Brenner corridor.

- In the **EU,** associations and institutions of regional and local governments involved in cross-borders cooperation [e.g. European Committee of the Regions (CoR), the Transfrontier Operation Mission (MOT), the Association of European Border Regions (AEBR) and the Central European Service for Cross-Border Initiatives - CESCI)] joined forces to propose a "European Cross-border Citizen's Alliance" (EU Committee of the Regions, 2020[192]).

Pointers for action

- Strengthen cooperation across municipalities and regions to help minimise disjointed responses and competition for resources during a crisis.
- Facilitate inter-municipal cooperation to support recovery strategies by ensuring coherent safety/mitigation guidelines, pooling resources, and strengthening investment opportunities, for example through joint borrowing..
- Promote inter-regional or inter-municipal collaboration in procurement, especially in emergency situations (e.g. purchasing alliances, networks, framework agreements, central purchasing bodies). Promote the use of e-government tools and digital innovation to simplify, harmonise and accelerate procurement practices at subnational level
- Actively pursue and promote cross-border cooperation in order to promote a coherent response recovery approach across a broad territory (e.g. border closure and reopening, containment measures, exit strategies, migrant workers).

Looking ahead: How COVID-19 is reshaping multi-level governance and regional development

Navigating the emergency: a challenge in sequencing

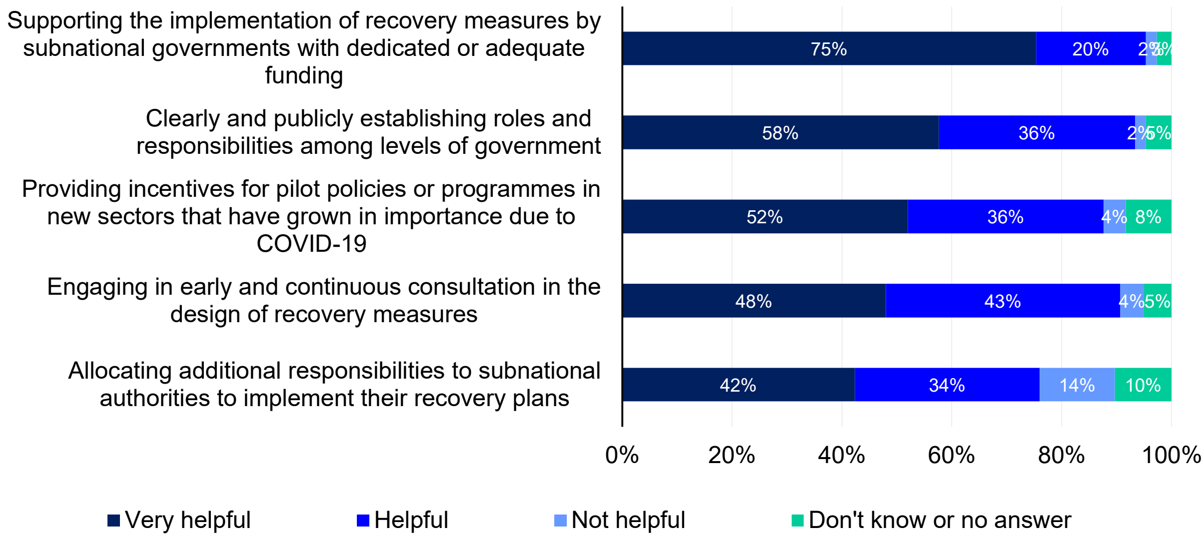
The COVID-19 pandemic is requiring all levels of government to act in a context of great uncertainty and under heavy economic, fiscal and social pressure. Since mid-2020, and especially with the onset of a second wave of infections in many countries, a new challenge has been revealed: the limited ability to sequence policy action. National, regional, and local governments find they cannot count on following a straight or linear course of policy action to manage, exit and recover from the crisis. Instead, governments must act on all fronts simultaneously and in synchrony. This need – for flexibility and adaptability – is leading governments to reconsider their multi-level governance systems, to revaluate their policy tools, and to reassess their regional development priorities. Success depends on mobilising and coordinating multiple policy sectors and all levels of government, and adopting place-based approach. It relies on clear leadership, balanced with effective coordination, consultation, and a collaborative approach among government and non-government actors. It also depends on reinforcing trust in public institutions and harnessing the power of regular communication with stakeholders and citizens. The responses to COVID-19 are revealing a potential in regional development priorities – emphasising greater regional resilience, including through more accessible basic services, narrower digital divides, adjusted global value chains and industrial policy, and broader climate action.

How COVID-19 is shaping the future of multi-level governance

The COVID-19 crisis highlights the importance of effective multi-level governance in managing this crisis. It is leading countries to re-evaluate their multi-level governance systems and regional policy instruments in an effort to make them more “fit for purpose”, more flexible, and better able to respond to the differentiated needs of regions. Doing so could mitigate the sequencing difficulty, helping subnational governments simultaneous manage new eruptions of the virus or other emergencies, recover from the crisis, and achieve greater resilience. The balance between centralised and decentralised territorial management is being reconsidered, as are coordination mechanisms. The COVID-19 crisis underscores the fundamental need for a coordinated response to emergencies and their aftermath, and accentuates the risks associated with uncoordinated and/or heavily bureaucratic approaches to crisis management – regardless of whether a country is federal or unitary, centralised or decentralised. Coordination is just as necessary across and among levels of government as it is between government and non-government actors, including citizens. Successfully managing the pandemic’s differentiated impact rests with differentiated responses, emphasising the potential advantages of experimentation and a place-based approach to exit and recovery strategies. Success also depends on a strong partnership between national and subnational governments, as well as with the private and third sectors, civil society and citizens. Effective central-level leadership, particularly in setting strategy and guidelines to support coherent responses and minimise competition among jurisdictions, a clear assignment of roles and responsibilities, and subnational governments well-capacitated to act in a manner coherent with meeting the immediate needs and long term priorities of their territories are contributing factors to an effective partnership.

It is also reinforcing how national governments can best support regional and municipal authorities manage and recover from a crisis. Among the 300 EU regional and municipal governments surveyed by the OECD and the Committee of the Regions (CoR) in June 2020, 75% indicated that funding was one of the most helpful levers for addressing the next crisis (OECD-CoR, 2020[65]). This highlights the increasing importance of subnational finance and well-funded mandates. On the one hand it can lead to a re-evaluation of traditional budget sources, just as it could mean identifying external funding possibilities. Clearly established roles and responsibilities among levels of government (58%), and offering incentives for pilot policies or programmes in sectors increasingly important since COVID-19 (52%) were also identified as areas where higher-level government support is particularly welcome (Figure 20). A change in how responsibilities are assigned and financed among levels of government, including for crisis response and management, and more experimentation though pilot policy actions and initiatives could result in more flexible multi-level governance systems and facilitate territorially differentiated responses.

Figure 20. Multi-level governance policy reforms



Notes: N=300 EU regional and municipal governments; Original question asked: How helpful would the following national government measures be to manage the next crisis.
Source: (OECD-CoR, 2020[65])

A centralised or decentralised approach in equilibrium

COVID-19 reveals the advantages and disadvantages to both highly centralised and highly decentralised approaches. For instance, a centralised approach to managing aspects of the public health emergency can support a rapid and uniform response across a country, overriding potential inequalities, be they in resource capacity or in the treatment of individuals (e.g. quarantining those who traveling from a specific country, state, region or province). This is evident in the ability of national governments to transfer patients from hospitals in highly affected regions to less affected ones, as seen in France. In the early days of the pandemic, for example, the French government transferred patients from hospitals in the most affected regions, such as Grand-Est to those less affected in the South. It can also facilitate quick information and knowledge sharing, which is essential in times of crisis (Silberzahn, P., 2020[193]). On the other hand, a decentralised system can support greater flexibility and experimentation in the face of uncertainty, making room for “bottom-up”, innovative approaches (Silberzahn, P., 2020[193]) that can be applied elsewhere, if successful and appropriately adapted. The multi-pronged “Veneto approach” to controlling the COVID-19 virus originated in a single Italian town, Vò-Euganeo, extended to entire Vento region and eventually was adopted, in part or in full, by other Italian regions. Additionally, decentralised approaches create space for regional and local governments to react and respond quickly. The decentralised networks of German laboratories were instrumental in realising the proactive testing strategy put in place by the country.

Furthermore, COVID-19 is reinforcing centralisation/decentralisation as a means to achieve objectives and not an end-state (OECD, 2019[194]). A good illustration is the fact that some governments are temporarily recentralising while others are temporarily decentralising in order to manage the crisis. Many countries adopted state-of-emergency laws, giving central or federal governments the right to take over some subnational responsibilities. By contrast, some countries decided to decentralise additional powers to subnational governments, at least temporarily. For example, Switzerland has temporarily recentralised health management in response to the crisis. In the early days of the pandemic, the UK temporarily decentralised health management, and as the pandemic continues the government is evaluating how to engage more with devolved governments.

Successful short, medium and long term responses to the coronavirus-induced crisis does not depend heavily on whether a country is federal or unitary or on its degree of decentralisation. Rather, it depends more on the coordination mechanisms applied, as well as on the ability of government actors to align priorities, implement joint responses, support one another, and foster information sharing, including with citizens (OECD, 2019[194]). The crisis is also accentuating the importance of a risk management strategy, a clear assignment and understanding of responsibilities among levels of government, particularly in responding to a crisis, and of ensuring properly funded mandates at the subnational level. This contributes to meeting the immediate needs that keep arising, but also to ensuring future capacity to do so.

Emergency or crisis situations demand rapid response capacity to prevent escalation and control damage. The ability to adapt to uncertainty and change, and to course correct as needed becomes central to successful crisis management. Because an emergency’s immediate impact is felt locally, regional and local governments need room to act quickly, effectively and responsibly – regardless of whether they operate in centralised or decentralised contexts. Such capacity, however, can frequently depend on having sufficient flexibility and discretion to mobilise resources, for example, or to make and enact decisions that can help mitigate or prevent further crisis-induced damage. It can also mean temporarily or permanently reducing burden and red-tape surrounding administrative procedures, making it easier for subnational governments to fulfil responsibilities and take decisions, and for eligible businesses and citizens to apply for and receive emergency support.

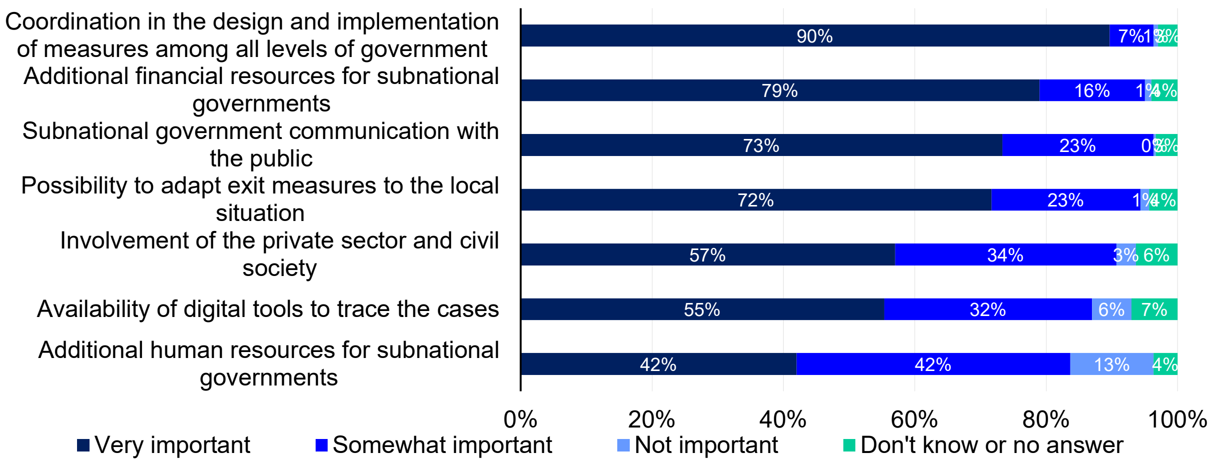
Finally, managing COVID-19's differentiated impact requires a degree of flexibility to allow for territorial responses that are place based and adapted to the most pressing needs and the preparedness of specific localities. This is can support a region in taking non-sequential but coherent action – addressing the emergency, containment and recovery demands based on the pandemic's status in a region. This differentiated territorial approach is as apparent and relevant in federal or highly decentralised countries as it is in unitary or highly centralised ones. The importance of a place-based approach in response to the health crisis has consistently grown. In many countries specific measures regarding masks, closure of schools or restaurant closures, and full versus partial lockdowns are adopted for specific localities and territories, rather than applied to the national level, to limit the economic impact.

Good coordination minimises the risk of crisis management failures

A coordinated response by all levels of government, in both federal and unitary systems, can minimise crisis-management failures. Many countries with past experience in crisis management seem better prepared to tackle the COVID-19 crisis in terms of coordination. The main risk of non-coordinated action in a crisis is to "pass the buck" to other levels of government, which can result in a disjoined response and generate collective risk. For example, in federal systems, there may be limited incentive for cross-jurisdiction cooperation (e.g. sharing equipment, skilled personnel, etc.) if supporting a neighbour jeopardises one's own ability to adequately respond to a crisis situation. Horizontal coordination is essential to minimise coordination failures and avoid disjointed responses that can lead to collective risk. Countries are approaching this in a variety of ways and at different levels of government.

When consulted on how to manage a successful exit strategy, respondents indicate coordination and financial resources as of utmost importance: 90% of subnational governments report that coordination in the design and implementation of measures among all levels of government is very important, and 79% cite additional financial resources for subnational entities is very important. Communication with the public and the possibility to adapt measures to the local situation are also considered as key in a successful exit strategy (Figure 21). While results are broadly homogeneous between the different subnational government categories, regions and municipalities have slightly different priorities. Regions place more emphasis than municipalities on adapting exit measures to the local context (76% versus 68%), while municipalities are more likely than regions to highlight the need for additional human resources (48% versus 33%).

Figure 21. Policy tools at the core of a successful exit strategy



Source: (OECD-CoR, 2020[65])

Many critical aspects of crisis response – such as containment measures, health care, social services, economic development and public investment – are shared among levels of government, reinforcing the need for effective vertical coordination. Federal and unitary countries alike have been introducing or mobilising vertical coordination mechanisms to ensure a coherent crisis response. Multi-level coordination bodies are commonly being used for this purpose, for instance the National Cabinet in Australia, the COVID-19 Social Roundtable (*Mesa Social COVID-19)* in Chile, and the Conference of Presidents in Spain. The more decentralised the country, the greater the need to mobilise coordination platforms to minimise the risk of a fragmented policy response. National associations of subnational governments are also playing a role to ensure vertical coordination efforts – disseminating information, identifying and sharing solutions, and supporting the implementation of emergency measures by their members. Effective crisis response highlights that robust vertical and coordination mechanisms are more important than ever.

The value of partnerships and communication for crisis management and beyond

No single government, or level of government, can meet the demands of crisis management alone. The COVID-19 crisis, given its scope and magnitude, is challenging all levels of government to reinforce their partnerships – with each other, with the private and third sectors, and with citizens. If priorities are mutually identified and agreed upon, and initiatives are designed with sufficient information exchanged between the developers and implementers, then the likelihood of an effective support programme will be greater. While this certainly requires coordination, it also means a clear delineation, understanding and agreement of roles and responsibilities, and mutual respect, in the short, medium and long term.

Quickly mobilising necessary public, private and third sector actors can help governments respond to a crisis more effectively. Countries are applying this insight in various ways. Asian countries, for example Korea, are drawing on their experience with SARS. In Attica Greece, the regional government is working with the Medical Association of Athens to establish preventive measures against the coronavirus (European Committee of the Regions, 2020[195]). Crisis management plans used in Asia and in the Nordic countries, for example, can help rapidly mobilise diverse actors to meet crisis-induced challenges, such as those arising from this pandemic.

Clear, transparent, rapid, and accurate communication among all parties is fundamental on many levels. First, it helps government and emergency personnel respond in a targeted manner. New Zealand's COVID-19 Local Government Response Unit (New Zealand Government, 2020[196]) such activity. Second, it can promote knowledge sharing which then leads to the application of more effective solutions. Portugal's General Directorate of Local Authorities established a contact line to support information exchange and peer learning among municipalities. The Local Government Association in England provides communications templates to help City Councils share good practices and exchange information (Local Government Assocciation, 2020[197]). Third, and perhaps most importantly, it contributes to trust in the institutions and people leading the crisis management effort, which in turn can mitigate the crisis' negative impact. Effective crisis communications depends on the relationships across all levels of government and with the public and private sectors. It means communicating early, clearly, regularly and with a coherent message. Subnational governments need to know what they are facing and what is expected of them – their role must be clear. Citizens and businesses need to be reassured that the government has a strategy for each stage of the crisis Like subnational governments, they too need to know what is expected of them, and feel reassured that they are supported through a difficult period (Smith, N., 2020[198]). There is evidence that in the face of COVID-19 people expect government to lead in all areas relevant to the pandemic: containment, information dissemination, economic relief and support, helping people cope, and getting the country back to normal (Edelman, 2020[199]). Less is expected of business, NGOs and media.

One of the most powerful aspects of a partnership the ability to generate agreed upon objectives, priorities and plans. Taking unilateral decisions can lead to non-compliance with measures at a minimum and larger-scale demonstrations or conflict at a maximum, as seen in France (Marseille), Italy, Spain, the UK and the

US during this crisis. Bringing together a territory's various levels of government to identify objectives and design measures in collaboration can lead to stronger implementation of containment and recovery efforts. It is also important to ensure sufficient and timely consultation with other stakeholders, including business owners, service providers, teachers and parents, and civil society. This can increase the possibility that measures are followed, despite "virus-fatigue", and can lead to more locally appropriate, more innovative initiatives. A September 2020 survey on the perception of EU citizens regarding the role of regional and local authorities in managing the COVID-19 crisis, and subnational government influence in EU politics and policies more broadly indicates that about two-thirds of Europeans think that regional and local authorities have insufficient influence on decisions made at the EU level (EU Committee of the Regions, 2020[108]). Specifically Europeans would like their regional and local authorities to have more influence on policies related to health (45%), employment and social affairs (43%), and education, training and culture (40%). Furthermore, 58% of surveyed Europeans think that greater influence of regional and local authorities would have a positive impact on the EU's ability to solve problems (EU Committee of the Regions, 2020[108]), and, implicitly, those associated with the coronavirus.

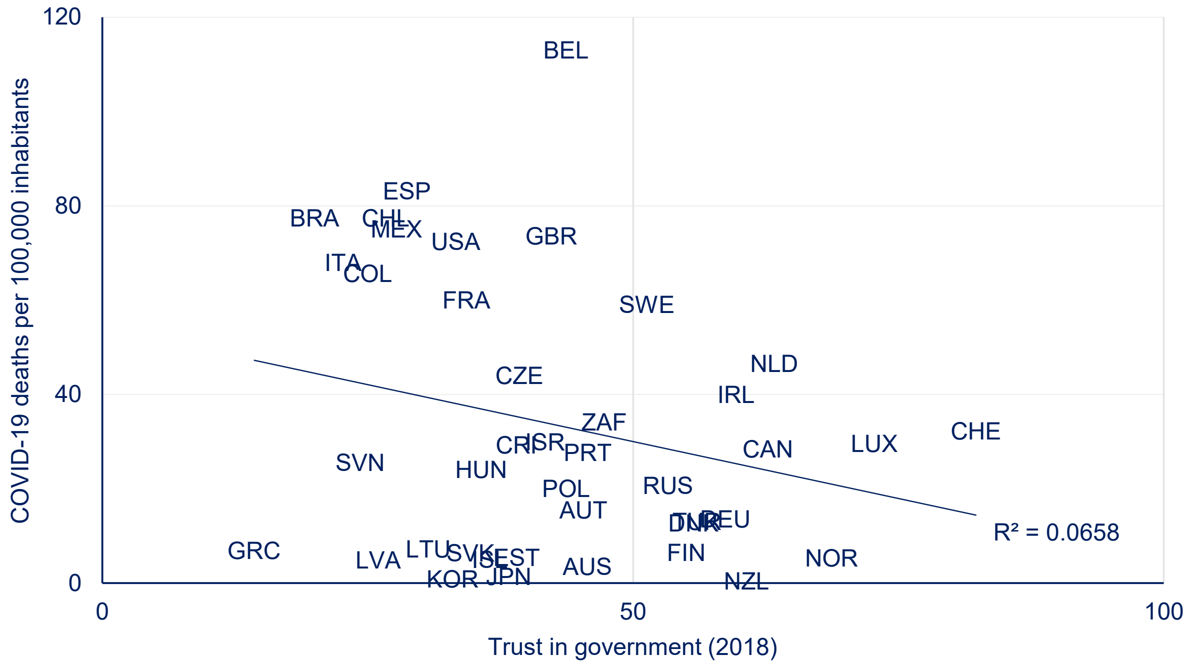
The importance of trust in government

There is evidence that, in some countries, trust in national government is increasing during this crisis. Where it is not, the gap is often filled by increased trust in local government (which tends to be higher even in non-emergency times) (Edelman, 2020[199]). This holds true at the European level, as well. More Europeans trust regional and local authorities (52%) than they trust the EU (47%) or their national government (43%) (EU Committee of the Regions, 2020[108]). More Europeans (48%) trust that regional or local authorities are taking, and will continue to take, appropriate measures to overcome the economic and social impact of COVID-19 crisis than the European Union (45%) or national governments (44%). Citizen trust in government can help mitigate the impact of "virus-fatigue" that contributes to a more lax uptake of virus control measures (e.g. confinement, social distancing, wearing masks), and jeopardise the success of emergency and containment actions.

This further highlights the importance of successful multi-level governance. Each level of government depends on the other for different aspects of policy and service design and delivery to manage the impact of COVID-19. At the same time, ensuring policy success will depend heavily on subnational governments and their ability to deliver solutions. Citizen trust can play a role in ensuring compliance with containment measures and mitigate the impact of "virus-fatigue". It becomes that much more important, then, to ensure that subnational governments have appropriate and adequate support from higher levels of government the to deliver solutions.

Furthermore, trust in government may play a role in COVID-19 related health outcomes. In some countries, COVID-19-related fatality rates are higher where governments enjoy lower degrees of trust (Figure 22). This is particularly the case in Brazil, Chile, Colombia, Italy, Mexico and the US. While many factors are at play, including health and social system capacity, deprivation levels, etc., it could signal that governments facing lower degrees of trust may have difficulty enforcing containment measures and ensuring their population's compliance with public health measures. Moving forward, these governments may be less likely to benefit from any uptick in trust generated by the crisis.

Figure 22. The relationship between trust in government and COVID-19 fatalities



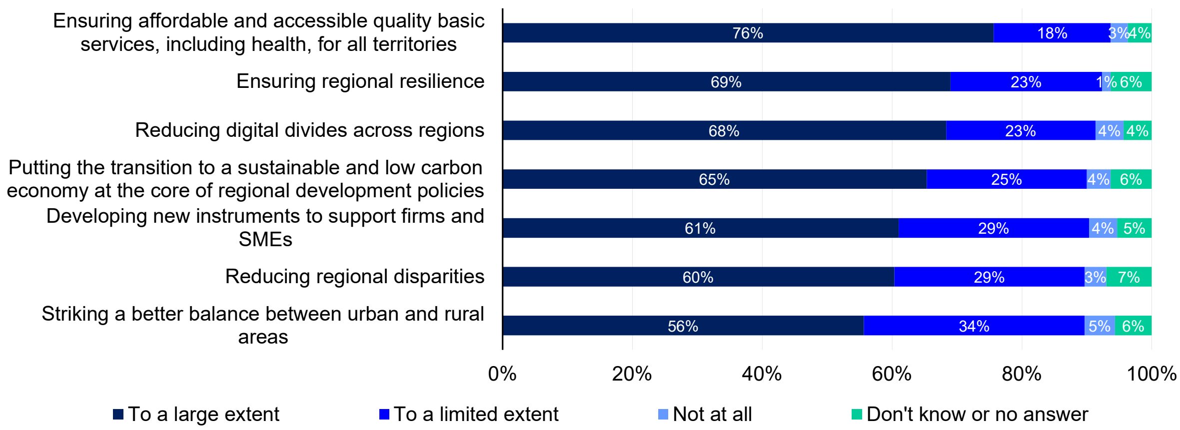
Note: Data for COVID-19 deaths have been retrieved for OECD countries, Brazil, Russia and South Africa on 8 November 2020.
Source: Authors' elaboration, based on data from: Johns Hopkins University Coronavirus Resource Centre, OECD Trust in government database

While this crisis may be generating record levels of trust in government, the challenge for public officials will be to maintain the trust. All levels of government may want to take stock, evaluate the trust-building actions adopted during the pandemic, and consider the opportunities they offer, post-pandemic. While it can take many years to build trust, it can be rapidly lost (Edelman, 2020[199]).

More resilient regions: a regional development policy priority post COVID-19

COVID-19's differentiated impact on individuals, communities, and regions and the potential risk of its accentuating territorial disparities lends new urgency to a place-based approach to regional development and generating greater inclusiveness. The role of effective partnerships and trust among different sets of actors, the need for flexibility and adaptability, and the importance of an equilibrium between top-down and bottom-up action serve to reinforce this urgency. It has also rekindled policy dialogue around regional resilience. The pandemic and the demands it places on all levels of government is generating a shift in regional development priorities towards reinforcing regional resilience (Figure 23).

Figure 23. Identified regional development policy priorities arising from the COVID-19 crisis



Note: N=300 EU regional and municipal governments; Original question: To what extent would you like the COVID-19 crisis to reshape regional development policy priorities in the future by putting more emphasis on the following elements?
Source: (OECD-CoR, 2020[65])

Generating more resilient regions means first ensuring that regions are able to absorb, recover (or bounce-back) from and/or adapt to the impact of economic, financial, environmental, political and social shock or chronic pressure; and then that they are able to continue meeting the needs of citizens and businesses at least as well as – and ideally better – than before a crisis. Post-COVID-19, building more resilient regions may see greater national and subnational-level investment in health care and other public services. In the EU, 76% of surveyed regional and municipal governments believe that regional development strategies should place greater emphasis on accessing quality public services, including health in all territories (OECD-CoR, 2020[65]). It is also likely to result in a re-evaluation of regional policy objectives, including with respect to their urban/rural equilibrium, the digital divide, the balance between tangible and intangible assets (infrastructure such as broadband, public transport, and social housing, R&D, innovation, well-being and culture, productivity and industrial profiles, and how to best meet higher-level aims, including those relating to the climate imperative.

Rethinking the urban/rural spatial equilibrium and the role of telework

The COVID-19 pandemic and its aftermath might contribute to strengthening urban-rural links. Teleworking is a significant factor in a territory's ability to mitigate the crisis' economic impact. It has required investment and adaptation (including cultural and behavioural) on the part of employers and employees. There is some discussion around whether increased possibilities for teleworking will lead people to leave large cities and establish residence in smaller cities or rural areas; yet this is unlikely to be the case. People are attracted to cities for their employment opportunities but also for access to services and amenities. At the same time, medium-sized cities could see a boom, as well as smaller municipalities adjacent to larger cities. The long-term impact on the urban/rural spatial equilibrium may be difficult to predict, though telework is likely to remain a permanent feature of work to some degree.

Rethinking global value chains and industrial policy

The impact of COVID-19 on national, regional and local economies is also propelling governments to rethink their industrial policies and production processes and the length of global value chains. Consideration is being given to the opportunities associated with reshoring strategic industries. Doing so in raw materials, for example, could reactivate rural economies as hosts of these industries. Also beneficial to rural economies can be the potential jobs created if the manufacturing sector uses and produces services in addition to goods. Greater emphasis on local production processes can favour shorter lead times and also shorten supply chains, making these more sustainable by reducing carbon emissions – a popular point with consumers.

There are challenges to manage, however, and these can vary according to a region's industrial drivers. For example, regions with major ports or logistics centres and those with large shares of employment in manufacturing or other tradeable sectors may be more affected by disruptions in global value chains. In addition, reshoring or producing locally can be more costly than offshoring. Production shifts can also be difficult to accomplish if a region lacks the necessary resources or skills as inputs. Meanwhile, regions with a productivity profile reliant on SMEs may be less resilient to disruptions, such as COVID-19, as these enterprises often operate in a limited number of markets and rely on a short list of suppliers and buyers.

Despite these challenges, the COVID-19 crisis can be used as an opportunity to accelerate the reconstruction of productive processes, industries and regions that were latent or growing only moderately. It may also be a good moment to reinforce investment in reorganising production methods in areas that did not exist during previous crises (e.g. 3D-printing and production, e-commence, digital technologies that support easier teleworking, etc.). The COVID-19 crisis could introduce an exponential shift in the circular economy, the relocation of production, short circuits, logistical reorganisation, and the digitalisation of companies, for example (Assemblée des Communautés de France, 2020[200]). Finally, COVID-19 may create space for improved and expanded services, contributing to regional attractiveness in remote and rural areas.

Rethinking the approach to the climate imperative

Regions and cities are ideally placed to create links between COVID-19 recovery packages and the climate change policies. They are responsible for about 64% for the public investment dedicated to climate and environmental initiatives. Using this power to invest in the green transition and properly target local needs, could further turn the COVID-19 crisis into an opportunity. For example, investing to reduce health risks can reinforce or be reinforced by investing to reduce pollution levels, as health and a clean environment can be positively related and contribute to a community's resilience. Making the most of such links can also support local business innovation, and generate a transition whose benefits reach the broadest possible numbers. A balance must be struck, however, with the challenges that can arise in this effort. For example, short-term spending and investment to mitigate the impact of COVID-19 might derail long-term priorities, such as a net-zero emissions, due to the increasingly tight fiscal environment and capital constraints. This makes diversifying sources of financing fundamental to success, which in turn can require appropriate multi-level governance mechanisms and higher-levels of government support (e.g. relaxed fiscal rules, reduced red-tape, etc.)

In the effort to respond effectively to COVID-19, it is also critical not to lose sight of long-term, large-scale, societal objectives, such as ensuring greater inclusiveness or addressing climate change. Building resilience can help. So can experimenting with new ways of working. For example, the city government of Barcelona developed a multi-stakeholder strategic pact. Representatives from different political parties, NGOs, the private sector, academia, etc., agreed to work with the government to develop and implement a strategy for addressing structural measures over the next two years. The city's budget will be pinned to the strategy that emphasises four needs arising from COVID-19: economic recovery, social solutions, rethinking the urban model, and enhancing the culture/education/knowledge sector (Barcelona City Council, 2020[201]). Significantly, the city reaffirmed its commitment to its 2030 Agenda and considers it more relevant than ever – highlighting how medium- and long-term responses to COVID-19 can go hand-in-hand with existing strategic priorities for regional and local development and investment.

The arrival of COVID-19, and its second wave in many countries, has thrown the significance of multi-level governance into relief – highlighting the need for a place-based approach to crisis management and recovery, shedding more light on the balance of centralised versus decentralised approaches to crisis management, the need for effective leadership balanced with effective coordination, consultation, and a collaborative approach among government and non-government actors. It is underscoring the role that trust in public institutions plays – not only in crisis management but also in health outcomes – and the power of effective communication with stakeholders and citizens. It is also leading governments to take an even closer look at regional development as a tool for building regional resilience, including through more accessible basic services regardless of where people live, reducing digital divides, achieving net-zero carbon emissions, and building on the opportunities of globalisation. COVID-19's differentiated impact on communities, regions and countries is inspiring broader discussion on the how to increase resilience and how to be better prepared for future health, economic, social or climate-related shocks.

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