Just How Resilient are OECD and EU Countries?

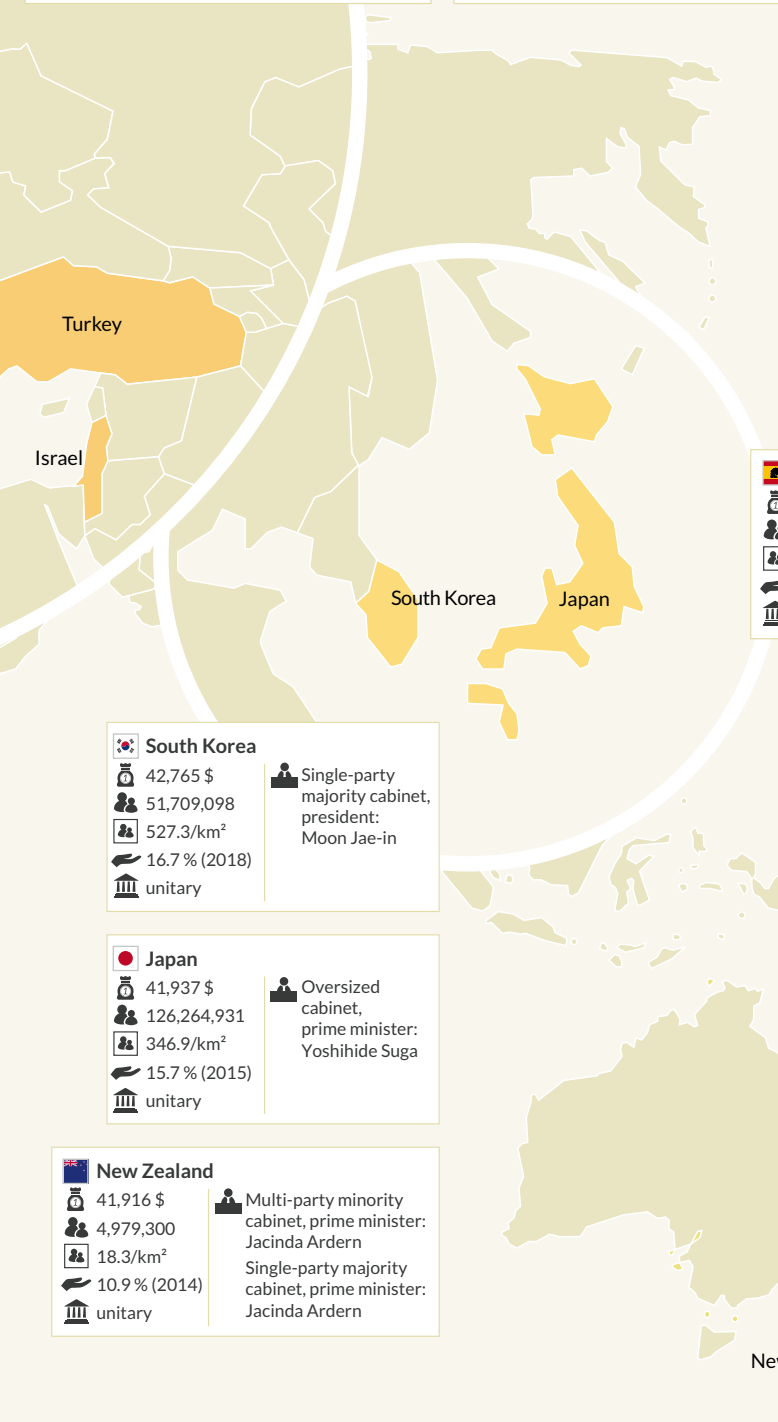
Sustainable Governance in the Context of the COVID-19 Crisis

Christof Schiller, Thorsten Hellmann, Helene Schüle,
Sascha Heller and Emma Gasster

BertelsmannStiftung

OECD and EU country sample

SGI Sustainable Governance Indicators



Denmark
57,929 $
5,814,422
136,5/km²
6.7 %
unitary

Single-party minority cabinet, prime minister: Mette Frederiksen

Sweden
53,080 $
10,278,887
24.6/km²
10.2 %
unitary

Multi-party minority cabinet, prime minister: Stefan Löfven

Finland
48,731 $
5,521,606
18.2/km²
5.4 %
unitary

Oversized cabinet, prime minister: Antti Rinne/ Sanna Marin

Estonia
36,919 $
1,326,898
31.3/km²
13.9 %
unitary

Minimum winning coalition, prime minister: Jüri Ratas/ Kaja Kallas

Ireland
88,086 $
4,934,040
71.7/km²
6.0 %
unitary

Multi-party minority cabinet, prime minister (Taoiseach): Leo Varadkar

Minimum winning coalition, prime minister (Taoiseach): Micheál Martin

United Kingdom
46,631 $
66,836,327
280.6/km²
11.3 % (2018)
de facto federal

Minimum winning coalition, prime minister: Boris Johnson

Germany
53,945 $
83,092,962
240.4/km²
9.0 %
federal

Minimum winning coalition, chancellor: Angela Merkel

France
47,680 $
67,055,854
119.2/km²
6.7 %
unitary

Oversized cabinet, president: Emmanuel Macron

Belgium
52,064 $
11,502,704
382.7/km²
7.3 %
federal

Multi-party minority cabinet, prime minister: Sophie Wilmès

Oversized cabinet, prime minister: Alexander de Croos

Netherlands
57,102 $
17,344,874
508.2/km²
6.7 %
unitary

Multi-party minority cabinet, prime minister: Mark Rutte

Switzerland
71,712 $
8,575,280
219.0/km²
9.6 %
federal

Governing executive: Bundesrat

Austria
56,303 $
8,879,920
109.3/km²
8.6 %
federal

Minimum winning coalition, chancellor: Sebastian Kurz

Poland
33,219 $
37,965,475
123.6/km²
9.4 %
unitary

Single-party majority cabinet, prime minister: Mateusz Morawiecki

Czechia
40,937 $
10,671,870
138.6/km²
4.3 %
unitary

Multi-party minority cabinet, prime minister: Andrej Babiš

Hungary
32,935 $
9,771,141
106.7/km²
8.6 %
unitary

Minimum winning coalition, prime minister: Viktor Orbán

Croatia
28,712 $
4,065,253
73.4/km²
12.2 %
unitary

Multiparty minority cabinet, prime minister: Andrej Plenkovic

Spain
40,880 $
47,133,521
93.7/km²
13.6 %
de facto federal

Single-party minority cabinet, prime minister: Pedro Sánchez

Multi-party minority cabinet, prime minister: Pedro Sánchez

Portugal
34,923 $
10,286,263
111.3/km²
10.5 %
unitary

Single-party minority cabinet, prime minister: António Costa

Italy
42,424 $
60,302,093
205.6/km²
13.8 %
unitary

Minimum winning coalition, prime minister: Guiseppe Conte

Greece
29,662 $
10,717,169
80.9/km²
12.3 %
unitary

Single-party majority cabinet, prime minister: Kyriakos Mitsotakis

South Korea
42,765 $
51,709,098
527.3/km²
16.7 % (2018)
unitary

Single-party majority cabinet, president: Moon Jae-in

Japan
41,937 $
126,264,931
346.9/km²
15.7 % (2015)
unitary

Oversized cabinet, prime minister: Yoshihide Suga

New Zealand
41,916 $
4,979,300
18.3/km²
10.9 % (2014)
unitary

Multi-party minority cabinet, prime minister: Jacinda Ardern

Single-party majority cabinet, prime minister: Jacinda Ardern

Legend
GDP per capita ($)
Population
Population/km²
Poverty rate (%)
State structure
Government from November 1, 2019 to January 15, 2021

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Table of Content

Key Findings **6**

Introduction **16**

PART I:
Resilience of Democracy **19**

PART II:
Resilience of Governance **30**

- Executive Preparedness 30
- Executive Response 32
- Resilience of Executive Accountability 45

PART III:
Resilience of Policies **49**

- Economic Resilience 49
- Welfare State Resilience 71

Measuring Sustainable Crisis Management **84**

Questionnaire **95**

Country Profiles **110**

- Austria 110
- Belgium 111
- Canada 112
- Chile 113
- Croatia 114
- Czechia 115
- Denmark 116
- Estonia 117
- Finland 118
- France 119
- Germany 120
- Greece 121
- Hungary 122
- Ireland 124
- Israel 125
- Italy 126
- Japan 127
- Mexico 128
- Netherlands 129
- New Zealand 131
- Poland 132
- Portugal 133
- South Korea 134
- Spain 135
- Sweden 137
- Switzerland 138
- Turkey 139
- United Kingdom 140
- United States 141

References **143**

Regional Coordinators and Advisory Board **146**

About the Authors **148**

Appendix **150**

Figures **166**

Publishing Information 170

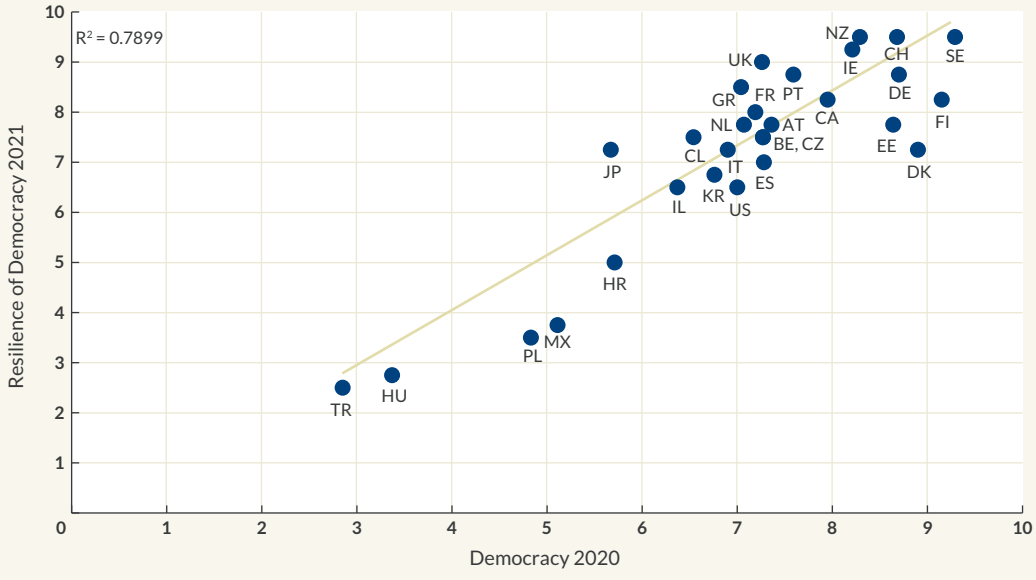
Key Findings

Resilience of Democracy

In states where freedom of the press, civil and political rights, the independence of the judiciary and core democratic values were subject to erosion even before the crisis, these worrying developments became further entrenched as a result of actions taken in the name of battling the coronavirus crisis. However, those countries classified as democratically resilient proved able, for the most part, to demonstrate their resilience, even during the crisis. In Turkey, Hungary, Poland, Mexico and Croatia, efforts to hollow out key democratic institutions have only continued during the crisis. In addition, the pressure placed on media professionals increased significantly in these countries. The ability of the courts to monitor the legality of measures taken by these state's governments has also been curbed even further. All of the other states in our sample also placed significant restrictions on political freedoms and civil liberties in order to contain the spread of the coronavirus. In this respect, the first year of the pandemic serves as a litmus test for whether elected governments are serious about commitments to restoring these rights at the first possible opportunity during an acute crisis. Whether attempts to effectively compensate for these restrictions have been made is, however, also relevant. It is thus a matter of the proportionality of restrictions introduced (see Fig. 1).

FIGURE 1 **Democracy 2020 and Resilience of Democracy 2021**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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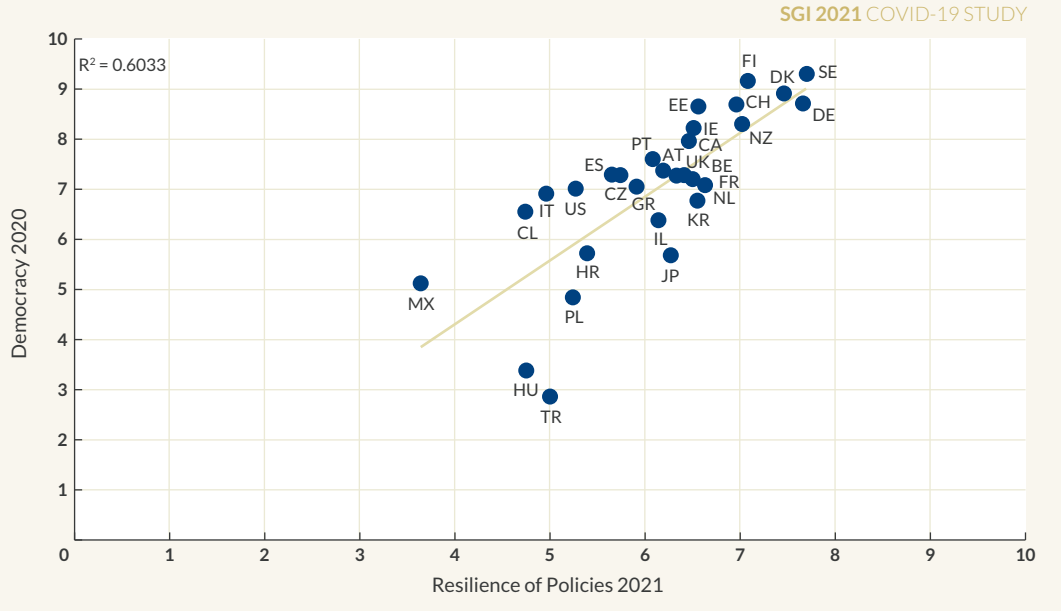
Only eight states in our sample have succeeded in demonstrating a high degree of credibility with regard to the proportionality of the restrictions placed on political freedoms and civil liberties. In Ireland, New Zealand, Sweden, Switzerland, Estonia, Greece, Portugal and the United Kingdom, our experts found the leadership in these countries to have made particularly credible commitments to lifting the restrictions placed on political freedoms and civil liberties at the first available opportunity. In many of these states, the decisions made were based on clear legal principles that in many cases featured mandatory exit clauses and were subject to regular judicial and legislative review. Restrictions placed on political and civil liberties are particularly problematic if they are influenced by political self-interest and are applied only to certain groups. This was the case in Poland, where restrictions on the freedom to demonstrate were interpreted differently for different groups and different kinds of public protest. The state of civil and political rights has also worsened in Hungary and Turkey, where governments exploited the coronavirus crisis to introduce tighter restrictions.

An important measure of the quality of a country's democratic culture is the ability of its political leadership to engage in compromise. In 10 of the countries we surveyed, political polarization posed a significant obstacle either within the policymaking process or later in the coordination and implementation of key crisis-response measures. Particularly at the beginning of the pandemic, we observed a high degree of cooperation between various political actors in many countries – including those featuring a highly polarized party landscape – that was manifest in short-term support for the government's course of action in a "rally around the flag" effect. However, this changed as the pandemic continued. In Belgium, Estonia, France, Spain, Turkey, Israel, Poland, Hungary, Mexico and the United States, failures to bridge partisan divides slowed progress in controlling the pandemic.

Resilience of Governance

Having resilient democratic institutions and processes as well as a resilient rule of law are thus important when it comes to responding capably to a crisis. However, highly resilient democratic institutions are a necessary but not sufficient condition for effective policy performance. States with high quality of democracy scores in the SGI 2020 have therefore generally proved more successful in terms of their crisis preparedness and response (see Fig. 2).

FIGURE 2 **Resilience of Policies 2021 and Democracy 2020**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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Nonetheless, there are clearly several states which, despite their robust democratic institutions, fall short in terms of delivering crisis-resilient economic and social policies. Thus, in addition to the quality of democracy, the sustainability and effectiveness of governance capabilities is equally important to a state's continued viability. This relates first to the quality of the existing crisis-management system itself. Second, a government's ability to successfully manage a crisis depends on criteria such as the ability to effectively formulate a crisis response, establish a functioning crisis-monitoring system, wage a clear crisis communication campaign and implement political measures. Third, both citizens and civil society must be empowered to monitor and influence the development of policies on an ongoing basis.

In retrospect, however, with the exception of South Korea, none of the countries we examined were adequately prepared in terms of their administrative crisis management and preparedness systems to deal with a public health crisis on the scale of the COVID-19 pandemic. Almost all countries, for example, did not have enough medical equipment for the pandemic at the beginning of the crisis. Of particular concern is the fact that in many cases, there was no clear allocation of competencies among the authorities involved in the event of a crisis. Instead, in nearly every country surveyed, we saw a lack of clarity in terms of who was responsible for what as well as a lack of experience with the channels of communication, which resulted in serious problems with coordination between authorities at different levels of government. This proved to pose a particular challenge to nearly all federally organized states which, however, were by no means the only ones to struggle with such problems. Countries with more centralized political systems such as the United Kingdom, Estonia, Italy and Japan also found it difficult to coordinate the central government's response to the crisis with that of regional governments. Looking forward, in order to strengthen their response to future crises, all states will need to subject their individual crisis architecture to regular evaluation and stress tests. Ensuring that such efforts have an impact, however, will require that the actors involved be provided a clear mandate and timetable, for example, so that they can provide the leadership binding recommendations for improvements to the crisis architecture. Maintaining a transparent evaluation process is also important.

Our study also shows that countries featuring robust executive capacities before a crisis are at an advantage when it comes to rapidly formulating effective countermeasures, evaluating the measures implemented and successfully communicating their crisis-response policies. Most of the countries that topped our "executive capacity" ranking for the 2020 SGI survey – which covers the end of November 2018 to the end of November 2019 – also number among the strongest performers in our special survey's "executive response" ranking. This is true for the Nordic countries of Finland, Sweden and Denmark as well as Oceania's New Zealand, all of which are top performers in terms of their executive crisis response. In terms of their overall executive capacity, other countries in our sample also achieved a level more or less on par with that observed by our experts in the SGI 2020. However, there are important exceptions to this. Greece, for example, shows impressive improvement compared to the pre-crisis period in both evidence-based policy formulation and national coordination efforts. As a result, it is in the group of top performers in terms of executive response along with the Nordic countries and New Zealand. By contrast, Estonia shows substantial deterioration compared to the previous reporting period in almost all areas of governance, ranging from the quality of evidence-based policy formulation to policy evaluation, public consultation and the national coordination of policy measures. A closer look at the individual criteria for good governance examined by our survey provides important lessons to draw upon when facing future crises.

Countries that can quickly and effectively incorporate the advice of experts into policy formulation or in adjustments made to appropriate policies tend to deliver a more effective crisis response. This has been particularly true for New Zealand, South Korea and Greece, which top our ranking on effective policy formulation. However, twelve out of the 29 countries surveyed demonstrated only marginal success in being able to rapidly and systematically translate the available expert advice into a coherent pandemic-control

policy. In the United States and Mexico, sitting presidents deliberately chose to ignore or express disdain for the advice voiced by established scientific advisory bodies. The horrible consequences of their inaction are well known: In terms of excess mortality, Mexico ranks last and the United States 27th among the 29 countries examined.

As the coronavirus pandemic progressed, policymakers were increasingly confronted with the challenge of creating a coherent crisis response able to incorporate divergent expert opinions, rapidly accumulating scientific evidence, and broader economic and societal perspectives on the consequences of the pandemic. Nearly all of the countries we studied varied considerably over time in terms of the extent to which the political leadership followed the advice of virologists on how to contain the pandemic. It is therefore crucial, on the one hand, that as a crisis develops, the circle of advisory experts and social groups remains sufficiently open and permeable to new members. Doing so ensures that new insights and overlooked issues are taken into consideration. In some of the countries examined, such as Sweden and the Netherlands, it turned out that the pool of experts involved was too limited at the beginning of the crisis. On the other hand, we see in all of the countries surveyed a lack of formally established mechanisms able to identify, effectively balance and coordinate divergent perspectives and conflicting goals as a crisis continues.

Another important area where further work is needed is ensuring that governments have the data collection and analysis capacities to evaluate the impact of measures taken. As the pandemic showed, many countries still struggle with gathering and assessing good data on health-related and other socioeconomic early-warning indicators that inform crisis-management decisions. In many states, there was an initial lack of valid and reliable data, such as that regarding intensive-care unit (ICU) capacity or excess mortality rates. This was also the case in countries such as the Netherlands, which are otherwise known for their excellent information infrastructure. A potentially promising approach to remedying this issue is to link up various and more detailed administrative data, and to tie this data to a frequently conducted survey of households. Overall, however, countries such as the Netherlands, New Zealand, Denmark and South Korea, each of which feature highly developed information and data infrastructures able to monitor on an ongoing basis the consequences of the pandemic, had greater success in mitigating the economic, health and social consequences of the pandemic.

It is important here to ensure that the data and information collected is also rapidly made available for public review and in ways that are user-friendly. However, the coronavirus crisis has shown just how far behind most states are in terms of providing open government data. Eight of the 29 states we studied delivered only weak and incomplete data on the pandemic to their citizens. And once published, this data often turned out to be unreliable. In addition, it was often unclear what data and which interpretation of the data ultimately informed government decisions on pandemic measures. In several other states, the essential (raw) data or information informing the leadership's decision-making metrics was not consistently made available to the public. Bucking this trend, Canada once again proved able to significantly increase transparency, accountability and the participation of its citizens – even during the crisis – through its already well-developed Open Government platform.

Overall, in all the countries examined, the degree to which legislative or civil society groups such as employers' associations, trade unions, environmental groups and welfare organizations were involved in policy formulation suffered as a result of the rapid-fire pressure under which measures had to be adopted. However, during the crisis, none of the countries in our sample proved able to adapt their societal consultation processes so as to enable the government and civil society to engage – under the strain of time pressure – in an adequate and effective exchange of ideas while formulating policies. In many of the countries surveyed, parliamentary oversight opportunities proved to be severely limited both de facto and de jure. In six countries, parliaments had almost no oversight capabilities. Only Portugal and Greece involved civil society groups more so than they had before. In both cases, however, the governments interacted with unions and employers' associations primarily to provide them

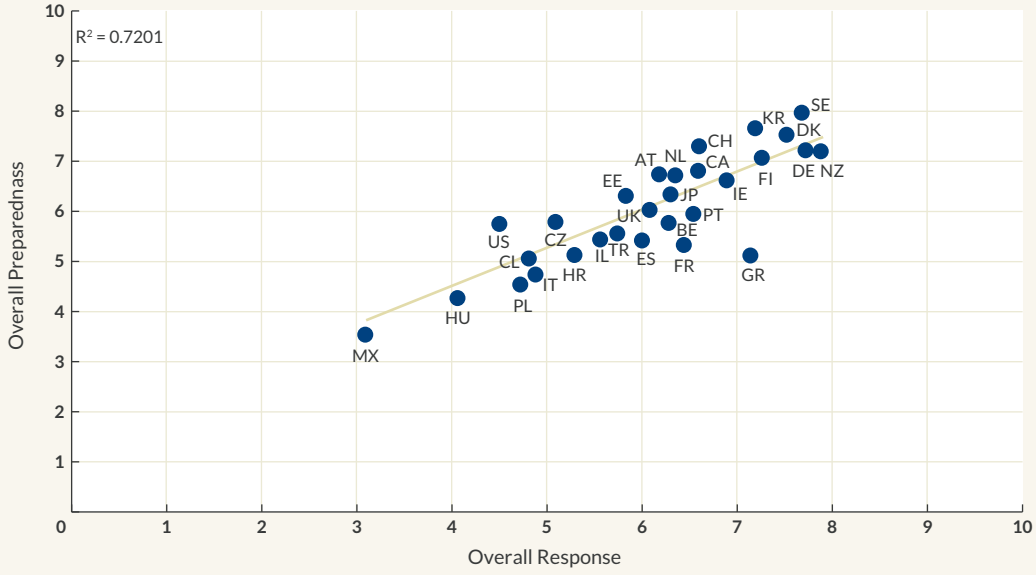
information rather than engage in an exchange of ideas. Looking ahead, a strong recovery from the crisis will therefore require involving civil society groups more heavily in the formulation of measures designed to lead the way forward.

Because key civil society actors are generally not heavily involved in decision-making processes during a crisis, a government's crisis communication becomes increasingly relevant. In fact, countries that are able to formulate relatively successful policies in response to a crisis often also feature a coherent and unified crisis communication strategy. There is therefore a correlation between proactive and coherent crisis communication efforts and a successful crisis response. Countries such as New Zealand, for example, succeeded in creating a shared understanding of the cause and effects of the coronavirus crisis through only a few clearly stated objectives and measures. From the outset, federally organized states faced greater challenges than more centralized ones in coordinating their respective crisis communication. All too often, countries such as Canada, the United States, Germany, Switzerland and Belgium, for example, failed to ensure that the public was provided with consistent information through the various levels of local administrative bodies.

However, when it comes to the question of successful national coordination efforts, one should not necessarily shy away from comparing federally organized systems with more centralized political systems. This should not come as a surprise. After all, the pandemic has powerfully demonstrated that this involves mobilizing and orchestrating a collective effort on a national scale, establishing solidarity across subnational entities, and empowering subnational actors to find solutions that work at the local level. In principle, federally organized states are particularly well-poised to draw on tried and tested structures and processes. In Germany, for example, the pandemic response required several rounds of federal-state coordination in which the two levels often ran into conflict with each other. However, with the help of a strong scientific advisory staff, the chancellor's office was comparatively successful in containing these tensions, and the effort as a whole was able to respond effectively to regional particularities and concerns. During the second and third waves of the pandemic, however, the foundation of this consensus increasingly began to erode in large part due to a series of state-level elections, resulting in the pursuit of uncoordinated and uneven approach across the country. Overall, however, the ranking is topped by the more cen-

FIGURE 3 **Overall Response and Overall Preparedness**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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tralized countries of New Zealand, South Korea, Denmark, Greece and Sweden. In these countries, national coordination efforts proved sensitive to local concerns and were thus carried out with the least friction, at least during the first year of the pandemic.

Overall, nearly half of the countries in our sample – 14 states in total – must therefore in retrospect be regarded as insufficiently resilient with regard to their political-administrative capacity to act during the coronavirus crisis. The current gap found between these states regarding their capacity to govern could actually grow rather than narrow in the years to come. For example, countries such as Canada, New Zealand and South Korea, each of which features a strong evaluation culture, decided already during the first year of the pandemic to draw upon the experience of past pandemics by initiating evaluations and taking steps to adapt their response along the way. Showing considerable readiness and willingness to learn from other countries' experiences with pandemics, New Zealand introduced its NZ Covid Tracer app, which was closely modeled on Singapore's contact-tracing app.

Our analysis shows that, during the first year of the coronavirus, the quality of a state's crisis response depended significantly on how well prepared the government was to deal with a crisis. Those countries already equipped before the pandemic with an effective crisis preparedness and management system as well as robust economic and social policies generally demonstrated a stronger executive response during the crisis and proved able to respond more competently to the economic and social policy challenges faced (see Fig. 3). Greece is a positive outlier in this regard, featuring an above-average crisis response, despite its rather adverse baseline conditions. By contrast, the United States stands out for its far-below-the-expected-bar performance, given its potential.

New Zealand, South Korea and Sweden are the top performers in our **overall ranking of the resilience of governance** (see Fig. 4)**.** The states demonstrating the most difficulty in steering their country's response to a crisis on the scale of the coronavirus pandemic were Israel, Croatia, Italy, Poland, Hungary and Mexico.

FIGURE 4 **Resilience of Governance**

Score: standardized, 1-10
Source: Sustainable Governance Indicators

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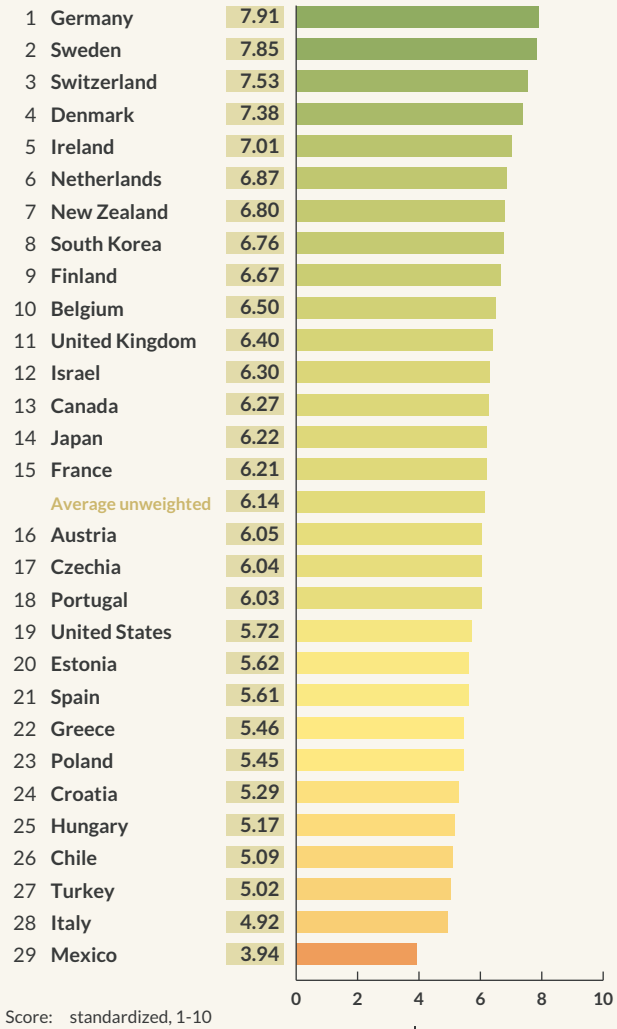
Economic Resilience

More than half of the states in our sample were showing weak economic growth even long before the coronavirus crisis. Between 2010 and 2019, real average economic growth was just 2% or lower in 15 of the 29 states. Some leading economies also appear to be losing increasing ground to other countries with regard to gross fixed capital formation. On this measure, Japan is the only G-7 state to fall among the top 10 countries in our survey. Progress in product development, which results from an effective research and innovation sector, also varies widely.

Before the crisis, none of the countries in our sample had yet developed convincing programs for transitioning to a climate-friendly and resource-conserving economic model. Some of the countries showing the highest recent economic growth rates fall into the bottom group in terms of key indicators measuring outcomes along the path to a climate-neutral economy. Top economic performers such as Ireland, Estonia, Poland and South Korea are among the states with the highest per capita greenhouse gas emissions. On the other hand, countries such as Sweden and Finland, despite being top performers in terms of climate protection and renewable energy development, have considerable catching up to do with regard to energy efficiency and using raw materials sustainably.

FIGURE 5 **Economic Resilience**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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The already-high levels of public debt in many countries, paired with further increases due to coronavirus-era stimulus packages, require policymakers to focus clearly on the major socio-economic challenges ahead. Countries that were already highly indebted before the crisis typically increased their public debt more significantly during the first year of the pandemic than did less heavily indebted countries. Moreover, fiscally well-positioned countries did not make excessive use of the low-interest credit options available to them. It is therefore already foreseeable that the coronavirus crisis will widen the gap between fiscally well-positioned countries and those that were already worse off.

When crafting their stimulus programs during the first year of the pandemic, the vast majority of the countries in our sample made virtually no attempt to set the sustainable transformation of the economy as one goal. In a minority of the countries examined, stimulus programs have already been designed to help economies transition toward a point of climate neutrality and resource-conserving growth. However, only 10 of the 29 states in our sample have released policy measures in this area. Just two countries – Germany and Sweden – are already seeking to align their economic stimulus programs with environmental and sustainability goals.

While some countries were relatively well prepared for the crisis in terms of labor market policies, many others were unable to draw on existing instruments and institutions appropriate to the crisis' specific challenges. Countries with comprehensive short-time work schemes and well-developed labor market policies fared better through the pandemic's first year than did those lacking such instruments. The short-time work policy model again become a popular export during the coronavirus crisis. Countries with considerable experience implementing such programs, such as Germany, France and Switzerland, extended their regulations still further. Best positioned in terms of the resilience of their labor market policies are Germany, Switzerland, Denmark and Sweden. What these countries have in common is that

FIGURE 6 **Welfare State Response and Welfare State Preparedness**

SGI 2021 COVID-19 STUDY

Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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their systems enable employers' and employees' organizations to work together constructively. In addition, these countries have successfully managed to significantly increase the employment rate among older workers in particular.

Nevertheless, few of the countries examined used the first phase of short-time work to reform the regulatory framework so as to provide greater incentives for worker training and further education. After the crisis, when people return to their jobs, the labor market will look different, requiring a different set of skills and qualifications than before the crisis. Denmark has taken an interesting approach in this regard. Here, policymakers have set compensation levels within retraining programs to provide the highest level of benefits to people retraining in areas experiencing skill shortages.

Our **overall ranking on economic resilience** (see Fig. 5) is led by Germany, Sweden, Switzerland and Denmark. The bottom group is made up of Poland, Croatia, Hungary, Chile, Turkey, Italy and Mexico. Both with regard to their vulnerability to crises and their economic-policy crisis response, these countries show the greatest shortcomings in terms of economic sustainability.

Welfare State Resilience

Overall, the analysis (see Fig. 6) shows a strong correlation between the degree of preparedness for the crisis and the quality of a country's actual crisis response. Countries whose social security systems were already well positioned before the pandemic tended to respond better to the challenges arising during the crisis in the areas of education, health and family policy.

Countries that were well prepared for the crisis in terms of education policy typically had strongly digitalized education systems, and also supported a certain degree of autonomy with regard to teaching methods. The pandemic led to school closures on a greater or lesser scale in all 29 countries examined. Countries whose education systems were already highly digitalized before the pandemic – that is, those in which digital infrastructure was already in place, and where teaching staff had previous experience with distance-learning tools – were most successful in making a rapid and smooth transition from face-to-face to online instruction. **Denmark** and **Sweden** stand out in this respect, with each placing among the top four countries in the study's four digitalization-related indicators. Another common

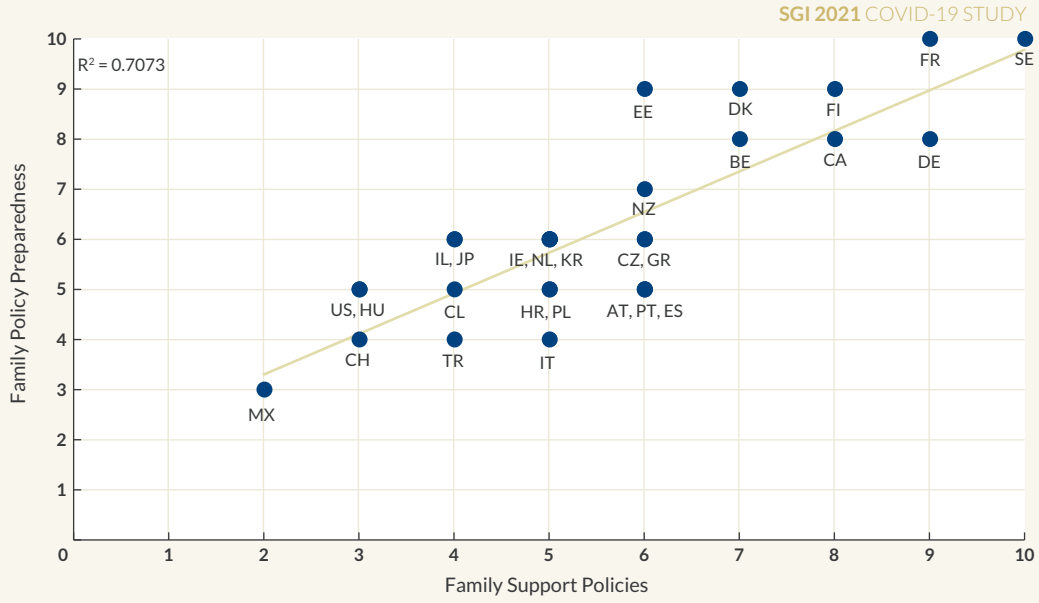
feature of well-organized education systems is a certain degree of autonomy granted to decentralized local authorities or teaching institutions, thus allowing them to experiment with or use different instruction methodologies.

The unequal distribution of educational opportunities that existed before the outbreak of COVID-19 has worsened in most countries. Children from socially disadvantaged families were more seriously affected by school closures due to a lack of laptops, fast internet connections and digital skills. This was true of well-performing states as well. For example, in **Denmark,** despite the well-developed digital infrastructure, many primary-level students – especially children from economically or ethnically disadvantaged backgrounds – did not receive instruction during the first year of the pandemic. In **Canada** too, students from disadvantaged socioeconomic backgrounds were disproportionately affected by school closures and the shift to online learning, in large part due to a lack of support programs for children with special needs.

In many countries, the increase in intensive-care capacities for COVID-19 patients was accompanied by a neglect of people with other conditions. **A shortage of well-trained staff proved to be a key bottleneck in this regard.** As a consequence, hospitals were often unable to use their newly expanded intensive-care facilities to full capacity and could not guarantee that all patients would receive the proper care. While some states were forced to postpone elective surgeries, the focus on COVID-19 patients had more serious consequences in others. In **Poland**, for example, hospitals were unable to admit many sick people even in cases of emergency.

Closures of schools and kindergartens during the crisis everywhere made it more difficult for parents to reconcile work and family responsibilities. In response, the EU and OECD countries examined here introduced or adapted a series of family-policy measures aimed at making this combination easier, while providing financial support to families coping with income losses. In many countries, despite the coronavirus' dangers, early childhood education and care institutions were kept open for parents deemed "essential workers." In instances where this was not possible, financial support was often introduced for parents who had to stay at home due to school or kindergarten closures. Other (financial) benefits were also introduced or adapted to fit the new circumstances in many places. For

FIGURE 7 **Family Support Policies und Family Policy Preparedness**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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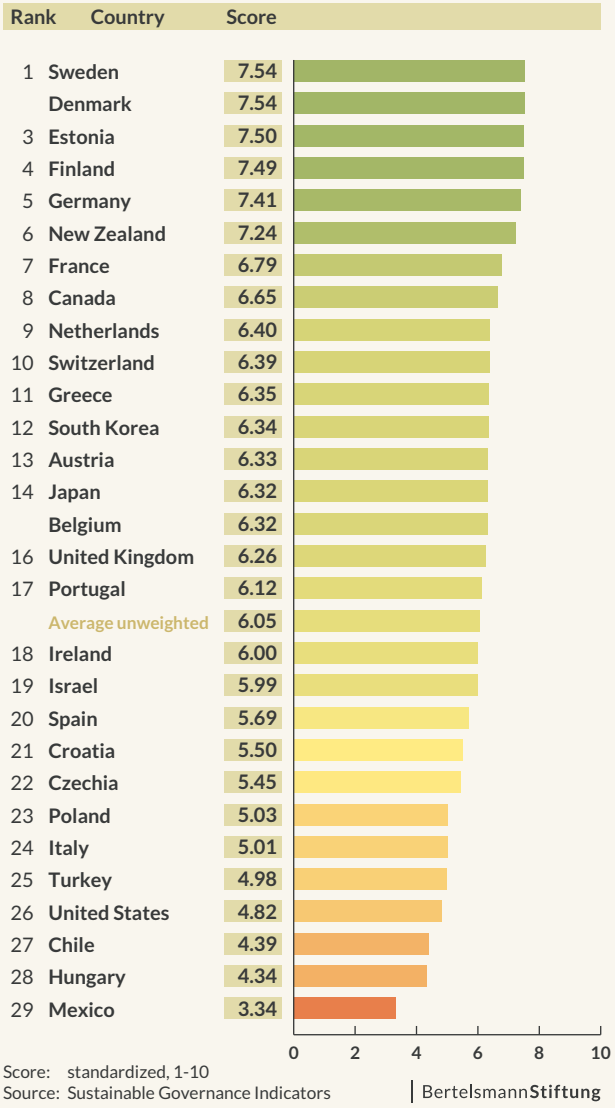
example, such policies included top-ups to child benefits, one-time bonus payments for families, the introduction of additional benefits for poor families and the provision of subsidies to employers in order to enable flexible working. Overall, it appears that countries with sustainable family policies before the crisis were also more successful in their response to the crisis (see Fig. 7).

No country succeeded in promoting a more equitable division of household labor between the sexes. Government support measures mitigated the negative impact of the crisis on families but were not able to lead to a more equitable sharing of responsibilities between the sexes. On the contrary, the coronavirus crisis seems to have reinforced adherence to traditional family roles, as women ultimately took over the bulk of the additional burden associated with caring for children and elderly family members. This underscores the fact that previous family-policy measures have done too little to make the household division of labor between women and men more equitable.

Overall, the welfare states in the countries of northern Europe showed the greatest resilience in the face of the crisis. **Our overall ranking on welfare state resilience** (Fig. 8) is led by **Denmark**, **Sweden**, **Estonia** and **Finland.** With the exception of the health sector, where Sweden (crisis response) and Estonia (preparedness and crisis response) both show slight weaknesses, these countries are among the top 10 in all three areas (education, health and family policy). In the area of education policy, all are even among the top five. In contrast, social security systems in the **United States**, **Chile**, **Hungary** and **Mexico** proved to be less resilient. The United States is ranked in the middle of the pack in terms of educational preparedness, while Chile achieves a mid-range ranking for its health-sector crisis response. However, these countries show major weaknesses in the other areas examined.

FIGURE 8 **Welfare State Resilience**



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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Introduction

The coronavirus crisis struck the wealthy democracies at a time when most of their governments had only slowly begun to embark upon a series of ambitious reform processes. These were aimed, for example, at initiating an effective environmental and digital transformation of the economy, revitalizing weak economic growth, reducing social inequality with palpable impact, modernizing state and administrative apparatuses, reducing public debt, and renegotiating both the basic social contract and the contract between the generations. In all the countries we examined, these longer-term reform projects and the discussions associated with them were pushed again into the background as the pandemic drew economic crisis in its wake, prompting governments to focus instead on short-term economic and social stabilization programs.

However, it is becoming increasingly clear that stabilization in economic and social policy must go hand-in-hand with transformative processes if countries are to emerge stronger from this crisis. In past moments of widespread difficulty such as the economic and financial crises, policymakers have pursued strategies consisting of (too) strongly decoupled and sequential elements, for instance by first setting their sights on economic recovery and stabilization, only afterwards addressing economic renewal. Yet addressing the problems in this way would this time result in considerable damage to the well-being of society. Why?

To achieve climate neutrality by 2050, these countries would also have to swiftly integrate ambitious cross-sectoral packages of economic, social and administrative measures into the economic stabilization programs and their implementation. The recently published Intergovernmental Panel on Climate Change (IPCC) report argues convincingly that only under the most optimistic scenario – that is, an effective transition to climate neutrality by 2050 – will the world be able to keep global warming to 1.5 degrees Celsius in the short term (by 2040) compared to the 1850 – 1900 period, and below this value by the end of the century (IPCC 2021: 18). Yet according to initial estimates, the exceptional effects of the coronavirus crisis have been followed in the current year by increases in greenhouse gas emissions, for instance in Germany, that may have been stronger than at any other time since 1900 (Rüb et al. 2021). It is also foreseeable that in addition to reductions in CO2 emissions, an entire series of additional measures could become necessary beginning in 2030 at the latest. Examples could include efforts to remove carbon dioxide directly from the atmosphere (MCC 2021).

In the area of resource consumption too, the overuse of natural resources is clearly progressing at a pace that means we can no longer tolerate any delay in introducing effective mitigation measures such as policies designed to promote the circular economy. The so-called Earth Overshoot Day, the day on which human demand for renewable resources exceeds the Earth's capacity and supply in a given year, is moving steadily closer to the beginning of the year worldwide. In 2021, this day fell on July 29 (see below). In most of the developed countries we examined, Earth Overshoot Day was reached earlier in 2021 than in 2020, with the exact date ranging between the fastest-consuming countries, the United States and Canada (both March 14, 2021) and Turkey (June 16, 2021). Only Mexico reached this date somewhat later than in the previous year (August 11, 2021) (Global Footprint Network 2021).

Beyond the need to expedited efforts to protect resources and the climate, many established economies had been experiencing protracted lulls in growth even before the crisis. This calls for policy approaches that are more effective than those of the past. We need to ensure the presence of skilled workforces, improve vocational and lifelong education, promote digitalization (particularly in rural areas and within small and medium-sized businesses or SMEs), boost investment in economic infrastructure, and improve conditions for innovations that generate clear future social benefits. Addressing these areas effectively will require a completely new regulatory framework in all countries. This is particularly critical given that most countries have experienced a decline in productivity growth across their entire economies in recent years. Thus, economic stabilization and environmental transformation must be considered together from the outset in the design of crisis reconstruction programs.

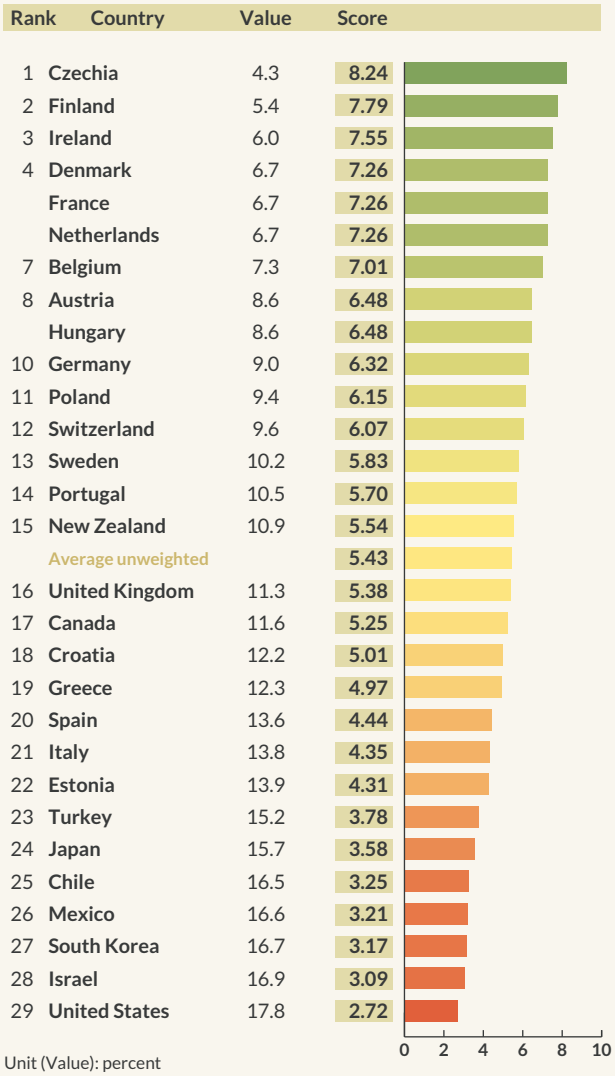
The economic damage caused by the coronavirus crisis and its associated loss of jobs and income is already having far-reaching social consequences. Social security systems have been placed under considerable stress. However, even before the onset of the pandemic, the welfare states in the 29 OECD and EU countries examined here varied in their ability to protect different population groups from poverty and create sufficient opportunities for inclusive well-being.

Despite the upswing in employment that began in 2014, many states had not succeeded in appreciably reducing the risk of poverty. These developments have been driven in part by the increasing flexibilization of labor markets. While this has contributed to a reduction in unemployment, it has also led to an increase in atypical employment (e.g., part-time, fixed-term or low-paid work). The share of people at risk of poverty varied from 4.3% in Czechia to 17.8% in the United States.

On the one hand, social security systems in the 29 countries examined differ with regard to the scope and degree of coverage they offer. But even in countries with well-developed safety nets, some groups in society still lack adequate social protections. In particular, (long-term) unemployment is still associated with an elevated risk of poverty in many countries. Moreover, people who are unemployed due to illness or disability also frequently live below the poverty line. The same applies to low-income families, single parents, people with a migrant background and people with a low level of education. The coronavirus crisis has pitilessly exposed the weaknesses of the systems surveyed here with regard to providing opportunities to fully participate in society.

In the education sector, the pandemic has exposed serious gaps in the digitalization of classrooms and educator functions. In many countries, a

FIGURE 9 **Poverty Rate**



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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lack of digital infrastructure and/or insufficient digital skills among teachers meant that classes could not be (fully) maintained in the wake of school closures. Another challenge is improving the educational opportunities afforded to children from disadvantaged socioeconomic backgrounds; such children often had poorer-quality schooling opportunities than their more well-off peers before the pandemic, and conditions have further deteriorated in the wake of the crisis.

In the health sector too, efforts must be made to decouple people's socioeconomic circumstances from the access to and supply of health services. This is particularly true in countries that do not offer universal access to health services. However, it also applies in countries where a public health system is generally accessible to all citizens, but where the range of services offered is inadequate, long waiting times are the norm or high private copayments are required. The coronavirus crisis has also demonstrated that it is often the lack of skilled personnel rather than a shortage of medical equipment that stands in the way of better healthcare. In many countries, there is additionally considerable need for improvement with regard to coordinating the various actors in the healthcare system.

In the area of family policy, a key challenge is to improve peoples' ability to reconcile work and family life. On the one hand, this requires the provision of childcare slots that are affordable and offer flexible opening hours. In addition, employers must be given more incentive to provide flexible working conditions, both in terms of working hours and working locations. To keep families from falling into poverty – especially single parents – some countries also need additional support measures such as paid parental leave programs.

There is also an urgent need for action with regard to gender equality. For example, women were significantly more likely to lose their jobs during the pandemic, while also bearing the brunt of the additional childcare burden associated with school and kindergarten closures. They also took on the largest share of care duties for elderly family members. The fact that this is true even in countries with generous and gender-neutral parental leave policies suggests that social norms still stand in the way of an equitable division of labor within households, thus making it more difficult for women to combine family and work.

In responding to the pandemic, governments worldwide have sought to mount an effective crisis response while also trying to transform their economic and social models to be more sustainable. Any effort along these lines requires robust democratic institutions and processes as well as forward-looking leadership in the government that values inclusion.

It is precisely in this era of crisis that media freedom, the credible protection of civil rights and political freedoms, the independence of the judiciary, and democratic culture must prove their worth. These factors are indispensable if citizens are to have basic confidence in the stability (and legitimacy) of the regulatory framework created by the government and the path taken out of the crisis. In many states, policymakers and other political leaders have yet to contain anti-democratic tendencies effectively and have been unable to establish a democratic culture that enables cooperation across party-political boundaries. Moreover, the first year of the pandemic emphatically showed that mounting an effective fight against abuses of power and corruption remains an ongoing task in many countries.

Public trust in a government's reform capacity and ability to act also depends on the quality of the governance shown by those in power. For example, governments are judged on how forward-looking and effective they are in terms of their facility for evidence-based policymaking, for consultation and communication with civil society, for subsequent policy coordination and implementation, and for engaging in their own learning processes. This is another area in which many weaknesses have emerged. Governments must now work vigorously to address these problems. The coronavirus crisis has additionally revealed clear deficiencies in the crisis prevention and coordination systems in almost all high-income countries. Existing institutional mechanisms for involving experts in policymaking processes need to be improved, as do most governments' ability to gather and analyze data. Many countries need a fresh start with regard both to crisis communication and open government approaches.

PART I:
Resilience of Democracy

Media and press freedom are core elements of a democratic system that have been of particularly crucial importance during the pandemic. In order to develop an awareness of the problems involved in dealing with the coronavirus crisis, citizens must be able to form a comprehensive and independent picture of current conditions. The same is true for other societal challenges. For example, initial comparative analyses seem to indicate a causal link between the existence of extensive political freedoms and civil rights on the one hand – in particular, the presence of extensive media coverage and the ability to engage in civic protest – and awareness of the negative consequences of climate change (Levi and Goldberg 2021).

As a part of this study, we examine the extent to which media were subject to influence by governments or pro-government actors during the crisis. In nine of our sample's states, media organizations were able to function independently and freely throughout the crisis. This group includes **Sweden**, **Switzerland**, **Canada**, **Finland**, **France**, **Germany**, **Ireland**, **New Zealand** and **Portugal** (see Fig. 11).

Moreover, in none of the countries that received at least moderately high media freedom scores in the 2020 SGI survey (a score of 6 or higher) did press organizations prove susceptible to systematic indirect or direct influence by policymakers (score of 5 or lower) during the crisis (see Fig. 12). In this respect, institutional guarantees of media freedom have fortunately proved to be relatively robust, even under the pressures of the crisis.

By contrast, a number of countries exhibited shortcomings in the area of media freedom before the pandemic. The media sectors in all of these countries, with the exception of **Japan**, also proved susceptible to state intervention during the crisis.

In **Japan**, our country experts see media freedom as having improved relative to the previous year. For example, during the pandemic, the media were able to help increase transparency around the government's handling of the crisis. Traditional media organizations and social networks proved sufficiently independent of government influence that they were able to provide information about government missteps to the public. They were also able to criticize political actions such as the government's handling of a coronavirus outbreak on a cruise ship, or shortcomings in the distribution of medical-grade protective equipment (Pascha et al. 2021).

However, in most of the other states that entered the period with problematic media and press freedom practices, the crisis seems to have perpetuated previous shortcomings. **Croatia** (Kotarski et al. 2021), **Mexico** (Muno et al. 2021) and **Poland** (Matthes et al. 2021) remain at the same disappointing levels as before the pandemic. Media freedom in these three countries again came under substantial pressure during the crisis but has not (yet) been completely eroded. **Croatia's** government, for example, convened a secret meeting with leading media representatives at the outset of the pandemic, with the goal of influencing public communication regarding the outbreak and containment measures. Even in December 2020, Prime Minister Plenković was still trying to persuade the media to report positively on the newly launched vaccination campaign (Kotarski et al. 2021).

FIGURE 10 **Resilience of Democracy**

SGI 2021 COVID-19 STUDY

Score: standardized, 1-10
Source: Sustainable Governance Indicators

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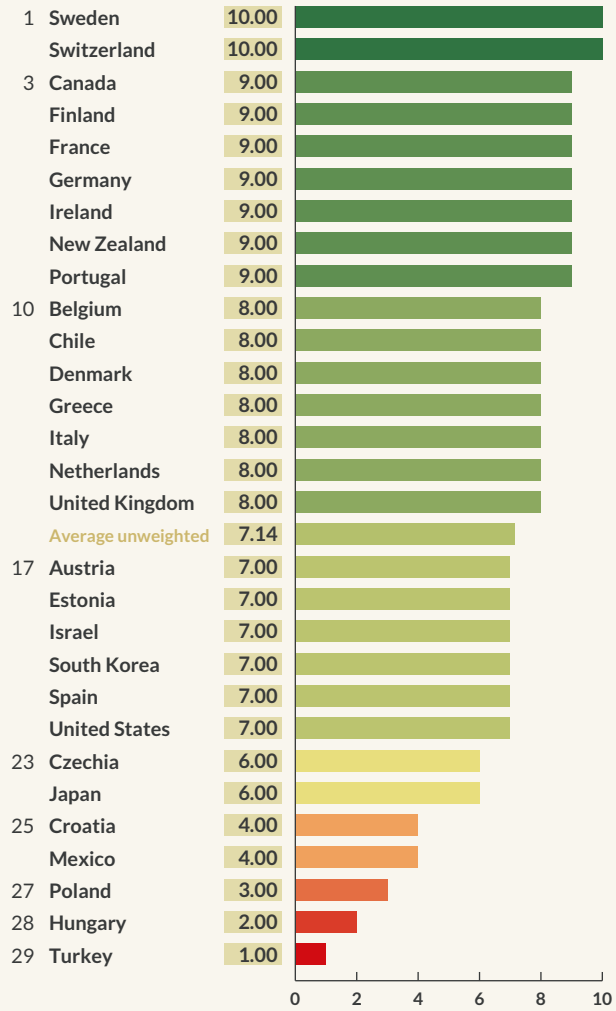
FIGURE 11 **Media Freedom**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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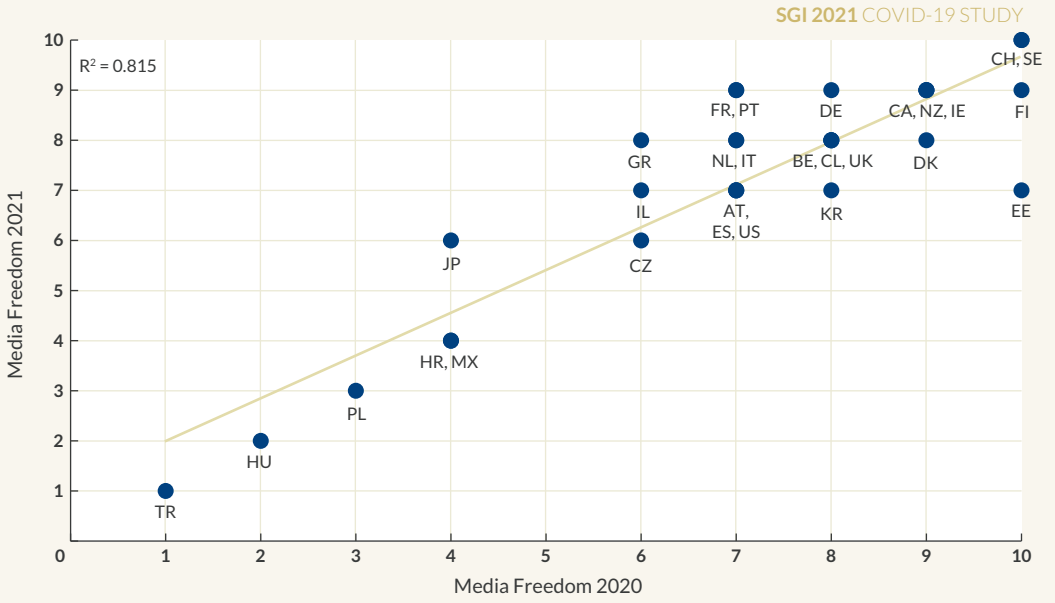
In authoritarian systems, on the other hand, the crisis was used as a pretext to further instrumentalize the media. In such countries, governments used the press to further party-political interests, and to propagate their own views of the pandemic and crisis management efforts. In **Hungary**, government control and influence over the media, which has increased significantly since the Fidesz party gained power in 2010, has continued. For example, during the period under review, the government-allied Media Council revoked an independent radio station's operating license, a clear example of restrictions being imposed on press freedom. This development was reinforced by a regulation on the prevention of fake news that came into force in March 2020. This imposes penalties of up to five years in prison for participating in or disseminating supposed fake news. The measure has intimidated media professionals, leading even to self-censorship (Ágh et al. 2021). In **Turkey**, the scope of media freedom had already been dramatically diminished before the pandemic. Political actors there exert significant influence over the media landscape, both directly and indirectly. Journalists critical of the government are arrested, and penalties are imposed on opposition radio and television stations; both actions are significant violations of press freedom.

FIGURE 12 **Media Freedom, 2020 and 2021**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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Much like **Hungary**, **Turkey** passed a law in the summer of 2020 that imposes significant penalties on journalists who do not comply with government regulations. This law is seen as another step in restricting opposition media figures, who are increasingly publishing online (Arslantaş et al. 2021).

As they have sought to contain the spread of the coronavirus, governments in many places have imposed significant restrictions on **political freedoms and civil liberties**. However, the key question is whether elected governments have made a credible and binding commitment to restore these rights at the first possible opportunity. Also relevant are whether attempts have been made to compensate for these restrictions in the best possible way. This is thus a question of the **proportionality of the restrictions.**

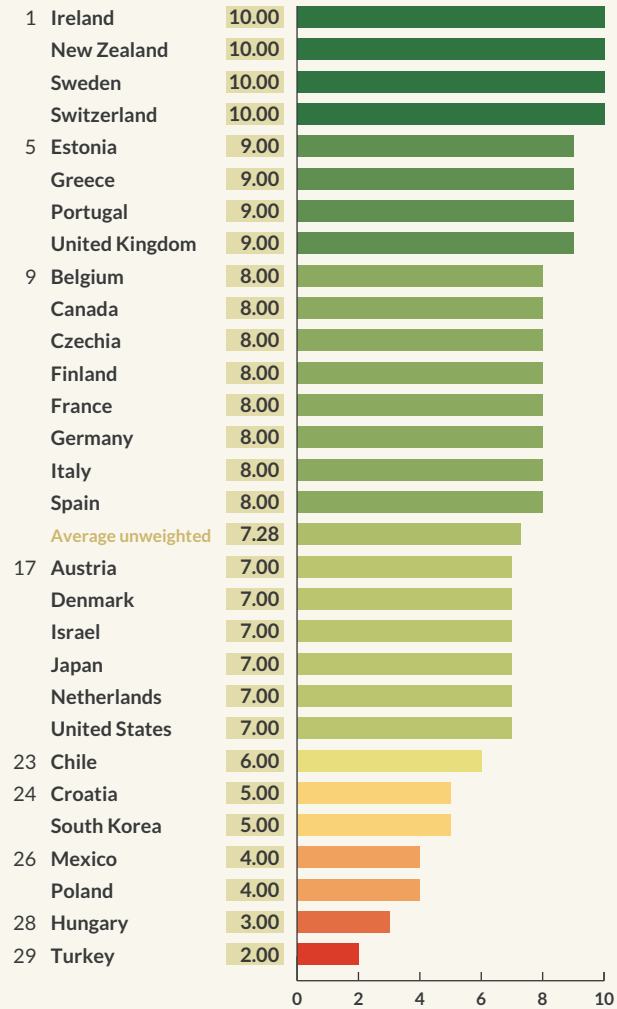
Eight states in our country sample have succeeded in demonstrating a high degree of credibility with regard to the proportionality of their restrictions on political freedoms and civil rights. This group includes **Ireland**, **New Zealand**, **Sweden**, **Switzerland**, **Estonia**, **Greece**, **Portugal** and the **United Kingdom**. The experts in these countries regard the governments' promises to lift restrictions on political freedoms and civil rights at the first possible opportunity as being particularly credible.

Germany, which imposed milder lockdowns than some other states, but also enacted significant restrictions on political freedoms and civil liberties, holds ninth place in the rankings in this area, tied with seven other states. In principle, the government had credible and binding ambitions to lift restrictions and restore civil rights as quickly as possible. However, critics found fault with the extensive powers assumed by the executive, which initially adopted far-reaching measures without the involvement of parliament. In some cases, changing thresholds for action, for example triggered by shifting incidence levels or infection dynamics, also created uncertainty and a lack of predictability regarding the maintenance or relaxation of restrictions (Rüb et al. 2021).

Three aspects are critical in ensuring that such restrictions are both easily understandable and proportionate. First, such provisions should be grounded in **a clear legislative framework** through **the existence and application of an emergency law**. In many states that place a high value on the

FIGURE 13 **Civil Rights and Political Liberties**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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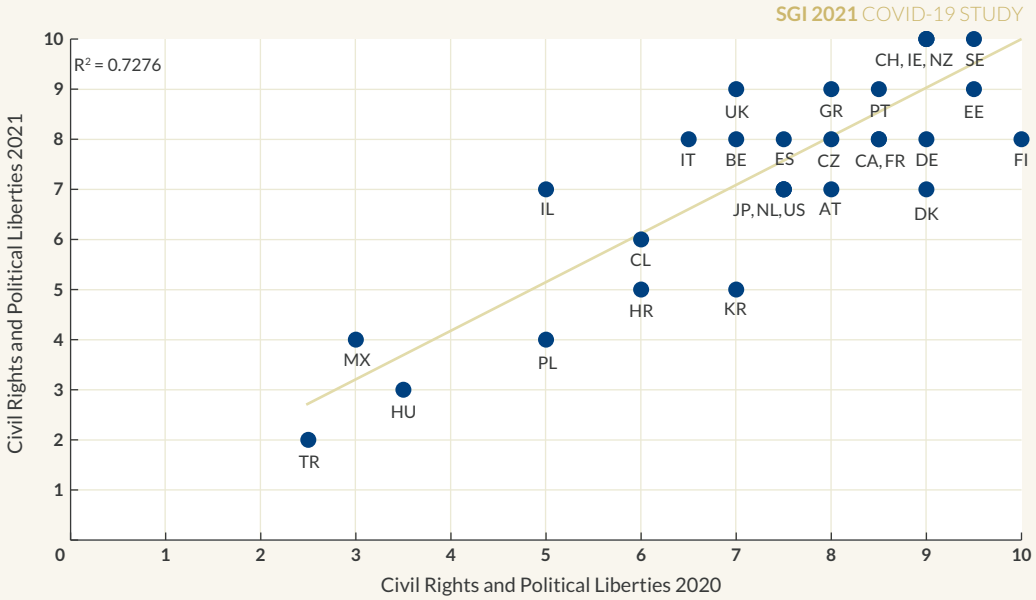
preservation of political freedoms and civil rights, decisions of this nature were based on clear legal principles. In **Switzerland**, for example, restrictions were grounded in the constitution, and based additionally on an epidemic act that sets out clear rules for the separation of political powers during an emergency (Armingeon et al. 2021). In **Portugal**, the country's constitutionally defined state of emergency was implemented for the first time during the coronavirus pandemic. The relevant provision contains clear rules regarding which rights can be restricted. Political freedoms are given a high priority in this context; for example, the measure explicitly states that meetings of political parties, trade unions and professional associations must continue to be explicitly permitted even in the event of a state of emergency (Jalali et al. 2021).

Second, **transparent** and **mandatory sunset clauses** in **emergency laws and regulations** are an important tool for credibly protecting political freedoms and civil liberties. In **Switzerland**, the **United Kingdom** and **Canada**, for example, these self-limiting provisions were integrated into the pandemic regulations. In the **United Kingdom**, the measures were reviewed every three weeks. When they were no longer deemed necessary, they were ended. The overarching Coronavirus Act 2020 also included a sunset clause slated to kick in no later than two years after the law's enactment (Busch et al. 2021). In **Canada,** sunset clauses were implemented in the relevant legislation so as to limit the extent of restrictions on civil rights. In this case, individual decisions also had to be justified in detail, with reference to their proportionality (Tedds et al. 2021).

Third, regular **oversight of the government and its emergency rules** is an important step. In **Estonia**, for example, the chancellor of justice closely monitored the government's actions during the pandemic. This office is tasked with protecting the principles of the constitution and the people's individual rights and liberties. It is independent of political actors. During the pandemic, the incumbent chancellor of justice reviewed the legality and appropriateness of the restrictions imposed, and reported publicly on her conclusions (Toots et al. 2021).

In **South Korea,** our country experts argued that individual civil rights were disproportionately restricted. Such rights played a clearly subordinate role in the fight against the pandemic, with the population accepting severe restrictions in areas such as data protection and sovereignty over personal data. Sensitive data was collected from mobile phone networks, GPS devices, credit cards and surveillance camera recordings, for example. The collection and analysis of this data was intended to help control infections and allow infection chains to be traced. However, the policy had a major negative impact on various groups within society. In-

FIGURE 14 **Civil Rights and Political Liberties, 2020 and 2021**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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fected people were stigmatized, and groups identified as supposed drivers of infection (e.g., specific religious groups or the LGBTQ+ community) were subject to discrimination (Kalinowski et al. 2021).

Restrictions on political and civil liberties are particularly problematic if they are influenced by political calculations, and applied only to certain groups. This was the case in **Poland**, where restrictions on the freedom to demonstrate were interpreted differently for different groups and different public protests. Demonstrations critical of the government, for example against its management of the crisis, were at times aggressively suppressed by the police. However, demonstrations from the right-leaning side of the political spectrum were subject to fewer restrictions (Matthes et al. 2021). The governments in **Hungary** (Ágh et al. 2021) and **Turkey** (Arslantaş et al. 2021) had been showing diminishing respect for civil rights and political freedoms even before the pandemic. This trend worsened during the crisis. In March 2020, the governing parties in **Hungary** passed a law with a two-thirds majority in parliament that allows authorities to suspend or deviate from previously applicable laws, and to postpone elections and referendums. Sometimes referred to as an "enabling act," the law holds out the possibility of prison sentences for individuals who voice opposition to the government's pandemic response, among its other provisions (Ágh et al. 2021).

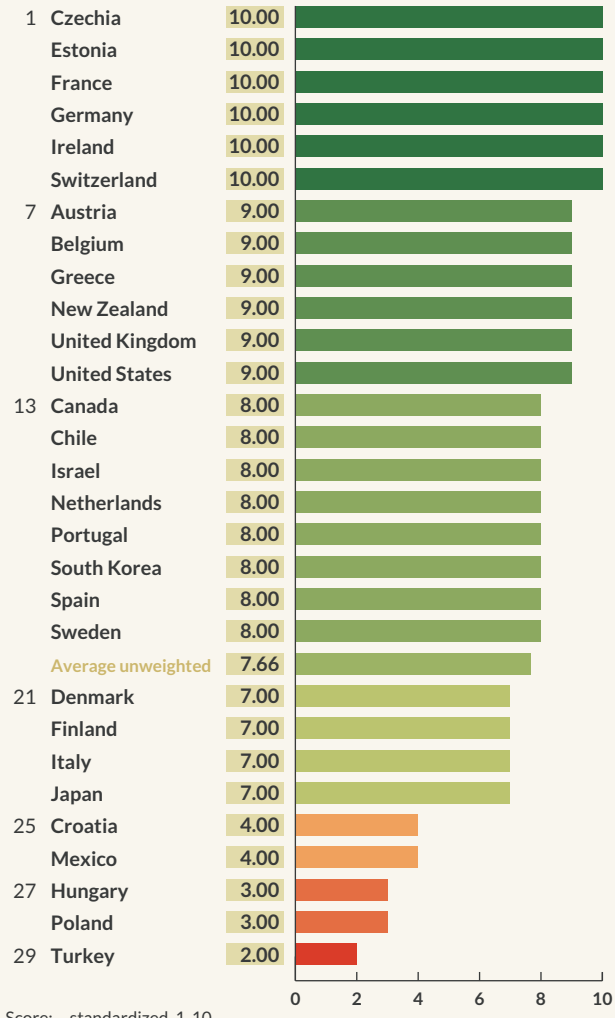
The **capacity of judicial review** to assess the legality and proportionality of political decisions also underwent an important stress test during the coronavirus crisis. Challenges during the pandemic related both to courts' practical ability to act (e.g., due to prohibitions on physical meetings) and to de jure oversight powers.

In states that had already demonstrated shortcomings with respect to judicial oversight functions, conditions have again worsened. In **Turkey**, **Poland**, **Hungary**, **Mexico** and **Croatia**, for example, courts' ability to monitor the legality of political measures declined further during the pandemic (see Fig. 16).

In **Hungary**, for example, the coronavirus pandemic was used as a justification to suspend the work of courts. Officially, this was done to contain the spread of the virus. In reality, it meant that the population had no point of contact where they could demand legal hearings or other court pro-

FIGURE 15 **Judicial Review**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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cesses (Ágh et al. 2021). In **Turkey**, which receives the study's lowest score in this area, almost all court hearings and legal proceedings were suspended from March to June 2020. This severely limited judicial review of coronavirus-related measures. In addition, President Erdoğan issued numerous presidential decrees during the crisis. These have a different status than laws passed by parliament, and the courts have little ability to review or change them. This also hindered judicial oversight (Arslantaş et al. 2021). In **Poland**, the fact that judicial selection procedures are influenced by political decision-makers meant that courts could not engage in effective oversight of coronavirus measures. Because the country's Supreme Court and Constitutional Court are staffed with judges who are close to and loyal to the current government, no judicial review of the legality of coronavirus measures took place, even though the measures do not meet constitutional requirements (Matthes et al. 2021).

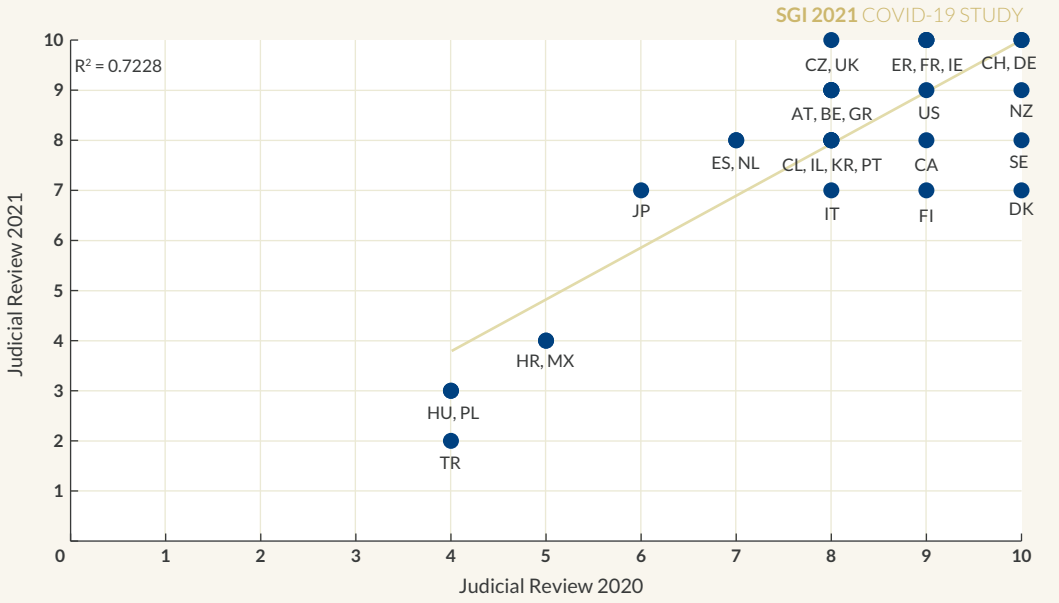
These examples show that within fragile legal systems, the COVID-19 pandemic served as both a catalyst and opportunity to restrict oversight instruments still further. It remains to be seen whether some of these restrictions will be reversed after the pandemic, or whether they will instead emerge from the crisis period having been transferred into the body of general law.

Although many states with independent and effective systems of judicial review also imposed de facto limitations during the pandemic, a number of governments developed solutions allowing for effective judicial review even under pandemic conditions. Once again, we observe that structures established before the pandemic helped to ensure the functioning of systems and processes during the crisis.

To be sure, work processes had to be adapted, for example by switching to remote work practices and court hearings involving fewer people, contact restrictions and hygiene rules. Even countries in the top group, such as **Greece** (Sotiropoulos et al. 2021) and **Finland** (Hiilamo et al. 2021), occasionally experienced case backlogs due to these constraints on everyday work. However, the country experts indicate that courts in these countries were able to exercise their formal discretion and review executive decisions despite these expedients.

In **Chile**, our country experts even conclude that virtual court proceedings helped improve transparency. On the one hand, such proceedings are easier for members of the public to attend, thus helping outsiders to understand the process. On the other hand, the fact that they are recorded and well documented enable decisions to be analyzed retrospectively should there be later disagreement. Thus, in many countries, the coronavirus pandemic in fact represented an opportunity for the judiciary: First, many places took a significant step forward with regard to digitalization due to the need for remote

FIGURE 16 **Judicial Review, 2020 and 2021**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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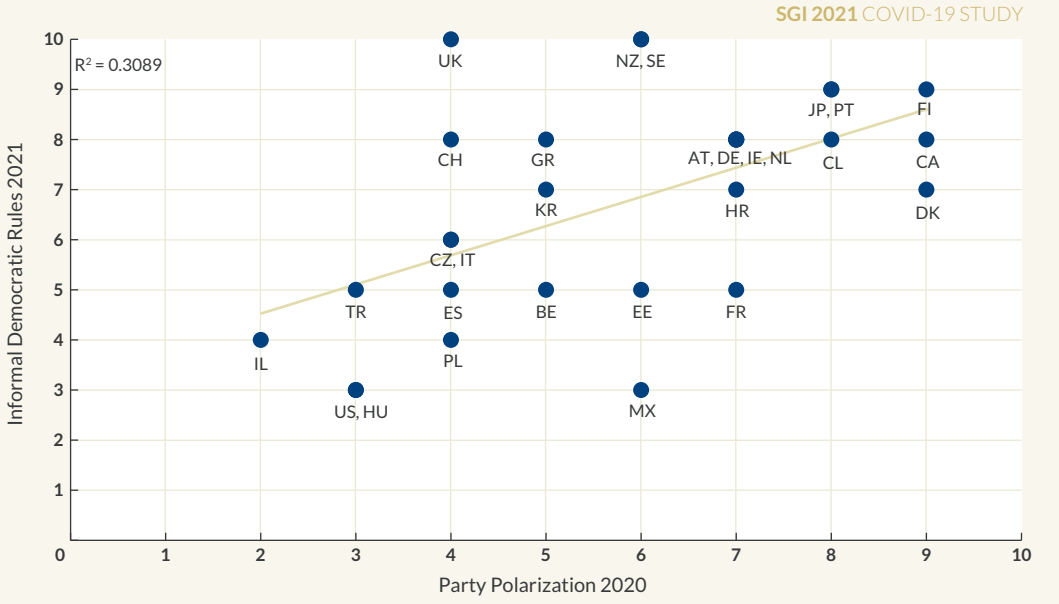
FIGURE 17 **Party Polarization 2020 and Informal Democratic Rules 2021**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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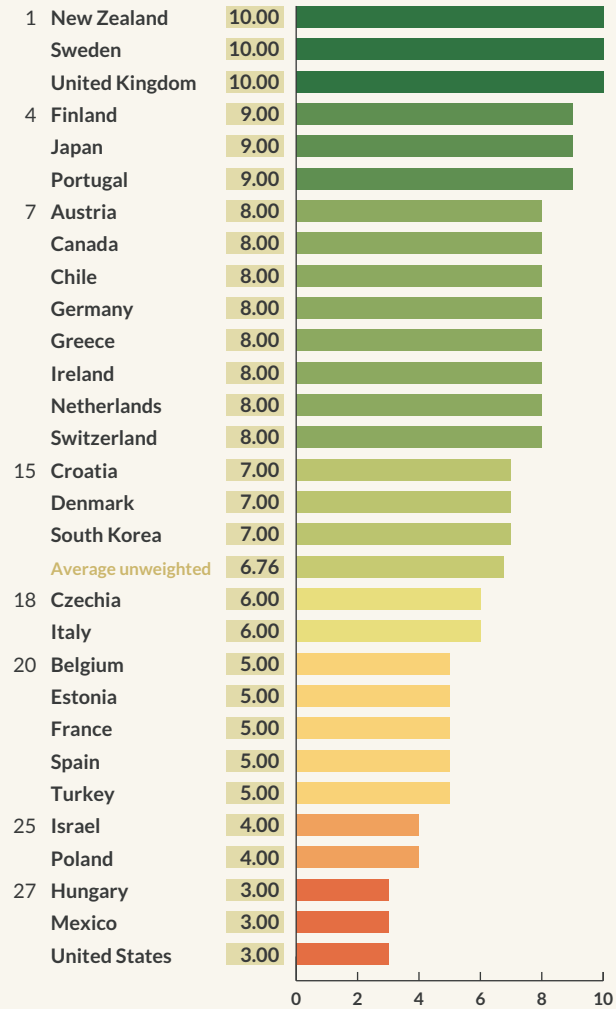
work and online hearings. Second, courts were able to demonstrate that their ability to act and assert their authority and independence can endure even through a period of crisis (Klein et al. 2021).

In democratic systems, competition between different parties is necessary if citizens are to have a choice between different policy options. At the same time, too much polarization between parties

FIGURE 18 **Informal Democratic Rules**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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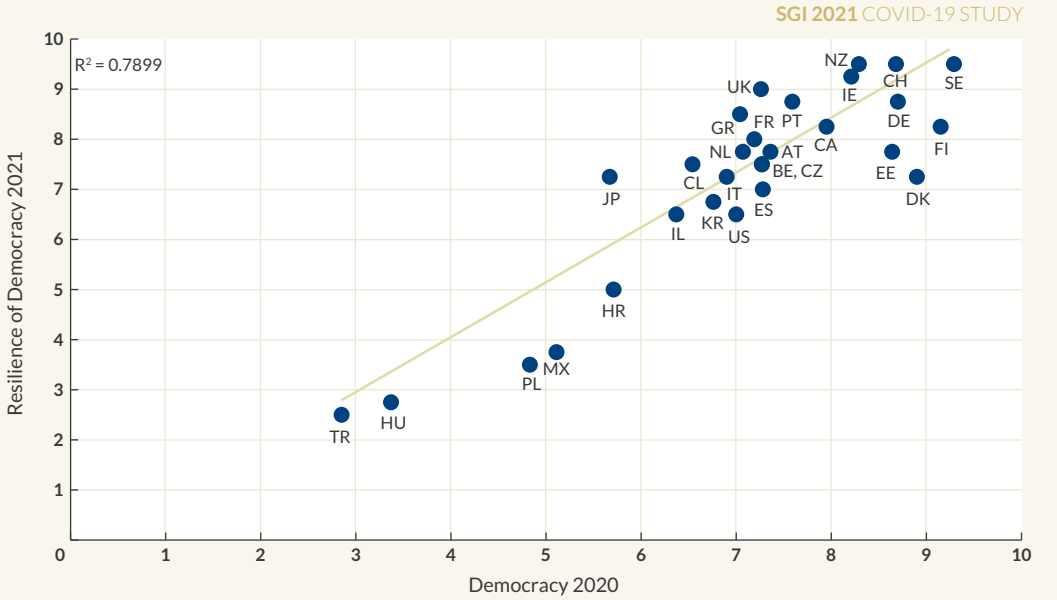
can lead to difficulties in reaching compromise. In the worst case, it can bring the political process to a standstill. The ability to reach compromise and build cross-party consensus is particularly important in times of crisis and represents a key element of democratic values and democratic behavior. How extreme was the polarization between parties in the legislative and executive branches during the pandemic, and what impact did this have on policy formulation and implementation?

Especially at the beginning of the pandemic, many countries saw a high level of cooperation between various parties and political actors, in the so-called rally-'round-the-flag effect. The abstract, immediate and unfamiliar threat of a global pandemic pushed actors to work together to achieve the best possible results and avert danger. In many countries, even actors who normally assume the role of political antagonists initially proved very willing to cooperate.

This behavior was observed in **New Zealand**, **Sweden** and the **United Kingdom**, for example. In all three countries, this development was quite remarkable, because it marked a significant improvement compared to the situation in the pre-crisis period. In **New Zealand**, the coalition partners and the largest opposition party (the New Zealand National Party) all rallied behind the government's "go hard, go early" course of action. That fact that entities from different sides of the political spectrum were all offering support had a positive impact on the public's perception of the crisis management efforts. For example, an April 2020 opinion poll showed that 87% of the population supported the policies (Hellmann et al. 2021). The political system in the **United Kingdom**, with its first-past-the-post voting system, in principle ensures stable majorities. That in turn normally enables the ruling party – in this case the Conservative Party – to make decisions with comparatively little need for consultation with other parties. During the pandemic, however, cross-party cooperation proved relevant, as representatives of the decentralized territorial authorities – who came from the Labour Party, the Scottish National Party and the Democratic Unionist Party, for example – were also involved in the crisis management efforts. While tensions between these parties were certainly perceptible, they did not hinder the adoption and implementation of measures (Busch et al. 2021). In **Sweden** too, the initial crisis response was characterized by a high level of mutual cooperation. This was partly due to the fact that the Public Health Agency, a neutral actor, played a leading role in crisis-related decision-making and communication. At the beginning of the crisis, political actors showed substantial willingness to cooperate, and the level of public trust in them was high. However, this level of trust declined significantly over the course of the crisis. As information about the inadequate implementation of coronavirus-related safeguards, particularly in nursing

FIGURE 19 **Democracy 2020 and Resilience of Democracy 2021**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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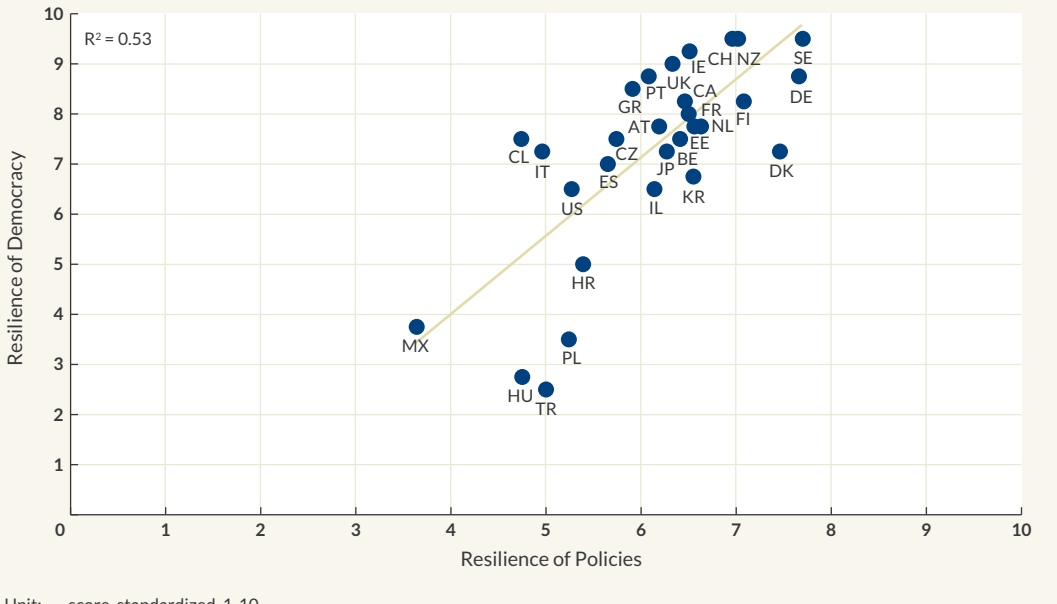
FIGURE 20 **Resilience of Policies and Resilience of Democracy**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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homes, filtered into the public consciousness, the government's COVID-19 strategy was increasingly judged to be ill-conceived and unbalanced (Petridou et al. 2021).

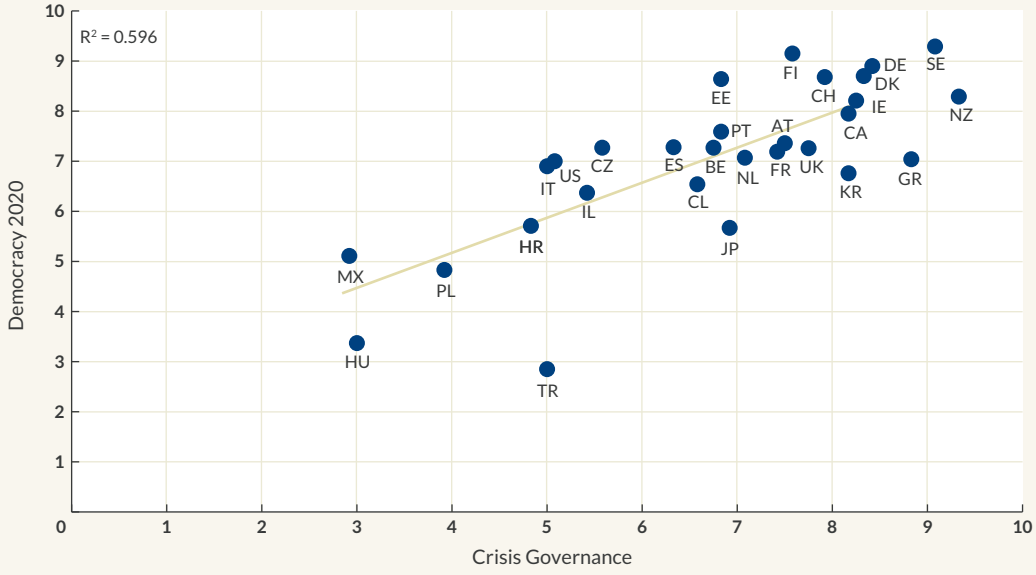
In other countries too, we observe that the initially extraordinarily high level of unity and cooperation among key political actors declined slightly over the course of the crisis, particularly as the

first wave subsided. In some cases, this was due to tensions spurred by elections held in 2020. In **New Zealand**, **Canada** and **Croatia**, for example, this increasingly led political actors to try to differentiate themselves from one other by presenting different options (Hellmann et al. 2021, Tedds et al. 2021, Kotarski et al. 2021). However, similar behavior was also evident in countries without impending elections, as was the case in **Greece**. Before the crisis, there was a significant degree of polarization between the center-right Nea Dimokratia party and the left-leaning SYRIZA opposition party. At the beginning of the crisis, SYRIZA endorsed the measures proposed by the governing Nea Dimokratia party, and supported the restrictions as implemented. However, with the onset of the second wave, this unified front dissolved. SYRIZA increasingly returned to its oppositional role, clearly critiquing and criticizing the government (Sotiropoulos et al. 2021). A similar pattern was evident in the **Netherlands**. During the first COVID-19 wave, there was an unusually high degree of consensus between the government and the opposition. This manifested, for example, in opposition politician Martin Van Rijn's assumption of the post of minister for medical care on an interim basis after the previous incumbent, Bruno Bruins, resigned in March 2020. After the summer recess in August 2020, however, this unity began to erode, and the opposition mounted growing criticism of the government's course and crisis management efforts (Hoppe et al. 2021). In no fewer than 10 countries, political polarization represented a significant obstacle either within the policymaking process or later in the coordination and implementation of key crisis response measures. In countries including **Belgium**, **Estonia**, **France**, **Spain**, **Turkey**, **Israel**, **Poland**, **Hungary**, **Mexico** and the **United States**, failures to bridge partisan divides slowed progress in controlling the pandemic.

In the **United States**, polarization led to a virtual standstill in the political decision-making process. Here, disputes between the two major parties – the Republicans and the Democrats – went far beyond ordinary disagreements over appropriate health and economic policies, severely limiting the adoption and implementation of pandemic-specific measures. This was in part because Republican President Donald Trump, who was in office in 2020, systematically downplayed the threat posed by COVID-19. As a consequence, there was no common, evidence-based foundation for

FIGURE 21 **Crisis Governance and Democracy 2020**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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bipartisan cooperation. Even before the pandemic, Trump's political style had depended on consciously distinguishing himself from the political opposition and fueling polarization (Béland et al. 2021).

In many of the states our country experts deemed to exhibit a high level of democratic quality before the coronavirus crisis, democratic systems remained stable and resilient during the crisis.

However, in states where democracy as a whole had already exhibited significant weaknesses and dysfunctionalities before the pandemic, we again observe declining levels of quality with regard to essential areas of democracy. In **Turkey, Hungary**, **Poland**, **Mexico** and **Croatia**, key institutions were further weakened during the crisis. In these states, the coronavirus crisis proved to be a catalyst for and amplifier of pre-existing negative trends.

High democratic standards are a necessary but not sufficient condition for effective policy performance. Figure 20 shows that states with high resilience of democracy scores also tend to have more resilient policies – a measure that reflects a combination of crisis preparation and crisis response. On the other hand, there are also states that exhibit weaknesses in policy performance despite having quite stable democratic structures. This leads us to the effectiveness of governance, a topic we will examine in the next chapter.

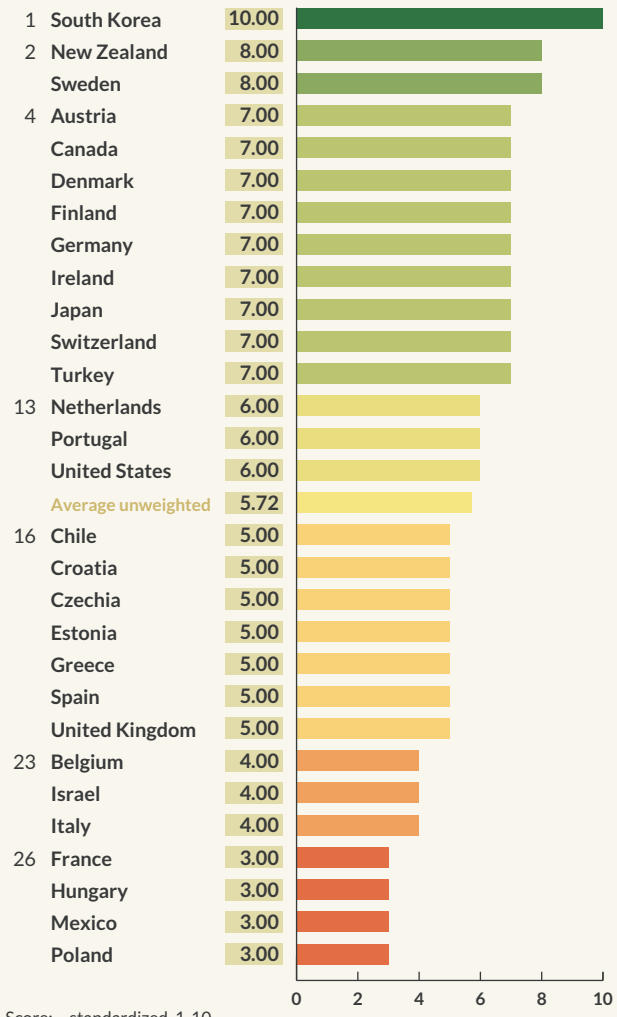
Moreover, a high quality of democracy before the crisis is positively correlated with stronger governance performance during the crisis (see Fig. 21). Only a few states show categorical differences between democracy quality in 2020 and crisis governance during the pandemic.

In the short term, we see that what we observed in other areas of society and policy during the pandemic also applies to democracy: Pre-existing positive and negative developments have been reinforced. Countries in which media freedom, civil rights, judicial independence and democratic culture were already given a high priority in recent years have largely kept to this trend line. By contrast, states in which we have recently observed a decline in democratic quality have tended to deteriorate further. In the medium to long term, it will be worth analyzing whether these are situational effects that will be counterbalanced and reversed at least in part after the pandemic, or whether they will instead perpetuate themselves, thus leading to increasing differences in the quality of democracy.

PART II:
Resilience of Governance

FIGURE 22 **Executive Preparedness**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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Executive Preparedness

The effectiveness of crisis management also depends on the institutional safeguards already in place within the political-administrative system. Especially relevant is the ability to identify and continuously monitor an emerging crisis via an effective early-warning system, appropriate risk assessment mechanisms and pertinent expertise. It is also important that the government entities involved have clearly distinguished areas of responsibility, are independent and open, and possess unambiguous authority.

Were there independent, open and expertly staffed institutions with the capacity and expertise to identify and monitor the crisis and warn the government? Were pandemic plans already in place? Were there pre-existing inventories of personal protective equipment? Had regular plan-implementation exercises been held?

In this sense, with the exception of **South Korea**, none of the countries we examined possessed crisis-preparedness systems of sufficiently high quality to render them well prepared for a health crisis of the magnitude of the coronavirus pandemic. Rather, the remaining states in practice displayed significant weaknesses. In numerous respects crucial to protecting populations in the event of a global pandemic, the crisis in retrospect revealed considerable need to develop national pandemic-management plans further.

Virtually all countries in our sample lacked adequate **national stockpiles of critical medical equipment** at the onset of the crisis. Only **South Korea** and to a lesser extent **Turkey** (although

here an additional expansion was necessary at the beginning) had sufficient reserves in this area.

A **clear division of civil-protection competences**, along with **explicit and well-practiced channels of coordination** between national and subnational actors in a crisis, are also important elements of successful crisis preparedness. However, in many of the countries in our sample, unclear responsibilities and a lack of links between agencies with related competencies initially led to a patchwork of different pandemic-control strategies. As might be expected, these weaknesses were particularly pronounced in federal states such as **Canada** (Tedds et al. 2021), the **United States** (Béland et al. 2021), **Germany** (Rüb et al. 2021), **Switzerland** (Armingeon et al. 2021) and **Belgium** (Castanheira et al. 2021). However, this was not solely a problem among federally organized states. Many more strongly centralized countries, such as the **United Kingdom** (Busch et al. 2021) and **Estonia** (Toots et al. 2021), also experienced initial coordination difficulties between the authorities involved in crisis management. Other centralized states such as **Italy** (Cotta et al. 2021) and **Japan** (Pascha et al. 2021) experienced significant coordination difficulties between the central government and the regions.

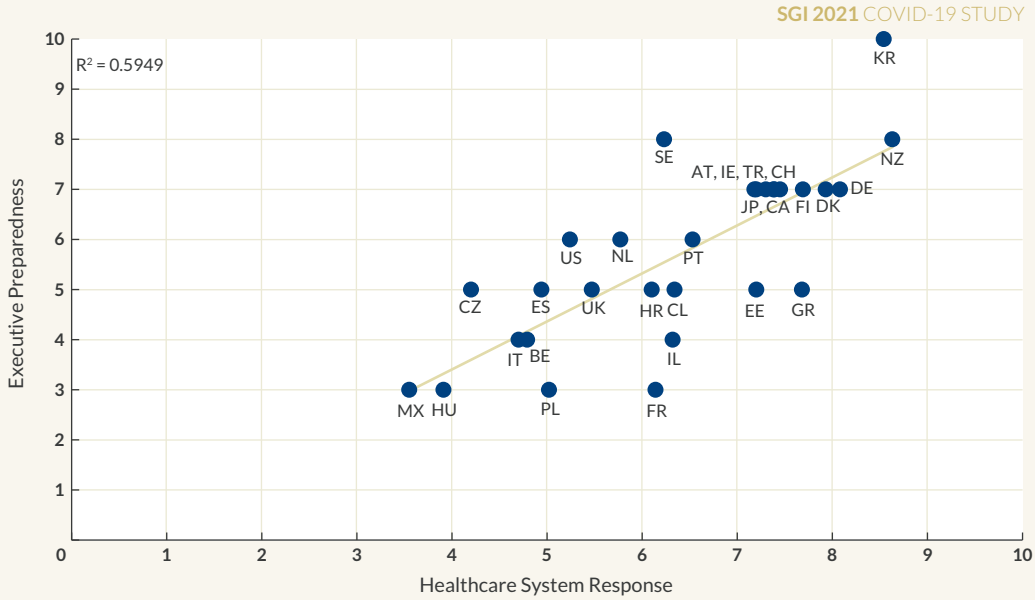
An intact crisis-preparedness system is also characterized by the presence of reliable approaches and plans for overcoming shortages of **skilled personnel** at key points in the pandemic response, for instance in public health agencies or intensive-care units. Stress tests such as those conducted in the financial sector, as well as regular exercises simulating a pandemic emergency, are also critical in this context. This allows authorities to develop a realistic picture of the resilience of the institutions vital to controlling a pandemic.

However, while carrying out stress tests is important, it is also necessary to have structures that facilitate organizational learning that can effectively collect and evaluate the knowledge gained from the tests. Evaluators must additionally have a clear mandate to make binding recommendations to the top levels of government regarding any changes needed to the crisis-preparedness architecture. This requires a timetable that allows for adequate assessment of the results, as well as a government response to the evaluation. The process of publishing and responding to the findings should be characterized by the greatest possible transparency. The evaluation should incorporate all relevant actors from civil society, the policymaking process and those responsible for policy implementation at the administrative level. In **Estonia**, for example, there was no lack of evaluations or findings regarding the lack of coordination between relevant authorities. Moreover, even before the outbreak of the coronavirus, exercises had regularly identified health system vulnerabilities likely to emerge during a pandemic outbreak. However, these insights never led to organizational reform (Toots et al. 2021).

South Korea is the only country in our sample that, in retrospect, can be considered as having been well prepared to deal with the coronavirus pandemic based on its existing institutional preparedness in the area of disease control. The country's rapid process of digital contact-tracing and well-developed testing regime, which is important for early detection, both proved to be crucial in keeping its incidence of infection low. Based on the sobering experience gained during the 2015 Middle East Respiratory Syndrome (MERS) pandemic, the Korean Center for Disease Control and Prevention (KCDC) was tasked to serve as the country's primary disease control body, combining all related national functions including prevention, protection, response and research. Even before the outbreak of the coronavirus pandemic, the agency had identified several high-priority infectious diseases and had procured and stockpiled vital medical supplies at national reserve centers. It had also conducted regular exercises and created plans for distributing these goods to local entities (Kalinowski et al. 2021).

An institutionally well-developed crisis-preparedness system is often paired with a rapid, appropriate response to a crisis by that country's healthcare system. During a crisis, countries with mature administrative crisis-preparedness systems have an advantage over countries that do not yet have sufficiently well-established procedures and institutions in place to provide the knowledge, human resources and medical equipment needed in such an emergency (see Fig. 23).

FIGURE 23 **Healthcare System Response and Executive Preparedness**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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However, gaps in pandemic preparedness can be compensated for by a rapid and appropriate response to the crisis by the country's healthcare system. **New Zealand**, for example, was very successful in keeping infection rates down due to its highly successful "go hard and go early" policy approach and four-tier COVID-19 alert system. These decisions resulted in the rapid rollout of a nationwide testing regime, rapid and aggressive contact-tracing, strict adherence to lockdown measures, and border closures. These policies were implemented despite, or precisely because of, the country's still-inadequate preparation for a pandemic emergency (Hellmann et al. 2021).

Executive Response

Yet, governments must do more than offer convincing solutions to the pandemic through their healthcare systems. They must also develop effective responses to the many other no less-pressing emergencies produced by the pandemic, such as simmering economic, educational, employment and democratic crises. To do so, countries must already have a suitable portfolio of policy measures in place, as well as the organizational and institutional capacities to engage in forward-looking political and administrative management.

The real quality of a government's ability to act in this area is revealed only during the crisis itself. Here too, however, countries with well-developed political-administrative governance capacities before the period of emergency have an advantage when it comes to quickly formulating effective countermeasures, evaluating the measures implemented and successfully communicating their policies during a crisis. Thus, there is a correlation between the quality of the previously developed institutional governance capacities and the quality of the governance performance demanded during the crisis.

This can be seen by comparing our executive capacity subindex from the SGI 2020 survey with the executive response 2021 subindex from the COVID-19 special survey (see Fig. 24). In terms of the quality of the political governance performance exhibited during the crisis, many of the countries in our sample are very close to the level of executive capacity identified by our country experts during the previous year.

FIGURE 24 **Executive Response 2021 and Executive Capacity 2020**

SGI 2021 COVID-19 STUDY

Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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However, there are exceptions to this general observation. Our country experts regard **Greece** as having significantly improved its executive capacity in almost all areas during the crisis as compared to the pre-crisis period. In fact, Greece was among our sample's top countries in the areas of evidence-based policy formulation and national coordination during the crisis (Sotiropoulos 2021). By contrast, **Estonia** has deteriorated significantly compared to the previous reporting period in almost all areas of governance, ranging from the quality of evidence-based policy formulation to policy evaluation, public consultation and the national coordination of policy measures. On the one hand, our experts attribute this to the relatively young age of certain institutional governance arrangements. However, the entry into government of the far-right populist Conservative People's Party (EKRE) was also an important factor, as the party held two portfolios critical to anti-crisis efforts, the Ministry of Finance and the Ministry of Entrepreneurship and Information Technology. Particularly within the economic sector, Estonia's crisis response was slow, and characterized by clientelism and incoherence (Toots et al. 2021).

A government's capacity to mount a rapid and effective pandemic response, as well as to address the myriad consequences for the economy, society and democracy, depends on a number of different factors. One core element in a government's ability to respond with rapid, evidence-based policies is its **incorporation of and adherence to expert advice** – following the science, as the expression goes. In order to provide scientifically sound responses to the pandemic, reliable structures for incorporating cutting-edge expertise should be in place before the crisis. However, very frequent changes in participation formats and advisory groups can also be detrimental to the coherence of policies that have already been agreed upon. In both **Israel** (Levi-Faur et al. 2021) and **Belgium** (Castanheira et al. 2021), rapid change of this kind significantly undermined the coherence of policy measures.

During a crisis, it is also necessary to draw on the resources available. In **Switzerland**, for example, existing epidemiological recommendations were not closely followed, particularly during the first phase of the pandemic (Armingeon et al. 2021). In the **United States** (Béland et al. 2021) and **Mexico** (Muno et al. 2021), sitting presidents deliberately

chose to ignore and/or express disdain for the advice of established scientific advisory bodies. The sad consequences have since become well known: Mexico has the worst ranking in our sample in terms of excess mortality, while the United States falls at 27th place out of 29 countries (see Fig. 90). In still other countries such as **Czechia**, experts were used as pawns in intra-governmental power struggles rather being tapped to find a targeted way forward in the pandemic response (Guasti et al. 2021).

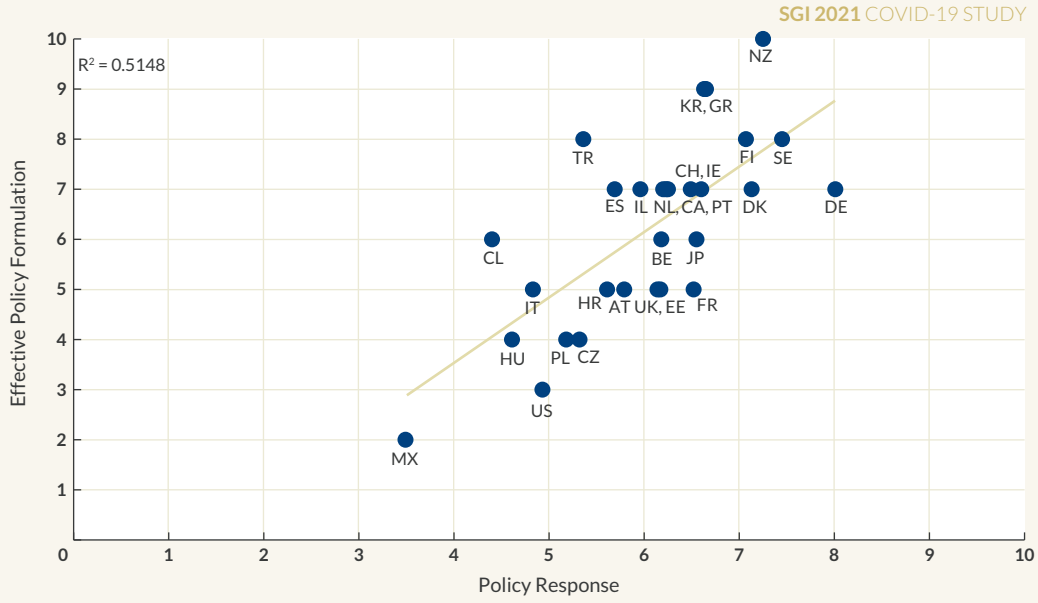
For rapid and effective policy formulation as the crisis unfolds, it is also crucial that the **circle of advisory scientists remains sufficiently open and permeable** to new members who can contribute new scientific knowledge and approaches. Especially in **Sweden**, the circle of scientists involved in the response was initially too closed, consisting exclusively of the members of the Public Health Agency (Petridou et al. 2021). In the **Netherlands**, the circle of experts involved was also very closed, with the result that the excluded (medical) experts became all the more vocal in later stages of the process. As a consequence, policy decisions became distanced from scientific evidence, and political considerations ultimately had a greater impact on strategy formulation than did scientific expertise (Hoppe et al. 2021).

Countries that were able to incorporate expert advice effectively and quickly into the formulation of appropriate policy measures were often more successful in developing effective countermeasures (see Fig. 25).

However, in nearly all of the countries in our sample, **the intensity of compliance with scientific advice, especially from leading virologists, decreased over time**. At the beginning of the pandemic (first wave), many governments tried to implement as many of the recommendations offered by the virologists they consulted as possible, in a timely manner. However, the degree of this compliance diminished significantly as time passed.

One primary reason for this decline in compliance intensity was that the multifaceted negative consequences of the pandemic in various other economic and social sectors also became increasingly visible as the pandemic progressed. This tended to increase the weight given to other economic, social and scientific perspectives and expert opinions.

FIGURE 25 **Policy Response and Effective Policy Formulation**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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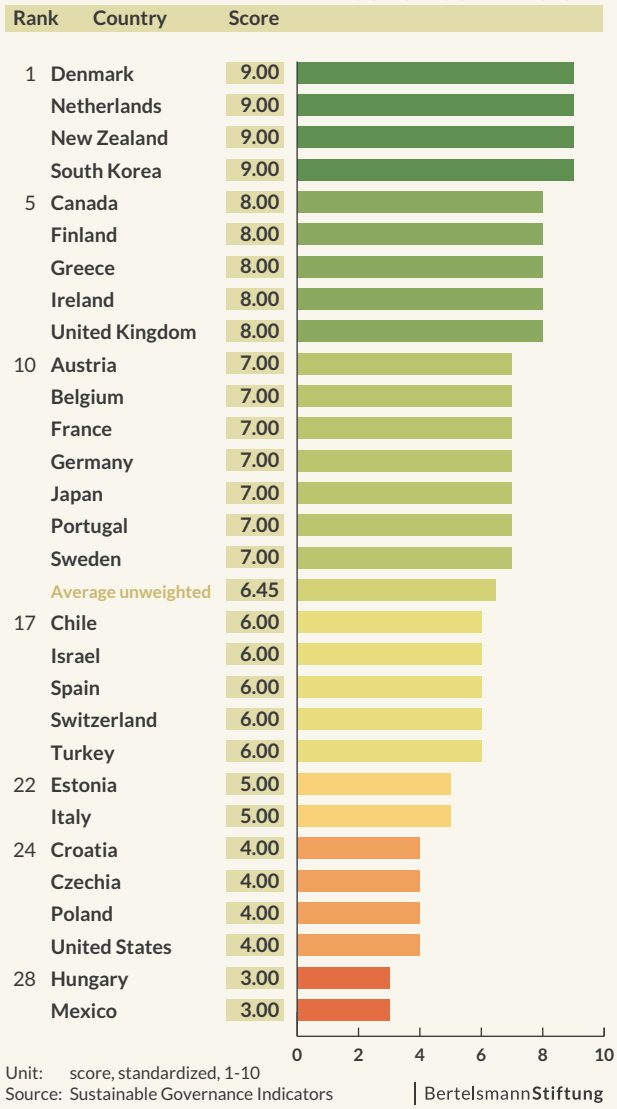
Therefore, the governments' ability **to process and balance different expert opinions** and **deal with conflicting goals** became increasingly important as the crisis progressed. However, none of our countries showed anything better than a rudimentary capacity for dealing with these goal conflicts. Formal and institutionally secured mechanisms are thus needed to balance and coordinate scientific expert opinions effectively during a crisis.

New Zealand, which tops our rankings in the area of effective policy formulation, was able to draw on a previously established network of independent scientific advisers very early on. These figures provided real-time modeling and data analysis on a range of issues related to the control of COVID-19. The government also appointed a member of this network as chief scientific adviser to the prime minister. In addition, the information derived from this real-time modeling was quickly **translated for communication to the public** (Hellmann et al. 2021). This was very helpful in clarifying different potential scenarios and contributed to the population's subsequent **acceptance** of the government's decisions.

FIGURE 26 **Effective Policy Formulation**

FIGURE 27 **Policy Feedback and Adaptation**



In addition to appropriate mechanisms for incorporating and balancing expert advice, governments must also have the capacity to review policies regularly to determine whether they need to be adapted or further developed. **Denmark**, **New Zealand**, the **Netherlands** and **South Korea** all succeeded in regularly reviewing the effectiveness of their policies, and in adapting them on an ongoing basis to rapidly changing circumstances or new knowledge (see Fig. 27).

Unsurprisingly, there seems to be a relationship between having adequate feedback systems and producing effective, because evidence-based, policy. Countries with a well-developed feedback system during the crisis are disproportionately found among the group of countries showing the greatest successes in mitigating the economic and social consequences of the pandemic (see Fig. 28).

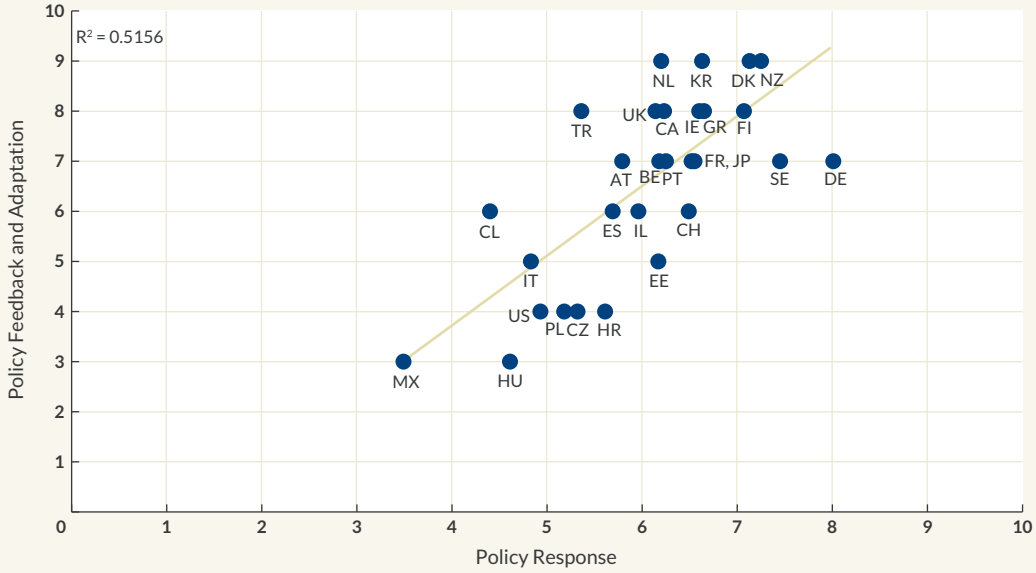
However, the coronavirus pandemic also revealed considerable room for improvement even in some of our frontrunner countries in terms of policy feedback and adaptation. These areas now need to be addressed swiftly in order to improve crisis resilience.

One important area where further work is needed is in **data-collection and analysis capacities** – particularly those associated with the health-related and other socioeconomic early-warning indicators that inform crisis management efforts. For example, even in the **Netherlands**, which otherwise has a very well-developed information infrastructure, there was initially no valid and reliable data on ICU capacity or excess mortality. This forced the government to rely on very heavily assumption-driven simulation models (Hoppe et al. 2021). In this regard, there is great potential in linking various well-targeted administrative data sources, and in additionally tying this data to a frequently conducted household survey. In **Germany** in particular, the pandemic revealed a wide range of weaknesses in this area (see also Bachmann et al. 2021).

To make sure that political measures and crisis assessments are comprehensible to all, it is also critical that the process of data collection, utilization and evaluation is as **transparent** as possible. Equally important is whether the **data collected is also rapidly made available for public review**.

FIGURE 28 **Policy Response and Policy Feedback**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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Overall, in all the countries we examined, the degree to which civil society groups such as employers' associations, trade unions, environmental groups and welfare organizations were involved in policy formulation suffered as a result of the high time pressure under which measures had to be adopted. In no fewer than 12 out of 29 states, the scope and frequency of participation by civil society groups declined significantly as compared to the pre-pandemic period.

A few countries managed to increase the degree to which civil society groups participated. Especially in the southern European countries of **Greece** (Sotiropoulos et al. 2021) and **Portugal** (Jalali et al. 2021) governments actively sought to engage key civil society groups – especially employers' associations and trade unions – to an extent greater than in the pre-crisis period.

However, none of the countries in our sample succeeded in adapting **societal consultation processes** during the crisis so as to enable the government and civil society to engage in an adequate and effective exchange of ideas during the policy formulation phase even **under great time pressure**. **New Zealand**, for example, normally has strong participation requirements associated with its primary legislative impact assessment procedures. These were suspended for coronavirus-related bailout packages so as to ensure rapid adoption (Hellmann et al. 2021). However, if confidence in political institutions and the quality of policy measures are to avoid damage over the long term, consultation with key stakeholders must be intensified significantly during the recovery phase now beginning.

FIGURE 29 **Public Consultation**

Score: standardized, 1-10
Source: Sustainable Governance Indicators

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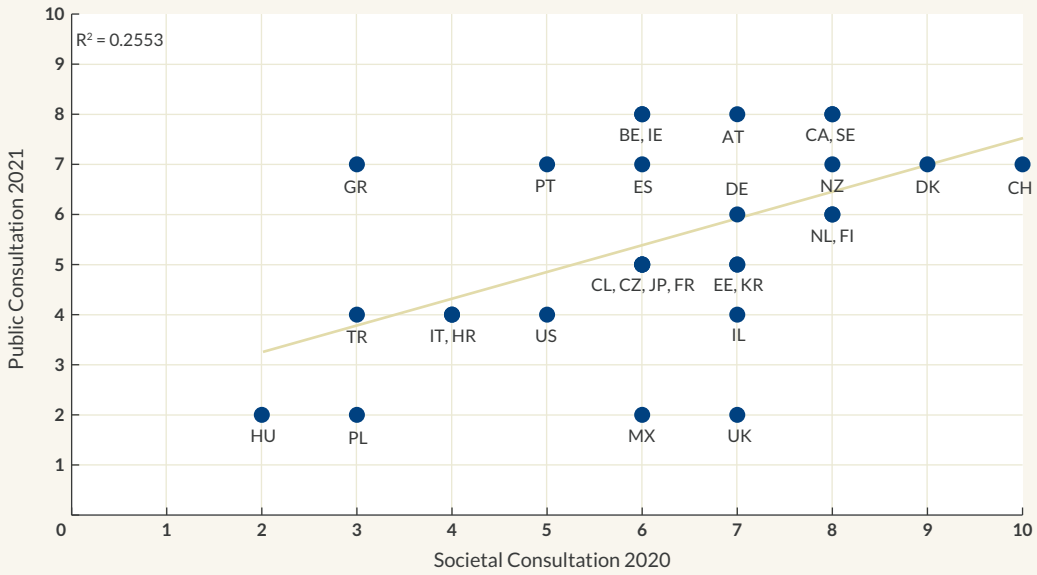
This makes effective government **crisis communication** all the more important. How proactively and frequently does the government provide information about the pandemic? How well does it explain why it took what action? Does it also tap the services of pandemic experts for this purpose? Does it then use multiple government communication channels in order to reach as many people as possible? And finally, does it provide a clear indication of its future plans?

Only a few countries in our sample earn top marks in the area of crisis communication. The government communication of **New Zealand** in particular can be considered as having been exemplary, at least during the pandemic's early months. The Ardern administration proved very good at familiarizing the population with the nuances and usages of its four-tier alert system, as well as the idea behind its "go hard, go early" approach. This helped create a mission-oriented sense of collective solidarity around the pandemic response, while also emphasizing the importance of empathy (Hellmann et al. 2021). Thanks to the rapid and consistent implementation of this approach, New Zealand managed to eliminate the coronavirus as early as August 2020, and largely returned to normality from that point on.

FIGURE 30 **Societal Consultation 2020 and Public Consultation 2021**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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It is true that in most of the other countries we examined, governments held regular briefings on the pandemic, often featuring representatives of the relevant sectoral agencies or leading epidemiologists. Many governments also used multiple channels to disseminate information. However, governments differ in the extent to which they were able to assert **control over messages** relating to pandemic management, for example by limiting which government or the media actors were involved. Similarly, **success in containing false reports varied**.

Message-control strategies exist in a certain tension with free media reporting. However, the countries deemed most successful by our experts in their crisis communication have generally also managed to respect media freedom (see Fig. 32). By contrast, countries such as **Hungary**, **Mexico**, **Poland** and **Croatia**, which also severely limited media freedom during the pandemic, did not have well-developed crisis communication. **Turkey** represents an exception in this regard. Even in this case, however, the country experts report a number of wide-ranging communication breakdowns and problems with flawed pandemic data (Arslantaş et al. 2021).

From the outset, coordinating crisis communications posed greater challenges for **federally organized states** than for more centralized systems of government. In **Belgium** (Castanheira et al. 2021), **Canada** (Tedds et al. 2021), **Germany** (Rüb et al. 2021) and **Switzerland** (Armingeon et al. 2021) authorities often failed to provide citizens in different regions with consistent information. In the **United States**, the government failed to engage in consistent crisis communication mainly due to President Trump's erratic communication style (Béland et al. 2021). In **Austria**, authorities largely managed to hold to a strongly centralized crisis communication strategy at least through the first year of the pandemic (Pelinka et al. 2021).

However, as the duration and complexity of the pandemic response grew, the overall **limitations of rigid message control** by central governments became apparent even in some of the more strongly centralized countries that had previously been successful in this area. The rally-round-the-flag effect ultimately diminished even in these countries, with the population's support for government measures declining significantly over time (for Denmark see Møller Pedersen et al. 2021; for the UK, see Busch et al. 2021). This came as a partial consequence of **communication break-**

downs and the **poorly coordinated announcement of policy measures** (as in the case of school closures), for example.

In addition, as time went on, actors involved in the fight against the pandemic proved more likely to engage in **finger-pointing and the assignment of political blame**, especially as elections drew near. In this respect, it appears that the window of opportunity for a strategy relying exclusively on the strongest possible centralized message control, along with avid government efforts to reduce complexity, is relatively short.

As the pandemic progressed, the **ability to evaluate, adapt and coordinate** crisis communication on a continuous basis thus became increasingly important. In **Finland**, for example, as the public exhibited a declining level of compliance with public health recommendations over time, the government significantly increased the frequency with which it informed the public of its measures as well as the level of detail it provided. Like **New Zealand**, Finland was comparatively successful in controlling the spread of the virus thanks to a rapid, targeted and restrictive containment strategy (Hiilamo et al. 2021).

Effective crisis communication and a crisis response featuring appropriate policy measures often go hand-in-hand. Countries that were able to formulate effective policies in response to the crisis also tended to have a professional crisis communication strategy. However, compared to their largely effective crisis responses in the area of policy measures, **Germany** and **Sweden** performed somewhat below their potential with regard to communication (see Fig. 33). In Germany, the federal government and federal states often failed to reach a shared understanding in diagnosing the immediate problems and the measures best taken in response (Rüb et al. 2021). In Sweden, the government's communication campaign had particular difficulties in reaching parts of the immigrant populations in the big cities (Petridou et al. 2021).

Another key factor in successful crisis management is states' administrative capacity to implement pandemic-response policies and relief measures that are able to cushion economic and social hardship immediately, effectively and without being unduly influenced by powerful interest groups (see Fig. 34).

FIGURE 31 **Crisis Communication**

SGI 2021 COVID-19 STUDY

Score: standardized, 1-10
Source: Sustainable Governance Indicators

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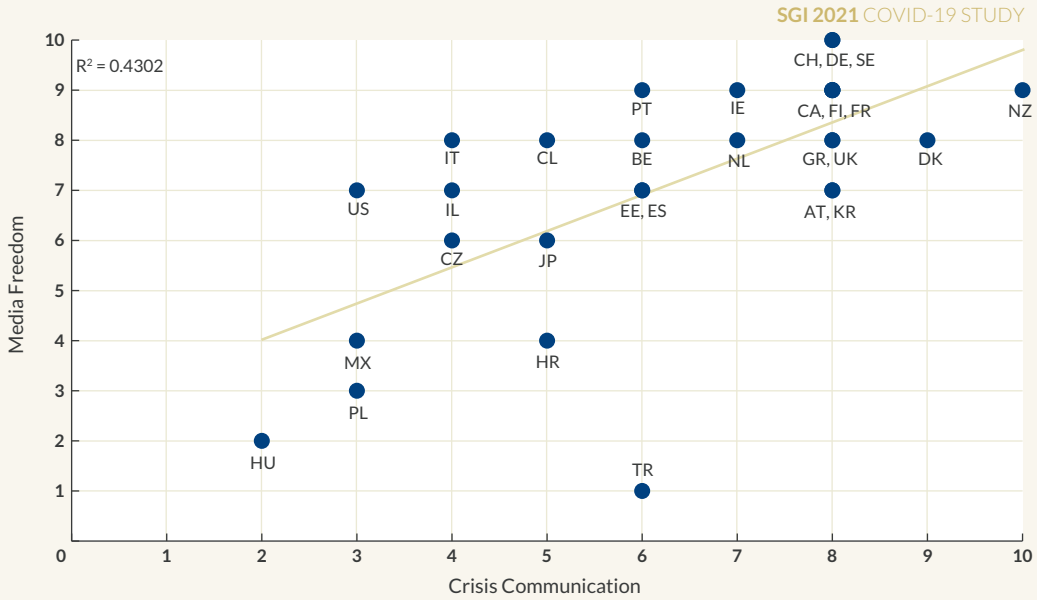
To what extent have governments succeeded mobilizing **budgetary resources** at short notice? To what extent are **sufficiently trained personnel** available for functions such as contact-tracing, disbursement of economic aid or testing of the infected population? Do authorities have the **organizational capacity** to implement new pandemic-response tools, for instance by introducing a coronavirus warning app?

FIGURE 32 **Crisis Communication and Media Freedom**



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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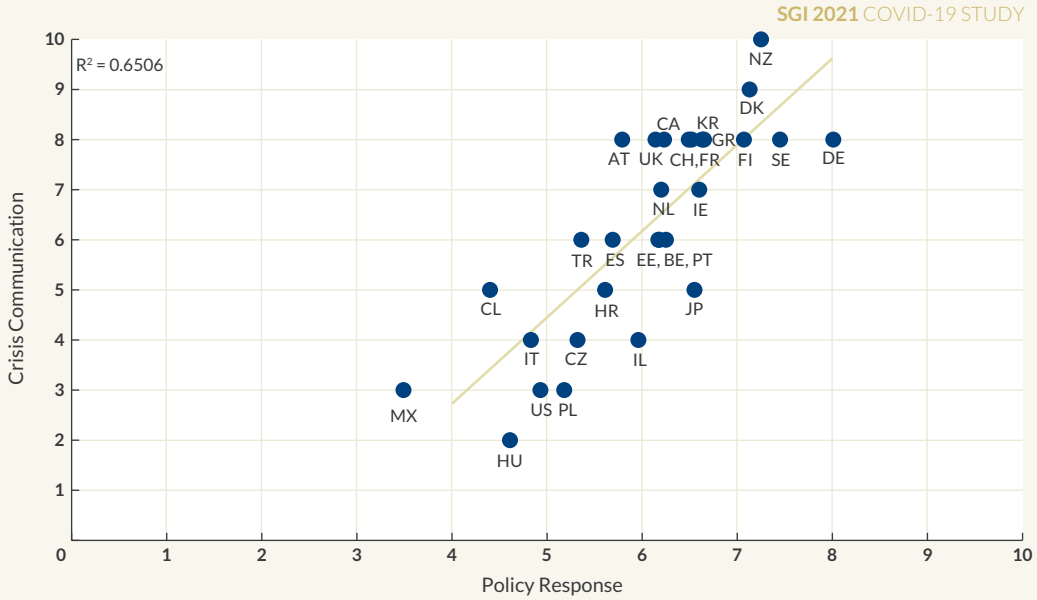
FIGURE 33 **Policy Response and Crisis Communication**



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Source: Sustainable Governance Indicators

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Here too, it appears that a rapid and effective response to the economic, social and health consequences of the pandemic is often associated with a well-developed administrative capacity for effective policy implementation (see Fig. 35). Particularly in **Turkey**, however, our experts noted that while policy implementation during the crisis was largely rapid and smooth, the content

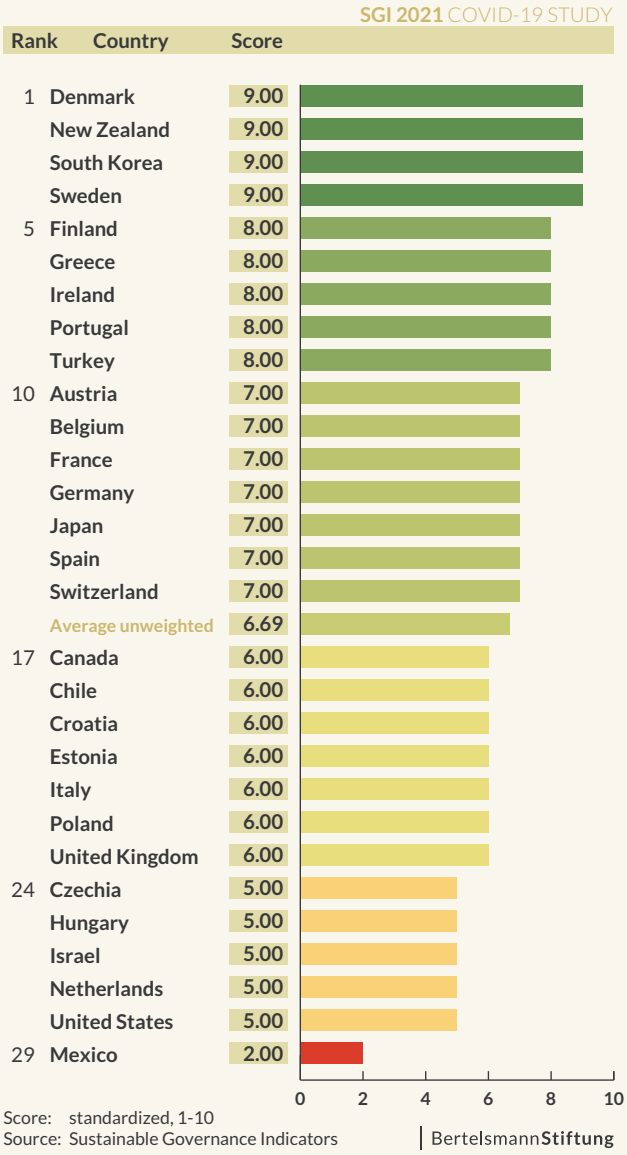
of the policies themselves was considerably less appropriate or effective. The country experts in Turkey also criticize the fact that the government often acted to silence critical voices pointing out mismanagement. Moreover, there are no reliable external evaluations of the actual capabilities of the Turkish healthcare system (Arslantaş et al. 2021).

In a novel crisis on the scale of the coronavirus pandemic, states need to have a well-practiced allocation of competencies in place, as well as sufficient resources for administrative implementation. However, the **capacity to adapt** is also of vital importance in order to be able to take remedial action at short notice. In all of the states we examined, this capability was sorely tested in many respects, from procuring protective medical equipment and creating sufficient testing capacities to informing the public, disbursing economic aid and creating contact-tracing programs. **Denmark** was one country that responded comparatively well to the rapid addition of new tasks. By April 2020, it had already created a nationwide PCR-test infrastructure, called Testcenter Danmark, with the aim of providing all residents with the opportunity to receive COVID-19 tests. The test centers were established in collaboration with – and were co-funded by – the Novo Nordisk Foundation and Novo Nordisk (Møller Pedersen et al. 2021).

Several countries in the sample, including **Israel** (Levi-Faur et al. 2021), the **United Kingdom** (Busch et al. 2021) and the **United States** (Béland et al. 2021), took an early lead in terms of vaccination. However, in each of these three states, these successes were preceded by extensive pandemic-response implementation failures and coordination difficulties.

As with crisis communication, decentralized states can evidently have greater initial difficulties with implementation capacity than is the case with more strongly centralized states. At the same time, the pandemic clearly showed the importance of finding a way to combat the pandemic that is both **coherent** and **sensitive to regional and local concerns**. National coordination of this kind was largely smooth, while also taking into account such local issues, in **New Zealand**, **South Korea**, **Belgium**, **Denmark**, **Greece** and **Sweden**.

FIGURE 34 **Implementation of Response Measures**

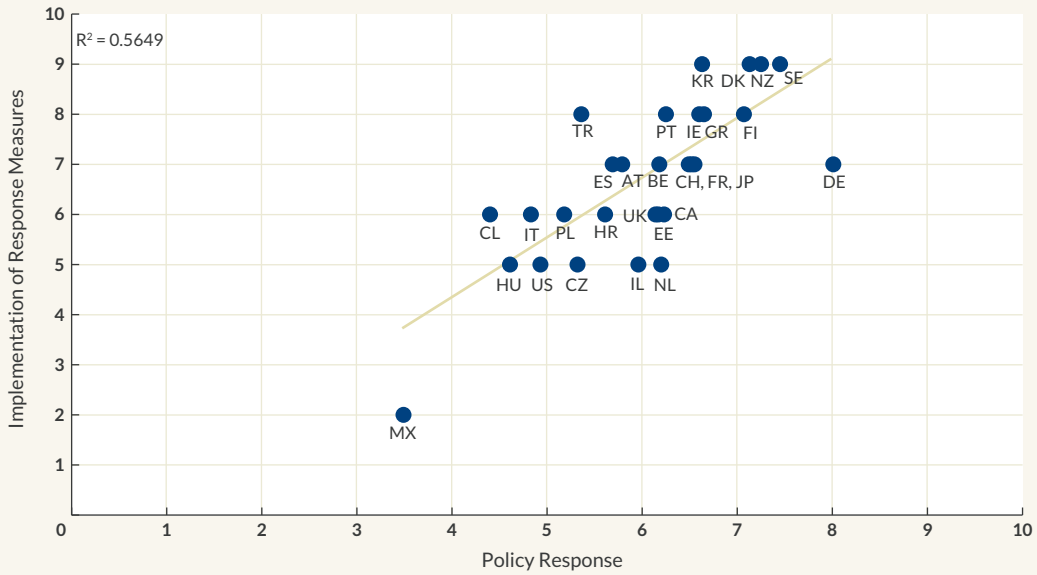


Conversely, failures to coordinate national pandemic-control efforts were evident in **Hungary** and **Mexico** (see Fig. 36).

With regard to successful national coordination too, federally organized systems compare well with more centralized political systems. For example, federal states in particular can typically draw on tried and tested structures and procedures for mobilizing and orchestrating a national collective effort, establishing solidarity between subnational units, and enabling subnational actors to develop tailor-made local solutions.

FIGURE 35 **Policy Response and Implementation of Response Measures**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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In **Germany**, for example, the pandemic response required a number of **federal-state coordination rounds**, with often-significant frictions between the federal and state governments. However, with the help of a **strong scientific advisory staff**, the chancellor's office was comparatively successful in containing these tensions, and the effort as a whole was able to respond effectively to regional particularities and concerns (Rüb et al. 2021). However, during the second and third waves of the pandemic, this basic consensus progressively diminished, especially with the approach of several state-level elections. Over time, the coordinated approach fell away. In April 2021, the federal government reacted to the dwindling federal-state consensus with the implementation of the so-called federal emergency brake. In the more centralized federal state of **Austria**, coordination between the federal government and the individual federal states was relatively smooth during the first year. However, the basic consensus between political actors crumbled here too in early 2021. For example, the federal government ultimately imposed tougher measures within the state of Tyrol against the will of the governor there (Pelinka et al. 2021).

In **Canada**, by contrast, which has a dual or "layer cake" system of federalism and thus a more distinct division between the powers of provincial and federal governments, both levels of government failed from the beginning to agree on basic shared principles for the pandemic response and the associated economic aid (Tedds et al. 2021). Under **Switzerland's** form of dual federalism, the national coordination of measures functioned smoothly in the beginning. However, this was largely due to the declaration of a state of emergency, under which the federal government introduced emergency laws and the cantons implemented federal decrees. When the emergency regulations expired after the summer, considerable coordination problems arose both between the cantons and between the federal and canton governments (Armingeon et al. 2021). In the **United States**, the election campaign and additional political polarization between states, fueled by President Trump, made nationwide coordination difficult (Béland et al. 2021). In **Mexico**, there was little appreciable cooperation between the central government and the individual states and municipalities, resulting in a patchwork of different uncoordinated actions on the part of the federal states (Muno et al. 2021).

Finally, in assessing the crisis resiliency of the institutional arrangements that determine a government's ability to act during a crisis, it is also

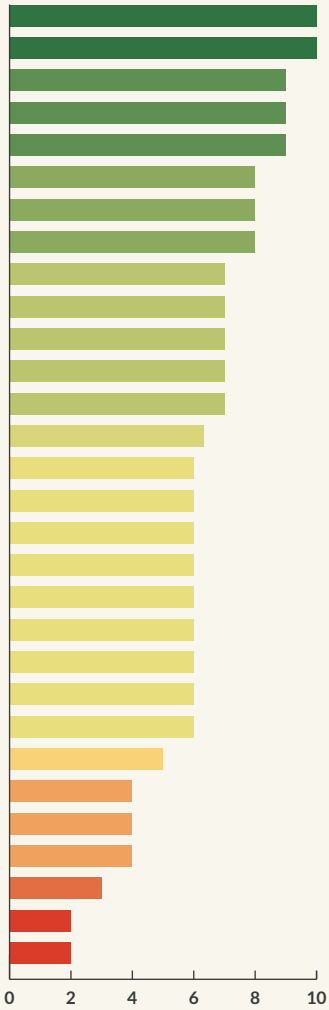
important to ask whether a government systematically learns from past failures or experiences in other countries, and adapts its own crisis management system accordingly, with the aim of better preparing for future crises. The current review period, encompassing just a single year of the coronavirus pandemic, is too short overall to assess the learning and adaptive capacity of the various political-administrative systems examined here. Indeed, many of the countries in our sample have only recently initiated their own evaluations of their crisis management systems. It is therefore too early to render a final conclusion on this issue.

However, it is already apparent that a subset of countries were able to initiate evaluation processes comparatively quickly, and adjust policies even at short notice. This was particularly true of states that had recently updated their crisis management strategies, especially due to previous experience with pandemics, or which possessed a well-developed culture of evaluation. **Canada,** for example, had extensive prior experience in evaluating crisis management systems, for instance in the wake of the SARS epidemic (Tedds et al. 2021). **New Zealand** showed great readiness and willingness to learn from other countries' experiences with

FIGURE 36 **National Coordination**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	New Zealand	10.00
	South Korea	10.00
3	Denmark	9.00
	Greece	9.00
	Sweden	9.00
6	Finland	8.00
	Germany	8.00
	Portugal	8.00
9	Austria	7.00
	Canada	7.00
	Ireland	7.00
	Spain	7.00
	United Kingdom	7.00
	Average unweighted	6.34
14	Belgium	6.00
	Chile	6.00
	Czechia	6.00
	France	6.00
	Israel	6.00
	Italy	6.00
	Netherlands	6.00
	Switzerland	6.00
	Turkey	6.00
23	Japan	5.00
24	Croatia	4.00
	Estonia	4.00
	Poland	4.00
27	United States	3.00
28	Hungary	2.00
	Mexico	2.00



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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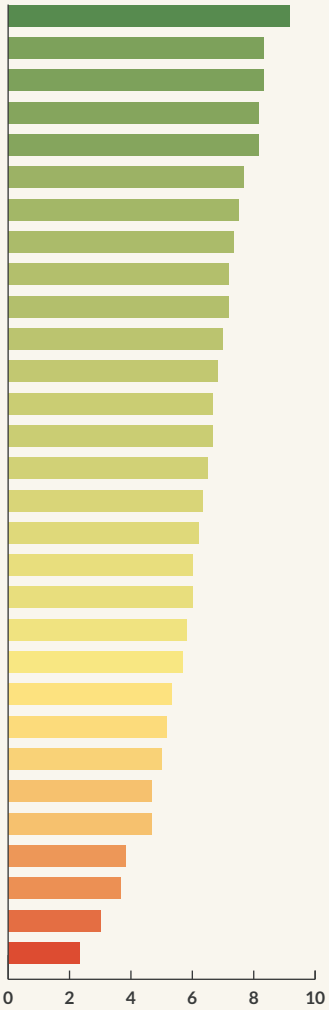
FIGURE 37 **Executive Response**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	New Zealand	9.17
2	Denmark	8.33
	South Korea	8.33
4	Greece	8.17
	Sweden	8.17
6	Finland	7.67
7	Ireland	7.50
8	Canada	7.33
9	Germany	7.17
10	Portugal	7.17
11	Austria	7.00
12	Switzerland	6.83
13	Spain	6.67
14	Netherlands	6.67
15	Belgium	6.50
16	France	6.33
	Average unweighted	6.21
17	Turkey	6.00
	United Kingdom	6.00
19	Japan	5.83
20	Chile	5.67
21	Israel	5.33
22	Estonia	5.17
23	Italy	5.00
24	Croatia	4.67
25	Czechia	4.67
26	Poland	3.83
27	United States	3.67
28	Hungary	3.00
29	Mexico	2.33



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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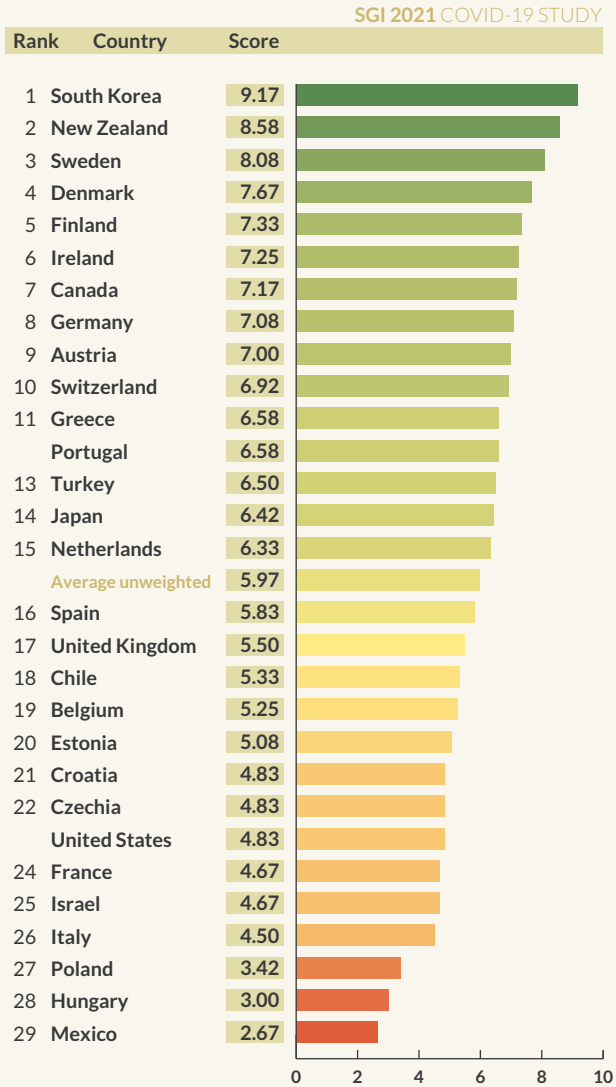
FIGURE 38 **Executive Capacity Resilience**



pandemics. For example, the NZ Covid Tracer app was closely modeled on Singapore's contact-tracing app (Hellmann et al. 2021). Following the 2015 MERS pandemic, health authorities in **South Korea** participated in a joint external evaluation and conducted multiple reviews. The government subsequently expanded the ability to generate and share data across different administrative levels (Kalinowski et al. 2021).

Due to successful crisis preparation and a well-orchestrated political steering process during the crisis itself, **South Korea** and **New Zealand** in particular were able to maintain a high standard of professionalism in their actions throughout. With the exception of South Korea, none of the countries in our sample can be considered as having been sufficiently well prepared to cope with a health emergency on the scale of the coronavirus pandemic. However, no fewer than 11 of the 29 countries examined also showed serious deficiencies in their executive response during the COVID-19 crisis.

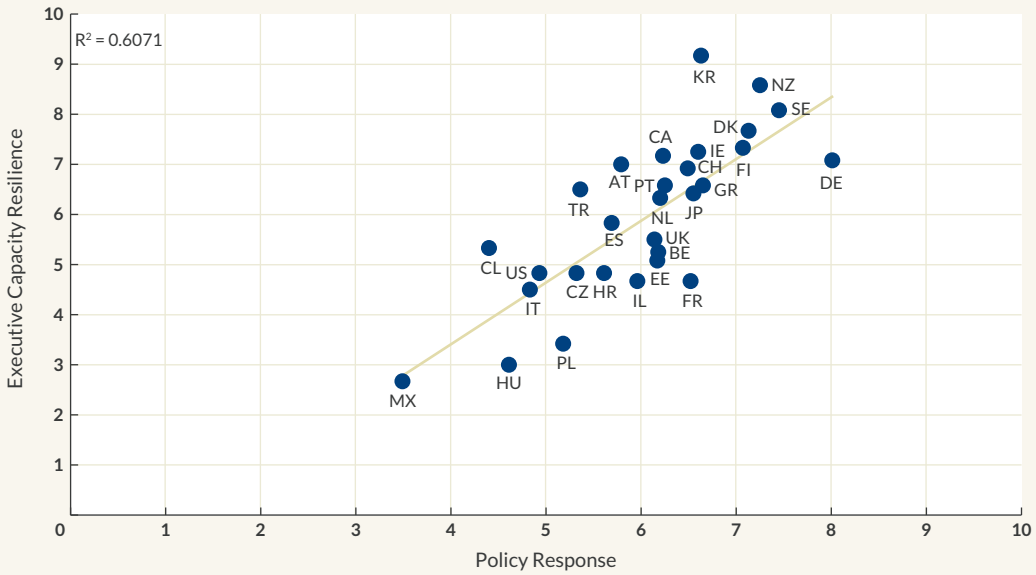
During the review period, the worst performers in terms of their political-administrative responses were the authoritarian- or populist-governed **Mexico**, **Hungary**, **United States** and **Poland**. However, in **Czechia**, **Croatia**, **Estonia**, **Italy**, **Israel**, **Chile** and **Japan**, the crisis exposed multiple institutional procedural weaknesses in policy formulation, the culture of feedback, crisis communication and implementation of response measures (see Fig. 37).

Overall, nearly half of the countries in our sample – 14 states in total – must therefore in retrospect be regarded as insufficiently resilient with regard to their political-administrative capacity to act during the coronavirus crisis (see Fig. 38).

This proves to be a heavy burden with regard to developing sustainable policy solutions capable of mitigating the pandemic's future economic and social consequences. A weak political-administrative capacity to act in the crisis is often accompanied by a comparatively ineffective crisis response (see Fig. 39).

FIGURE 39 **Policy Response and Executive Capacity Resilience**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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Resilience of Executive Accountability

A government's ability to act is one key aspect of effective political steering during a crisis. However, also crucial is the extent to which citizens, NGOs and other organizations are able to participate in the policymaking process, understand the motives and goals behind government actions, and ultimately play an oversight role. Thus, how resilient and sustainable are the relationships between government and civil society during a crisis, particularly with regard to the issue of accountability? The coronavirus crisis has served as an important litmus test for these relationships.

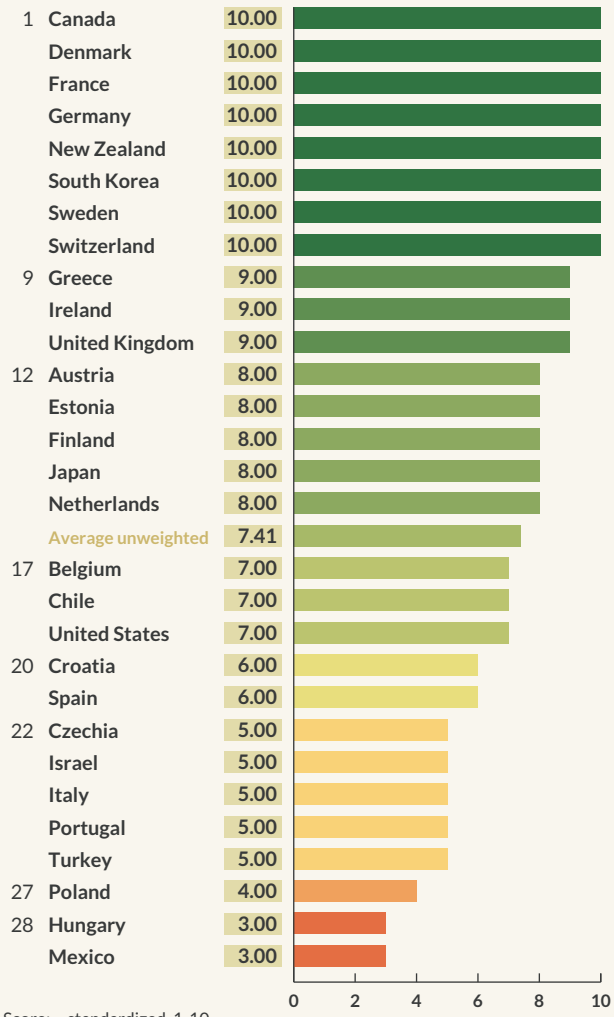
For example, have governments in our sample of countries been able to make data and information about the COVID-19 pandemic available to their citizens at all times, in a way that has empowered civil society to hold government accountable during the crisis?

In **Mexico** (Muno et al. 2021), **Hungary** (Ágh 2021), **Poland** (Matthes et al. 2021), **Portugal** (Jalali et al. 2021), **Italy** (Cotta et al. 2021), **Israel** (Levi-Faur et al. 2021), **Czechia** (Guasti et al. 2021) and **Turkey** (Arslantaş et al. 2021), the pandemic data provided to citizens was both insufficient and incomplete (see Fig. 40). Following its publication, the data often turned out to be less than reliable. In addition, it was often unclear what data and which interpretation of the data ultimately informed these governments' decisions on pandemic measures. In part, this was because no information was provided to the public on the key government meetings where these decisions were made.

In **Spain** (Kölling et al. 2021), **Belgium** (Castanheira et al. 2021), **Japan** (Pascha et al. 2021), **Austria** (Pelinka et al. 2021) and **Finland** (Hiilamo et al. 2021), the public was not consistently given access to important (raw) data, or to the information derived from this data that informed decision parameters in the adoption of coronavirus measures. In **Chile**, the frequent changes in methodology for counting COVID-19 infections and deaths led to considerable confusion within civil society (Klein et al. 2021). In the **United States**, there was considerable data produced at both the national and subnational levels. However, due to differing capacities within state and local governments and individual agencies, discrepancies arose in pandemic reporting practices that sometimes proved

FIGURE 40 **Open Government**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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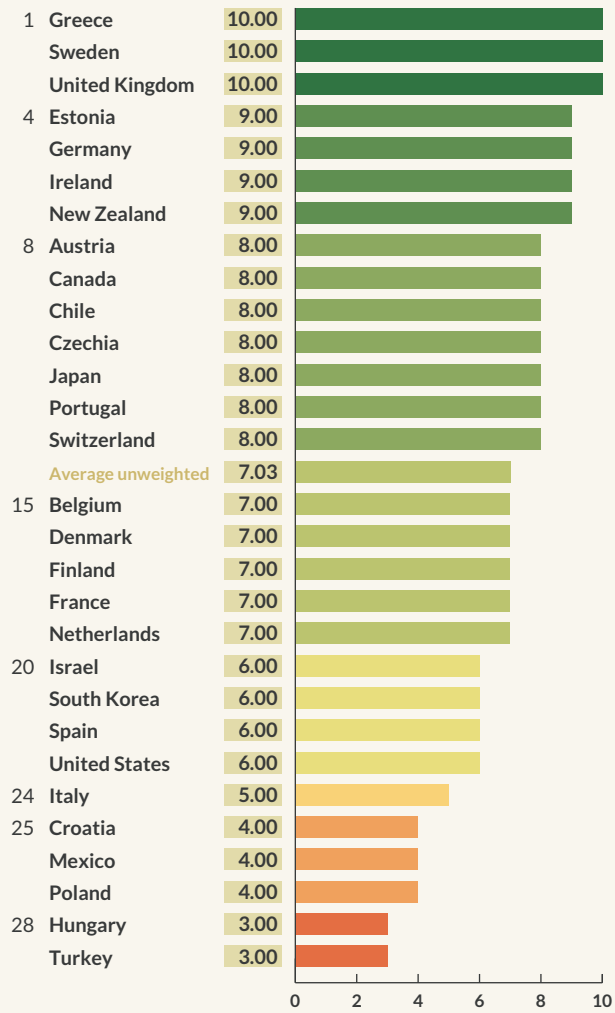
FIGURE 41 **Legislative Oversight**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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difficult to resolve. The Trump administration itself made little effort to improve this situation in any substantial way (Béland et al. 2021).

By contrast, **Canada** was able to significantly enhance transparency, accountability and citizen participation, even during the crisis, through use of its already well-developed Open Government platform. This platform offers a comparatively comprehensive and diverse set of data on the government's work during the coronavirus crisis. In addition, Statistics Canada is publishing a series of additional analyses intended to help model and assess the coronavirus pandemic's social and economic impacts on individuals (Tedds et al. 2021).

During a crisis, governments must be able to meet the public's increased need for information by providing the most comprehensive-as-possible data and explanations. But parliaments, too, must also be able to conduct effective oversight of the government's crisis management efforts.

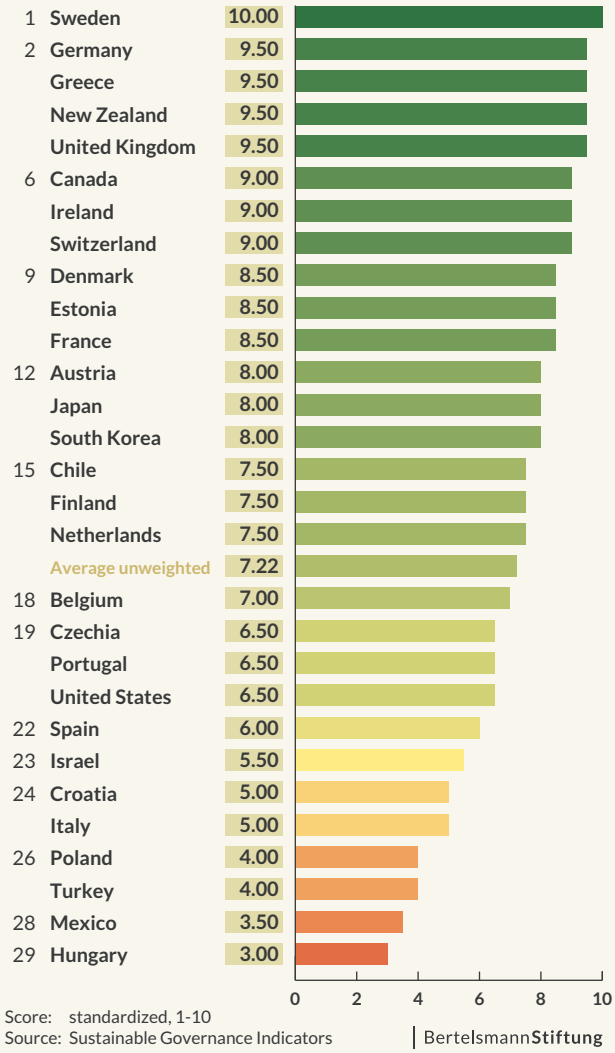
Nonetheless, in our sample's countries, parliamentary oversight opportunities proved to be severely limited both de facto and de jure. Par-

ticularly when emergency legislation was passed, parliaments often had to work under great time pressures. Consequently, in many locations, there was often insufficient opportunity for elected legislators to engage in effective scrutiny of the regulations and laws being adopted.

In a number of authoritarian-populist states, the crisis again made it very clear that parliamentary oversight functions had already been deeply eroded. In **Turkey**, the parliament has largely lacked any effective oversight powers, including in the fields of economic and social policy, since the introduction of the new presidential system in 2018. The parliament has no ability to review President Erdoğan's presidential decrees, and the powers to question ministers or introduce a motion of no confidence have both been abolished (Arslantaş et al. 2021). **Hungary's** adoption of the so-called enabling act in March 2020 also allows Viktor Orbán's government to make far-reaching decisions on the basis of decrees that can be overturned only by a two-thirds parliamentary majority, at least for the duration of the state of emergency. In November 2020, the government declared another state of emergency and the parliament adopted ACT CIX of 2020, which exempts decrees from the parliamentary approval requirement for 90 days (Ágh et al. 2021).

FIGURE 42 **Resilience of Executive Accountability**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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FIGURE 43 **Crisis Governance**

SGI 2021 COVID-19 STUDY

Score: standardized. 1-10
Source: Sustainable Governance Indicators

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In **Mexico** (Muno et al. 2021), **Poland** (Matthes et al. 2021), **Croatia** and **Italy**, governments deliberately used a variety of procedural mechanisms to try to shorten parliamentary deliberations on emergency measures. In Italy, ratification was regularly linked to motions of confidence (Cotta et al. 2021), while in Croatia, the parliament's rules of procedure were changed due to the pandemic to shorten speaking times and suspend legislators' ability to reply (Kotarski et al. 2021).

Therefore, in these six countries, parliaments in fact had virtually no effective oversight capability during the pandemic. However, in many of our sample's other states too, parliamentary oversight standards were lowered due to the intense time pressure associated with the passage of emergency measures. In the **United States**, the pandemic exposed the many weaknesses in Congress' technical infrastructure, particularly due to the transition to remote work (Béland et al. 2021). In **Spain** (Kölling et al. 2021), **South Korea** (Kalinowski et al. 2021) and **Israel** (Levi-Faur et al. 2021), parliamentary oversight capacities were also very limited at times.

In 19 out of the 29 states we examined, by contrast, it proved possible to maintain parliamentary oversight powers without major curtailments. However, only seven states – **Estonia**, **Germany**, **Greece**, **Ireland**, **New Zealand**, **Sweden** and the **United Kingdom** – were ultimately successful throughout the crisis in respecting the democratic division of labor between the executive and the legislature.

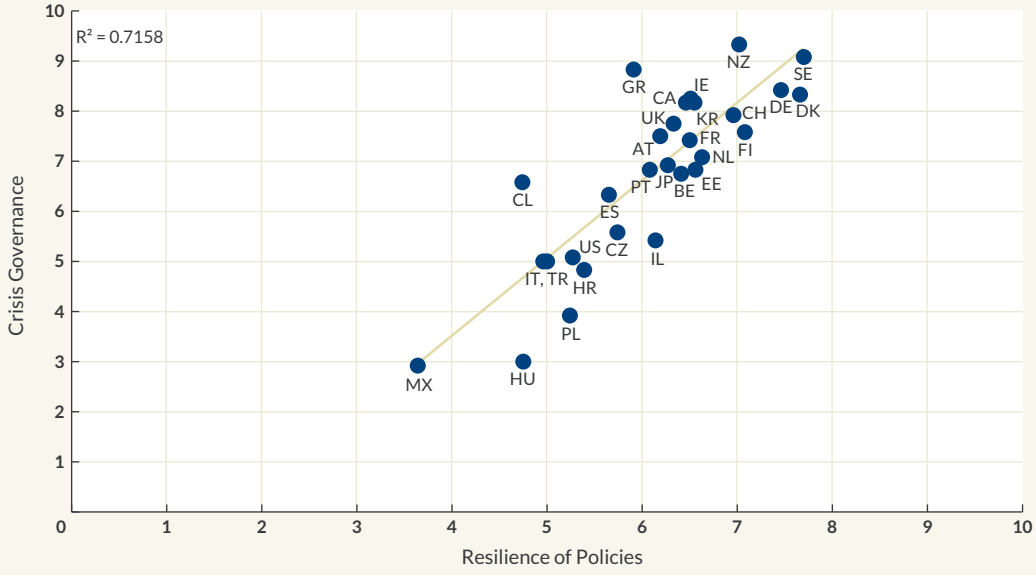
The bottom line is that of the 14 states that already lacked resilience with regard to their political-administrative capacity to act in the crisis, seven – **Hungary**, **Mexico**, **Turkey**, **Poland**, **Italy**, **Croatia** and **Israel** – must also be considered insufficiently resilient with regard to key civil society actors' ability to hold their governments accountable (see Fig. 42).

The 29 states in our sample have thus succeeded to very different degrees in building capacities for sustainable and effective sociopolitical governance during a comprehensive emergency such as the coronavirus crisis. In no fewer than nine states, overall governance capacities are underdeveloped. **New Zealand**, **Sweden** and **Greece** have recently demonstrated the greatest progress in this area.

A failure to close the gap between the states that lead and trail with regard to governance capacities risks allowing further future divergence between countries in dealing with the coronavirus pandemic's economic and social consequences (see Fig. 44).

FIGURE 44 **Resilience of Policies and Crisis Governance**

SGI 2021 COVID-19 STUDY



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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PART III:
Resilience of Policies

Economic Resilience

Economic Preparedness

Before the onset of the coronavirus crisis, the countries in our sample were grappling simultaneously with weaknesses in economic growth and the need to transition to climate-friendly and resource-conserving economic systems

Strikingly, none had yet developed convincing responses to either of these exigencies.

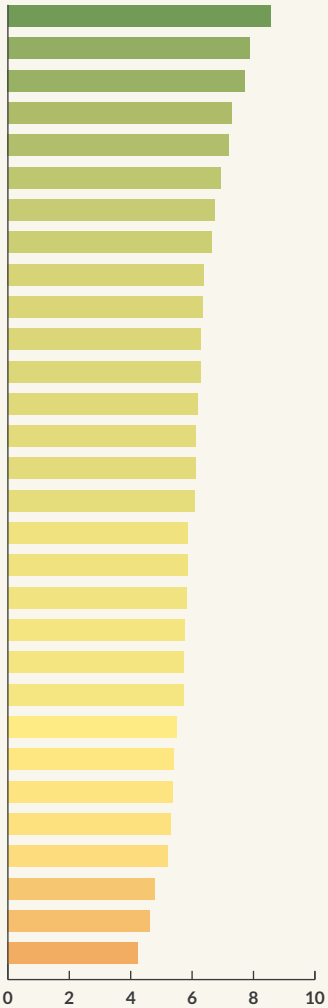
Looking at economic growth over the past ten years among the countries in our sample, we see, **Ireland** performs best, with average real economic growth of 6.3% (see Fig. 45). **Turkey** (+5.8%), **Israel** (+3.7%), **Estonia** (+3.7%), **Poland** (+3.6%), **South Korea** (+3.3%) and **Chile** (+3.3%) have all also experienced strong real economic growth rates well above the 2% mark. However, more than half of the states we studied – 15 states in total – showed real economic growth rates that were below average in this sense. Greece even had an overall negative real growth rate of -2.10 %%. Among the G-7 countries, only two – the **United States** (+2.3%) and **Canada** (+2.2%) – displayed economic growth stronger than the average in this period. Among the founders of the OECD, only the two North American countries, **Ireland**, **Sweden** (+2.5%) and **Turkey** cleared this mark.

Overall national investment trends are also a cause for concern in a number of countries. A look at the 10-year average of the ratio of gross fixed capital formation to GDP shows that some of the leading economies increasingly appear to be losing ground to other countries. Particularly in the G-7 coun-

FIGURE 45 **Economic Preparedness**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	Switzerland	8.55
2	Denmark	7.87
3	Ireland	7.73
4	Sweden	7.28
5	Netherlands	7.20
6	Germany	6.93
7	Israel	6.72
8	Austria	6.62
9	France	6.39
10	United Kingdom	6.33
11	Finland	6.28
12	Belgium	6.28
13	New Zealand	6.18
	Average unweighted	6.13
14	Japan	6.11
15	South Korea	6.08
16	Chile	5.85
17	Canada	5.84
18	Portugal	5.81
19	Spain	5.74
20	Czechia	5.73
21	Estonia	5.72
22	Poland	5.51
23	United States	5.41
24	Croatia	5.38
25	Hungary	5.30
26	Turkey	5.20
27	Italy	4.77
28	Greece	4.63
29	Mexico	4.24



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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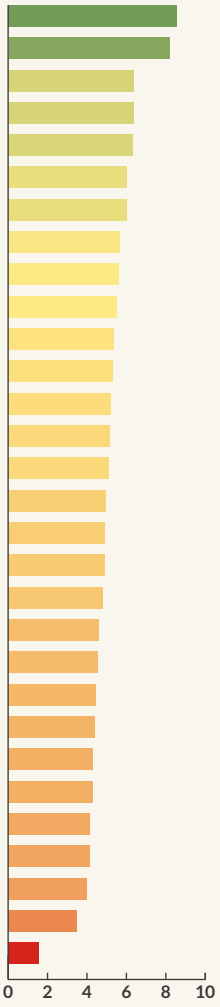
FIGURE 46 **Real GDP Growth Rate**

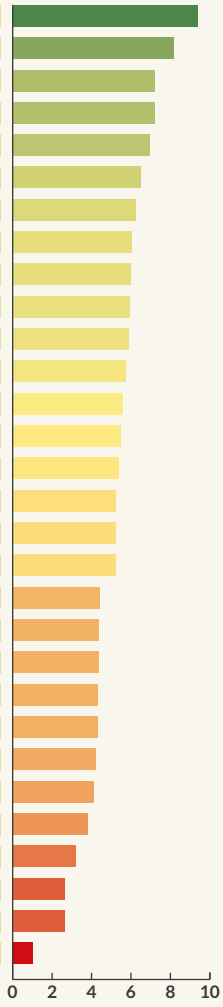
Rank	Country	Value	Score
1	Ireland	6.35	8.53
2	Turkey	5.86	8.13
3	Israel	3.76	6.39
4	Estonia	3.74	6.37
5	Poland	3.64	6.29
6	Chile	3.30	6.01
	South Korea	3.31	6.01
8	New Zealand	2.90	5.67
9	Hungary	2.80	5.59
10	Mexico	2.68	5.49
11	Sweden	2.49	5.33
12	Czechia	2.42	5.28
13	United States	2.30	5.18
	Average unweighted		5.13
14	Canada	2.22	5.11
15	Switzerland	2.02	4.94
16	Denmark	1.94	4.88
17	Germany	1.93	4.87
18	United Kingdom	1.83	4.79
19	Belgium	1.58	4.58
20	Austria	1.55	4.56
21	Netherlands	1.43	4.46
22	France	1.38	4.41
23	Japan	1.26	4.31
24	Finland	1.22	4.28
25	Spain	1.06	4.15
26	Croatia	1.03	4.12
27	Portugal	0.85	3.98
28	Italy	0.26	3.49
29	Greece	-2.10	1.53



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

FIGURE 47 **Gross Fixed Capital Formation, 2010-2019**

Rank	Country	Value	Score
1	South Korea	31.17	9.39
2	Turkey	28.54	8.13
3	Czechia	26.65	7.23
4	Ireland	26.57	7.19
5	Estonia	26.09	6.96
6	Switzerland	25.15	6.51
7	Japan	24.61	6.25
8	Austria	24.19	6.05
9	Sweden	24.10	6.00
10	Belgium	23.97	5.94
11	Canada	23.86	5.89
12	Chile	23.55	5.74
13	Finland	23.19	5.57
14	France	22.96	5.46
15	Mexico	22.80	5.38
16	Hungary	22.50	5.24
17	New Zealand	22.49	5.23
	Average unweighted		5.23
18	Croatia	20.79	4.42
19	Israel	20.74	4.39
20	Denmark	20.68	4.37
21	Poland	20.60	4.33
22	Germany	20.54	4.30
23	United States	20.33	4.20
24	Netherlands	20.12	4.10
25	Spain	19.48	3.79
26	Italy	18.20	3.18
27	Portugal	17.15	2.67
28	United Kingdom	17.13	2.66
29	Greece	13.14	1.00



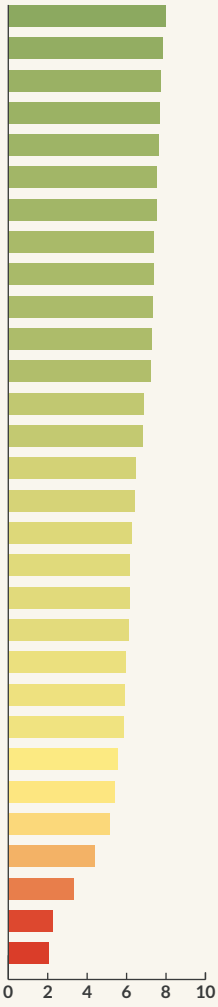
Unit (Value): percentage of GDP
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

tries of **Germany**, the **United States**, **Italy** and the **United Kingdom**, the ratio of gross fixed capital formation to GDP was well behind that seen in leading countries such as **South Korea**, **Turkey** and **Czechia**. Measured against the weighted average of all 29 countries in our sample, an additional nine countries – **Greece**, **Portugal**, **Italy**, **Spain**, the **Netherlands**, **Poland**, **Denmark**, **Israel** and **Croatia** – had a below-average share of gross fixed capital formation over the past 10 years. On this measure, **Japan** is the only G-7 state to fall among the top 10 countries in our survey.

The weak investment activity is particularly worrying given the now-imminent transition to climate-neutral economies. A full assessment of economic preparedness should include not only indicators of past economic performance in the narrow sense, but also indicators of progress toward realizing a climate-neutral and resource-conserving economy. When this latter category is taken into account, it becomes very clear that the industrialized countries have not yet embarked on a path capable of combining a dynamic economic performance with a more ambitious climate-friendly and resource-conserving economic approach.

FIGURE 48 **Greenhouse Gas Emissions**

Rank	Country	Value	Score
1	Sweden	4.98	8.01
2	Switzerland	5.40	7.85
3	Mexico	5.74	7.71
4	Croatia	5.79	7.69
5	Chile	6.00	7.61
6	Turkey	6.17	7.54
7	Portugal	6.18	7.53
8	France	6.59	7.37
	Hungary	6.59	7.37
10	Spain	6.70	7.33
11	United Kingdom	6.80	7.29
12	Italy	6.99	7.21
13	Denmark	7.89	6.85
14	Greece	7.98	6.82
15	Israel	8.85	6.47
16	Austria	9.01	6.41
	Average unweighted		6.25
17	Japan	9.58	6.18
18	Finland	9.61	6.17
19	Germany	9.75	6.11
20	Belgium	10.18	5.94
21	Poland	10.29	5.89
22	Netherlands	10.43	5.84
23	Estonia	11.10	5.57
24	Czechia	11.52	5.40
25	Ireland	12.19	5.14
26	South Korea	14.10	4.37
27	New Zealand	16.74	3.32
28	Canada	19.43	2.25
29	United States	19.98	2.03



Unit (Value): tonnes in CO2 equivalents per capita
Unit (Score): standardized, 1-10
Source (Value): Eurostat, OECD, UNFCCC & World Bank
Source (Score): Sustainable Governance Indicators

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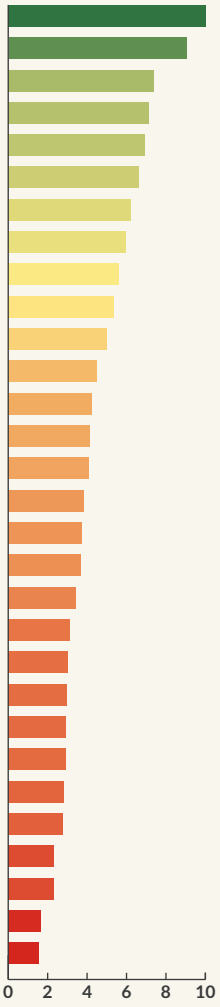
FIGURE 49 **Renewable Energy**

Rank	Country	Value	Score
1	Sweden	52.48	10.00
2	Finland	44.22	8.98
3	Denmark	35.33	7.38
4	Austria	33.85	7.11
5	Croatia	32.85	6.93
6	New Zealand	31.04	6.60
7	Estonia	28.84	6.21
8	Portugal	27.61	5.98
9	Chile	25.46	5.60
10	Switzerland	24.20	5.37
11	Canada	22.18	5.00
	Average unweighted		4.51
12	Greece	17.86	4.22
13	Spain	17.39	4.14
14	Italy	17.07	4.08
15	Germany	15.80	3.85
16	France	15.25	3.75
17	Czechia	14.73	3.66
18	Hungary	13.53	3.44
19	Turkey	11.87	3.14
20	Poland	11.26	3.03
21	United Kingdom	11.05	2.99
22	Ireland	10.74	2.94
23	Belgium	10.66	2.92
24	United States	10.11	2.83
25	Mexico	9.63	2.74
26	Japan	7.39	2.33
	Netherlands	7.38	2.33
28	Israel	3.72	1.67
29	South Korea	3.18	1.57



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): UN SDG Indicators
Source (Score): Sustainable Governance Indicators

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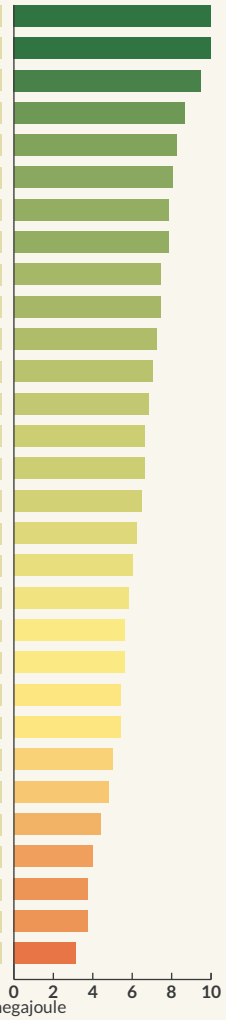
For example, some of the countries that have shown the most dynamic economic growth in recent years fall into the bottom group in terms of key indicators measuring outcomes along the path to a climate-neutral economy (see Fig. 47). Countries such as **Ireland**, **Estonia**, **Poland** and **South Korea**, for example, are among the states with the highest per capita greenhouse gas emissions. Among the countries in our sample, the most significant emitters on a per capita basis in 2019 were again **New Zealand**, **Canada** and the **United States.**

If a climate-neutral economy is to be achieved by 2050, significantly more progress in reducing greenhouse gas emissions will be necessary. Yet a look at the pace of change in the reduction of per capita greenhouse gas emissions shows that in many countries, this process has all but stalled. Countries including **Austria**, **Portugal**, **New Zealand**, **Poland**, **Hungary**, **Japan** and **Canada** have in fact achieved no appreciable reductions since 1995. In emerging economies such as **Turkey, Chile, South Korea, Croatia** and **Mexico,** per capita greenhouse gas emissions have even continued to

FIGURE 50 **Energy Productivity**

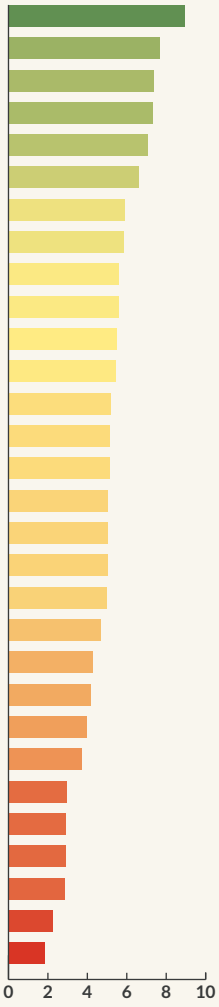
Rank	Country	Value	Score
1	Ireland	0.71	10.00
	Switzerland	0.58	10.00
3	Denmark	0.46	9.49
4	United Kingdom	0.42	8.67
5	Italy	0.40	8.26
6	Turkey	0.39	8.06
7	Israel	0.38	7.85
	Portugal	0.38	7.85
9	Austria	0.36	7.44
	Spain	0.36	7.44
11	Germany	0.35	7.24
12	Greece	0.34	7.03
13	Mexico	0.33	6.83
14	Croatia	0.32	6.63
	Netherlands	0.32	6.63
	Average unweighted		6.49
16	France	0.30	6.22
17	Japan	0.29	6.01
18	Chile	0.28	5.81
19	Hungary	0.27	5.60
	Poland	0.27	5.60
21	Belgium	0.26	5.40
	Sweden	0.26	5.40
23	New Zealand	0.24	4.99
24	Czechia	0.23	4.78
25	United States	0.21	4.38
26	Finland	0.19	3.97
27	Estonia	0.18	3.76
	South Korea	0.18	3.76
29	Canada	0.15	3.15



Unit (Value): GDP (PPP, 2017 international $) per megajoule
Unit (Score): standardized, 1-10
Source (Value): UN SDG Indicators
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

FIGURE 51 **Material Footprint**

Rank	Country	Value	Score
1	Mexico	10.18	8.95
2	Hungary	14.83	7.69
3	Croatia	16.02	7.36
4	Turkey	16.07	7.35
5	Chile	17.15	7.05
6	Portugal	18.73	6.63
7	Italy	21.42	5.89
8	Ireland	21.50	5.87
9	France	22.51	5.60
10	United Kingdom	22.52	5.59
11	Germany	22.84	5.51
12	Czechia	22.99	5.47
13	Spain	23.97	5.20
14	Belgium	24.12	5.16
	Israel	24.11	5.16
16	New Zealand	24.48	5.06
	Average unweighted		5.04
17	Denmark	24.60	5.03
18	Poland	24.68	5.01
19	Japan	25.93	4.67
20	Greece	27.23	4.31
21	Netherlands	27.69	4.19
22	South Korea	28.51	3.96
23	Estonia	29.36	3.73
24	Switzerland	32.19	2.96
25	Sweden	32.26	2.94
26	United States	32.42	2.90
27	Austria	32.59	2.85
28	Canada	34.84	2.24
29	Finland	36.22	1.87



Unit (Value): tonnes per capita
Unit (Score): standardized, 1-10
Source (Value): OECD
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

rise relative to 1995.[1] By contrast, the countries that have been most successful in reducing per capita greenhouse gas emissions include **Denmark**, the **United Kingdom** and **Sweden**. However, even these countries, if they were to maintain the current pace of reductions, would fall well short of meeting the CO2 reduction goals set in the Paris Agreement.

In many counties, the development of renewable energy sources has been stalled for some time. By contrast, our sample's top countries in this area, **Sweden** and **Finland** (see Fig. 48) expanded their use of alternative energy sources in the 2010 – 2018 period.[2]

1 Own calculations based on: UNFCCC: Dataset: Time Series -Annex I, GHG total without LULUCF URL:https://di.unfccc.int/time_series extracted October 27,2020 Eurostat: Dataset: Population on January 1 by broad age group and sex[demo_pjanbroad] URL:https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanbroad&lang=en, extracted April 12, 2021.

2 Own calculations based on: Sustainable Development Goals Indicators Database Indicator 7.2.1, Series: Renewable energy share in the total final energy consumption (%) [EG_FEC_RNEW] URL: https://unstats.un.org/sdgs/indicators/en/extracted, April 29, 2021.

The extent to which renewable energy use can be increased is of key importance in achieving a climate-neutral economy. However, so are efforts to increase energy efficiency within private households and companies. Direct energy intensity in the industrial sector plays a crucial role here. One important indicator in this respect is energy productivity, or the level of economic benefit associated with the use of primary energy. On this measure, the leading countries with regard to the use of renewable energy still have some catching up to do (**Sweden**: rank 21 and **Finland**: rank 26; see chart).

Increasing wealth and growing populations in emerging parts of the world are also intensifying international rivalry in the consumption of non-fossil fuels, biomass, metallic ores and non-metallic ores. Highly developed countries in particular thus have a particular responsibility to lead the way in developing methods of using these raw materials carefully and sustainably. This is likely to include the expansion of recycling and repair options, improved economic incentives, the provision of better information for recycled products, and effective CO2 taxation. However, effective mechanisms for curbing carbon leakage are also needed (OECD 2021a).

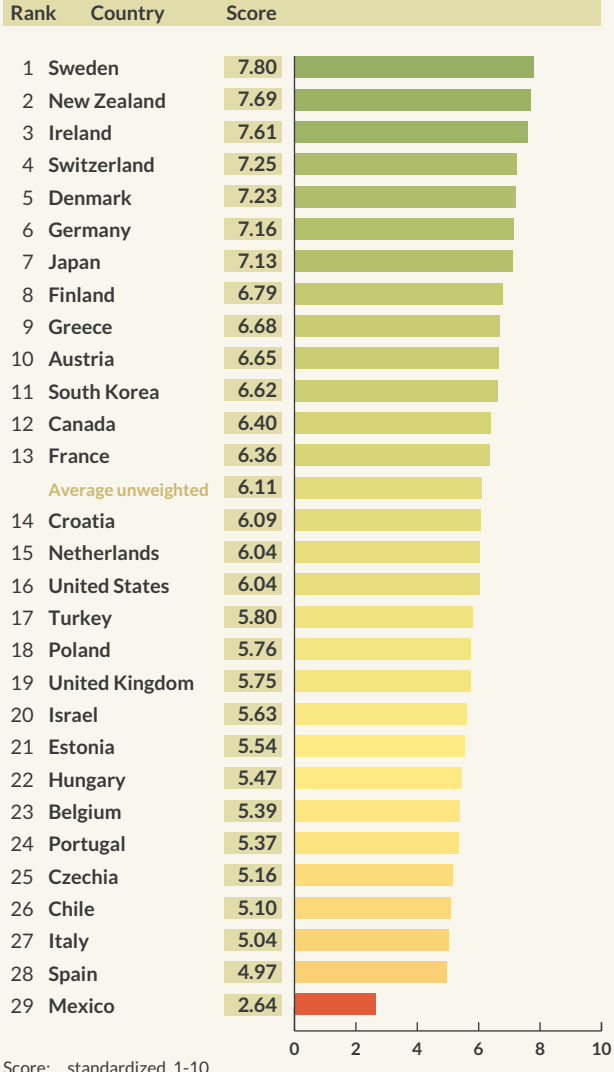
A given country's material footprint indicates how much of the global extraction of these raw materials can be attributed to its own domestic final demand, while also taking into account the size of the population. The measure thus also reflects the extent to which material-intensive industrial processes have been outsourced to other countries. On this measure too, it is clear that countries such as **Sweden** and **Finland**, which have made great efforts in developing sustainable forms of energy, still need to significantly increase their efforts in the area of sustainable consumption and production methods.

The leader in the economic preparedness criterion is **Switzerland** (see Fig. 51). The Swiss economy has a number of strengths, including the skills profile of its domestic workforce, its vocational education and training system, and its highly developed economic infrastructure. However, Switzerland is also characterized by a pronounced dualism, between a very competitive and innovative export industry on the one hand, and relatively protected domestic sectors on the other. This partially explains the country's low levels of productivity growth (Armingeon et al. 2021).

Economic Response

Governments around the world have made historic efforts to ensure the liquidity of businesses and households during the economic crisis triggered by COVID-19. The OECD has calculated the total amount of coronavirus-related support provided in OECD countries, including both direct government spending and lost revenue, at around 16.4% of gross domestic product (OECD 2021: 17).

FIGURE 52 **Economic Response**

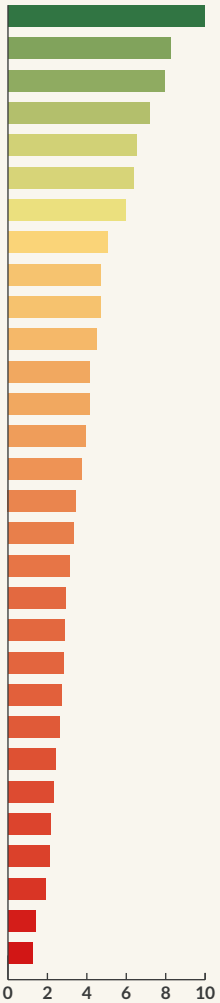


If the sharp increase in health spending is disregarded, and the analysis is instead focused exclusively on additional spending and/or lost revenues in the non-health sector as a share of economic output, we can see very considerable variation in the fiscal efforts mounted by the different states. While **New Zealand** mobilized fiscal measures totaling 17.4% of GDP, for example, such measures amounted to less than 1% of GDP in **Turkey** and **Mexico** (see Fig. 52).

These strongly varying fiscal efforts do not always reflect the different ways in which countries' business sectors were affected by the coronavirus crisis. For example, while **Mexico**, **Spain** and **Portugal** were particularly strongly affected by workplace closures (see Fig. 53), they also rank at the bottom of the list when it comes to the scale of fiscal measures implemented. These countries' economies in particular are thus likely to experience further declines in the coming years. By

FIGURE 53 **Fiscal Measures in Response to the COVID-19 Pandemic**

Rank	Country	Value	Score
1	New Zealand	17.86	9.99
2	United States	14.41	8.26
3	Japan	13.79	7.94
4	Canada	12.25	7.17
5	United Kingdom	10.92	6.50
6	Greece	10.66	6.37
7	Germany	9.83	5.95
8	Austria	8.07	5.06
9	Chile	7.36	4.71
10	Poland	7.31	4.68
11	France	6.92	4.48
12	Italy	6.25	4.15
	Average unweighted		4.15
13	Israel	5.79	3.92
14	Belgium	5.40	3.72
15	Switzerland	4.86	3.45
16	Ireland	4.65	3.34
17	Czechia	4.25	3.14
18	Netherlands	3.77	2.90
19	Spain	3.74	2.88
20	Portugal	3.63	2.83
21	Sweden	3.43	2.73
22	South Korea	3.18	2.60
23	Hungary	2.82	2.42
24	Estonia	2.63	2.32
25	Croatia	2.31	2.16
26	Finland	2.18	2.10
27	Denmark	1.74	1.88
28	Turkey	0.79	1.40
29	Mexico	0.46	1.23



Unit (Value): percentage of GDP
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators

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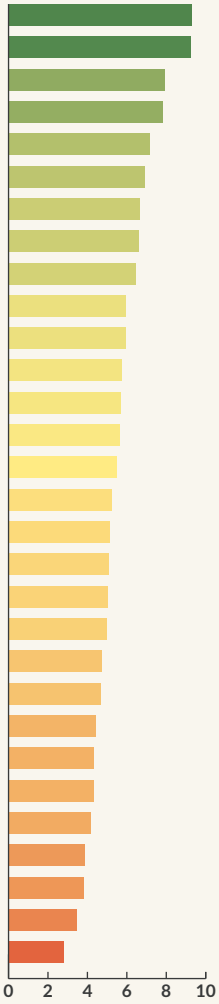
FIGURE 54 **Workplace Closings**

Rank	Country	Value	Score
1	New Zealand	197	9.32
2	Japan	206	9.24
3	Greece	340	7.93
4	Sweden	350	7.83
5	Finland	419	7.16
6	Estonia	441	6.94
7	Croatia	472	6.64
8	Hungary	475	6.61
9	Czechia	490	6.46
10	Poland	544	5.94
11	Turkey	545	5.93
12	South Korea	561	5.77
13	Denmark	567	5.71
	Average unweighted		5.63
14	Austria	587	5.52
15	Switzerland	615	5.24
16	Israel	625	5.15
17	Germany	631	5.09
18	Spain	637	5.03
19	France	641	4.99
20	Portugal	666	4.75
21	Netherlands	670	4.71
22	Belgium	700	4.41
23	United Kingdom	708	4.34
24	United States	710	4.32
25	Ireland	722	4.20
26	Italy	756	3.87
27	Canada	763	3.80
28	Mexico	797	3.47
29	Chile	863	2.82



Unit (Value): ordinal scale
Unit (Score): standardized, 1-10
Source (Value): University of Oxford
Source (Score): Sustainable Governance Indicators

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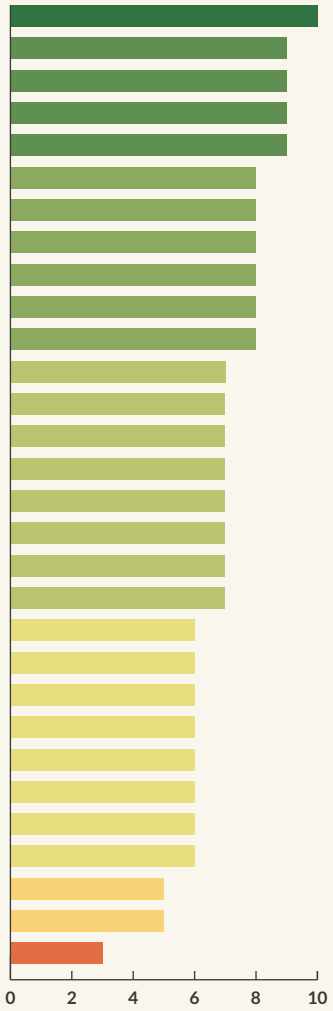
FIGURE 55 **Economic Recovery Package**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	Sweden	10.00
2	Denmark	9.00
	Germany	9.00
	Ireland	9.00
	Switzerland	9.00
6	Austria	8.00
	Canada	8.00
	Finland	8.00
	France	8.00
	New Zealand	8.00
	South Korea	8.00
	Average unweighted	7.03
12	Chile	7.00
	Croatia	7.00
	Greece	7.00
	Japan	7.00
	Netherlands	7.00
	Poland	7.00
	United Kingdom	7.00
19	Belgium	6.00
	Czechia	6.00
	Israel	6.00
	Italy	6.00
	Portugal	6.00
	Spain	6.00
	Turkey	6.00
	United States	6.00
27	Estonia	5.00
	Hungary	5.00
29	Mexico	3.00



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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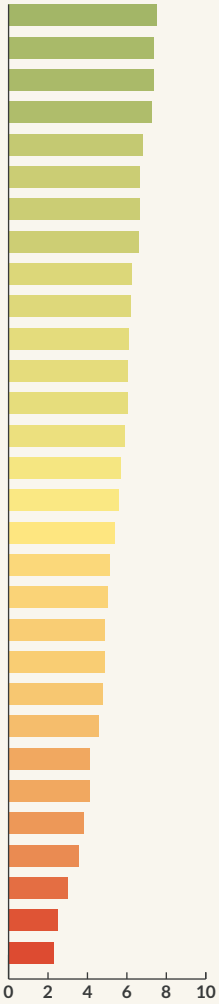
FIGURE 56 **Change in GDP Growth Rate**

Rank	Country	Value	Score
1	Ireland	-3.88	7.51
2	Turkey	-4.07	7.39
3	Finland	-4.11	7.36
4	South Korea	-4.27	7.26
5	Switzerland	-5.00	6.79
6	Denmark	-5.23	6.65
	Netherlands	-5.22	6.65
8	Sweden	-5.30	6.60
9	United States	-5.81	6.28
10	New Zealand	-5.90	6.22
11	Japan	-6.09	6.10
12	Israel	-6.14	6.07
13	Greece	-6.15	6.06
14	Poland	-6.37	5.92
15	Estonia	-6.68	5.72
16	Germany	-6.83	5.62
	Average unweighted		5.41
17	Canada	-7.62	5.12
18	Hungary	-7.76	5.03
19	Czechia	-7.98	4.89
20	Belgium	-8.00	4.88
21	Austria	-8.14	4.79
22	Portugal	-8.44	4.60
23	Chile	-9.14	4.15
	Italy	-9.13	4.15
25	France	-9.62	3.84
26	Croatia	-10.03	3.58
27	Mexico	-10.92	3.01
28	United Kingdom	-11.75	2.48
29	Spain	-12.02	2.31



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators

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contrast, countries such as **New Zealand, Japan** and **Greece** put together comparatively large fiscal rescue packages despite experiencing less extensive business closures.

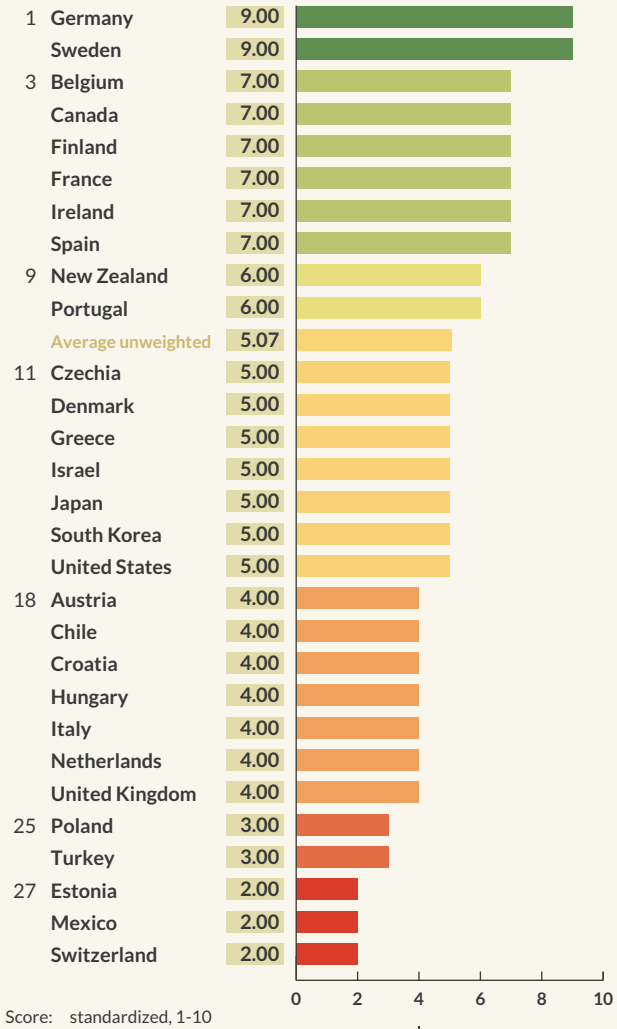
While it is certainly vital to offer aid on an adequate financial scale, it is also critical to ensure that this **economic aid** is likewise provided **rapidly**, and in a way that is both as **transparent** and as **well targeted** as possible (see Fig. 55). In the judgment of our country experts, **Sweden**, **Denmark**, **Germany**, **Ireland** and **Switzerland** all performed comparatively well with regard to distributing economic aid quickly, transparently and to those who needed it most.

However, it is striking that the vast majority of states fell into the middle category of responses here, which means our country experts saw shortcomings in many countries' reactions to the crisis in this area. The country experts found the provisions for awarding aid in **Estonia**, **Hungary** and **Mexico** to be clearly inadequate in terms of scope, transparency and targeting. In **Estonia**, the country's National Audit Office criticized the fact that the objectives and criteria for the distribution

of aid were far from transparent. In January 2021, a scandal centered on a low-interest loan, alleged bribery attempts and political donations led to the resignation of that country's Prime Minister Jüri Ratas (Toots et al. 2021).

The bottom line is that all of the countries in our sample showed a slump in economic momentum compared with the previous 10-year period. Overall, countries in which personal services account for a relatively large share of economic output showed the largest declines in growth rates (see Fig. 56).

FIGURE 57 **Sustainability of Economic Policy Response**
SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators | BertelsmannStiftung

Sustainability of Economic Response

In the vast majority of the countries examined, the goal of transforming the economy to a point of greater sustainability played a minor role or no role at all in the design of economic stimulus packages. This was true for no fewer than 19 of the 29 states. Only two countries – **Germany** and **Sweden** – have already sought to coherently align their economic stimulus programs more closely with environmental and sustainability goals (see Fig. 57).

Labor Market Preparedness

A successful employment policy is characterized by its ability to reconcile a number of objectives: bringing about a lasting reduction in unemployment, preventing skills shortages, correcting imbalances between labor supply and demand, and removing barriers to labor market entry.

A variety of labor market instruments can also be used to cushion the negative impact of an economic crisis on the labor market. These include workplace protection measures, income replacement benefits for sick workers and their families, short-time work programs and unemployment benefits for non-regular workers. Efforts to enhancing workplace training and expand programs that help workers develop new skills are of particular importance. In many sectors, the pandemic has triggered a surge in digitalization and automation. This in turn will require employees to develop new skills.

Well-prepared countries such as **Switzerland**, **Denmark**, **Germany** and **Sweden** (see Fig. 58) have in the past adopted different strategies and instruments enabling them to meet the challenges of technological and demographic change in the labor market.

What these four leading countries have in common, however, is that their respective systems of industrial relations between employers and employees have in recent years made it possible for them to work together in a largely constructive manner, for the most part avoiding destructive conflicts. For example, union wage restraint and the establishment of workplace alliances during

economic downturns were both important factors enabling the employment boom in Germany in the late 2000s (Hassel and Schiller 2010).

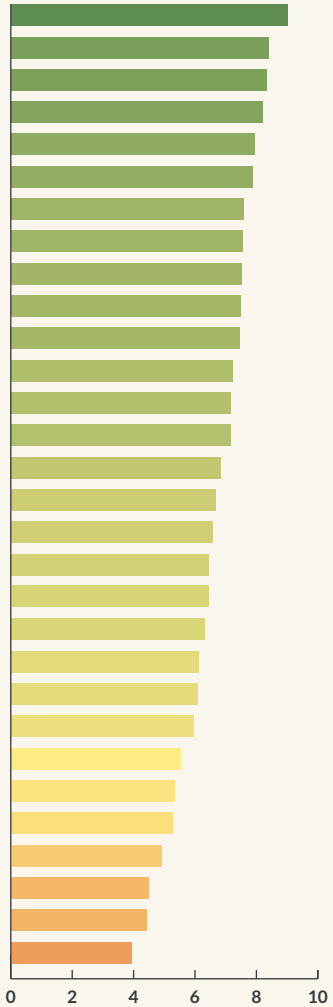
There has also been a strong increase in the employment rate among older workers in all four countries, as incentives for early retirement have been significantly reduced. In all four countries, significantly more than 70% of all 55- to 64-year-olds are employed (see Fig. 59).

In addition, the four countries have in the past been successful in keeping unemployment rates low, to a certain extent using different strategies. In **Switzerland** (Armingeon et al. 2021) and **Denmark** (Møller Pedersen et al. 2021), comparatively highly liberalized job-dismissal protections in the past ensured a high degree of flexibility and allowed for considerable fluctuation in the labor market. **Switzerland** also continues to offer what are comparatively very generous passive wage-replacement benefits. This allows employees seeking to make long-term investment decisions about qualifications and specific career activities to do so with a relatively high degree of security (see Fig. 60).

FIGURE 58 **Labor Market Preparedness**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	Switzerland	9.02
2	Denmark	8.40
3	Germany	8.32
4	Sweden	8.21
5	Czechia	7.95
6	Japan	7.87
7	Canada	7.60
8	United Kingdom	7.55
9	Belgium	7.51
10	Netherlands	7.49
11	Israel	7.46
12	Estonia	7.22
13	New Zealand	7.17
14	Austria	7.16
15	Ireland	6.85
	Average unweighted	6.67
16	United States	6.56
17	South Korea	6.45
18	Portugal	6.39
19	Poland	6.33
20	France	6.12
21	Finland	6.08
22	Hungary	5.96
23	Chile	5.53
24	Croatia	5.34
25	Spain	5.27
26	Italy	4.86
27	Mexico	4.48
28	Turkey	4.41
29	Greece	3.93



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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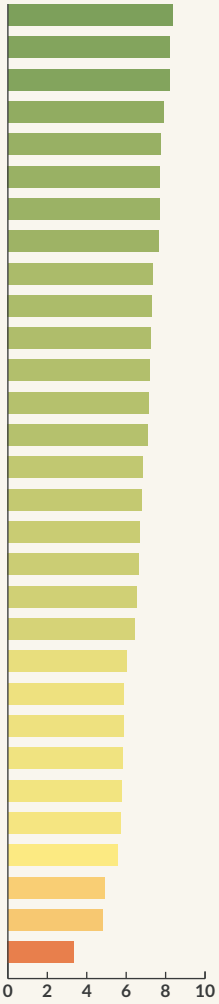
FIGURE 59 **Older Employment Rate**

Rank	Country	Value	Score
1	Sweden	77.60	8.34
2	Japan	76.28	8.20
	New Zealand	76.32	8.20
4	Switzerland	73.50	7.90
5	Estonia	72.00	7.74
6	Germany	71.80	7.72
7	Denmark	71.40	7.68
8	Netherlands	71.00	7.63
9	Czechia	68.20	7.33
10	Israel	67.94	7.31
11	Finland	67.50	7.26
12	South Korea	66.87	7.19
13	United Kingdom	66.17	7.12
14	Chile	66.13	7.11
15	United States	63.67	6.85
16	Canada	63.23	6.80
	Average unweighted		6.68
17	Ireland	61.80	6.65
18	Portugal	60.70	6.53
19	Hungary	59.60	6.41
20	Mexico	55.99	6.02
21	Austria	54.70	5.88
	Spain	54.70	5.88
23	Italy	54.20	5.83
24	France	53.80	5.79
25	Belgium	53.30	5.73
26	Poland	51.80	5.57
27	Croatia	45.50	4.90
28	Greece	44.60	4.80
29	Turkey	31.10	3.35



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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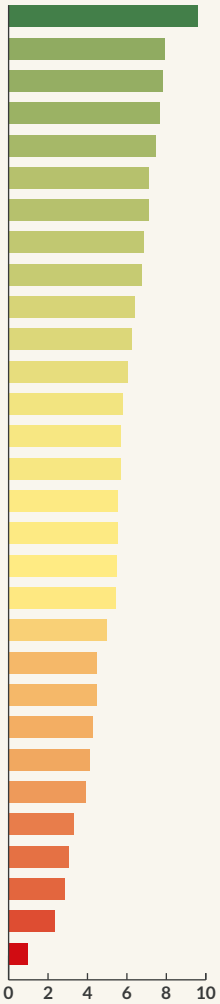
In **Germany** and **Switzerland** in particular, well-developed vocational education and training systems ensure a seamless transition into the labor market, allowing for very low youth unemployment rates in comparison to other countries in the sample (see Fig. 61).

All four countries have also successfully used extensive and comparatively effective training and activation policies (some quite strict) to keep long-term unemployment rates low (see Fig. 62).

Unlike **Switzerland**, **Denmark** and **Sweden**, however, **Germany** has seen the emergence of a comparatively large low-wage sector. In 2019, 20% of workers earned less than two-thirds of the median income. This share was higher only in **Poland**, **Estonia**, **Israel** and the **United States** – and even then, only very slightly (see Fig. 63). Moreover, unlike in the other states, high marginal tax burdens in the lower income range make additional earnings very unattractive for workers employed at these wage levels (Peichl, Buhlmann, & Löffler 2017).

FIGURE 60 **Net Unemployment Replacement Rates**

Rank	Country	Value	Score
1	Israel	89	9.59
2	Portugal	75	7.93
3	Netherlands	74	7.81
4	Switzerland	73	7.69
5	Czechia	71	7.45
6	Chile	68	7.10
	France	68	7.10
8	Italy	66	6.86
9	Belgium	65	6.74
10	Denmark	62	6.39
11	Canada	61	6.27
12	Germany	59	6.03
13	Estonia	57	5.80
14	Finland	56	5.68
	Spain	56	5.68
16	Austria	55	5.56
	Turkey	55	5.56
	Average unweighted		5.50
18	Japan	54	5.44
19	Sweden	50	4.97
20	Hungary	46	4.49
	Ireland	46	4.49
22	Poland	44	4.26
23	South Korea	43	4.14
24	United States	41	3.90
25	Croatia	36	3.31
26	United Kingdom	34	3.07
27	New Zealand	32	2.84
28	Greece	28	2.36
29	Mexico	0	1.00



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): OECD
Source (Score): Sustainable Governance Indicators

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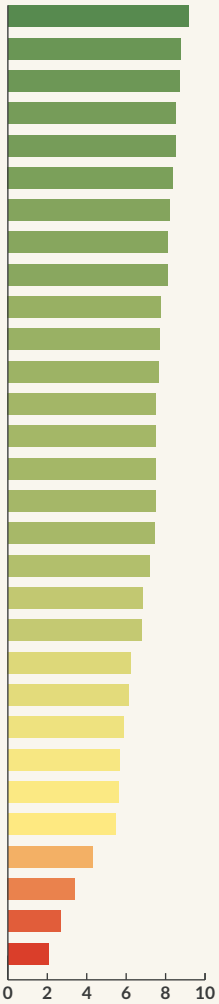
FIGURE 61 **Youth Unemployment Rate**

Rank	Country	Value	Score
1	Japan	3.66	9.17
2	Czechia	5.60	8.74
3	Germany	5.80	8.69
4	Israel	6.68	8.49
	Netherlands	6.70	8.49
6	Mexico	7.23	8.37
7	Switzerland	8.00	8.19
8	United States	8.39	8.11
9	Austria	8.50	8.08
10	Poland	9.90	7.76
11	Denmark	10.10	7.72
12	South Korea	10.44	7.64
13	Canada	11.02	7.51
14	Estonia	11.10	7.49
15	New Zealand	11.16	7.48
16	United Kingdom	11.20	7.47
17	Hungary	11.40	7.43
18	Ireland	12.50	7.18
	Average unweighted		6.83
19	Belgium	14.20	6.79
20	Croatia	16.60	6.25
21	Finland	17.20	6.12
22	Portugal	18.30	5.87
23	Chile	19.11	5.68
24	France	19.50	5.60
25	Sweden	20.10	5.46
26	Turkey	25.20	4.31
27	Italy	29.20	3.41
28	Spain	32.50	2.66
29	Greece	35.20	2.05



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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Before the onset of the coronavirus crisis, most of the other states in our country sample also experienced a general trend in which the labor market was split between well-protected and well-paid labor market insiders on the one hand, and poorly protected and poorly paid outsiders on the other. These conditions can be traced to a set of partially contrary historical developments. In 11 EU countries, for example, the share of normal employment relationships has recently increased again, thanks to positive labor market trends. However, this share has decreased in 16 countries (Eurofound 2020).

Labor Market Response

During the first year after the outbreak of the coronavirus, all the states we examined made tremendous efforts to cushion the pandemic's negative impact on the labor market, implementing a variety of measures.

Variously designed short-time work instruments, which allowed companies to reduce employees' working hours and curtail the extent of wage losses, and thus largely avoid layoffs, played a central role in these efforts. Many countries that did not

FIGURE 62 **Long-term Unemployment Rate**

Rank	Country	Value	Score
1	South Korea	0.03	9.97
2	Mexico	0.06	9.93
3	Israel	0.22	9.76
4	United States	0.47	9.48
5	Canada	0.48	9.47
6	New Zealand	0.51	9.44
7	Czechia	0.61	9.33
8	Poland	0.71	9.22
9	Japan	0.76	9.17
10	Denmark	0.79	9.13
11	Sweden	0.82	9.10
12	Estonia	0.89	9.02
13	United Kingdom	0.97	8.94
14	Netherlands	1.06	8.84
15	Hungary	1.12	8.77
16	Austria	1.13	8.76
17	Chile	1.20	8.68
17	Germany	1.20	8.68
19	Finland	1.23	8.65
20	Ireland	1.46	8.40
21	Switzerland	1.66	8.18
	Average unweighted		8.09
22	Belgium	2.33	7.45
23	Croatia	2.37	7.40
24	Portugal	2.75	6.99
25	Turkey	3.22	6.47
26	France	3.28	6.40
27	Spain	5.34	4.15
28	Italy	5.67	3.78
29	Greece	12.14	1.00

Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): ILOSTAT & OECD
Source (Score): Sustainable Governance Indicators

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FIGURE 63 **Low Pay Incidence**

Rank	Country	Value	Score
1	Turkey	0.46	9.89
2	Sweden	3.61	9.13
3	Portugal	3.95	9.05
4	Finland	5.03	8.78
5	New Zealand	6.92	8.33
6	Italy	8.46	7.95
7	France	8.61	7.92
8	Denmark	8.69	7.90
9	Switzerland	10.21	7.53
10	Chile	10.57	7.44
11	Hungary	11.61	7.19
12	Japan	11.79	7.15
13	Belgium	13.68	6.69
	Unweighted Average		6.63
14	Spain	14.33	6.54
15	Austria	14.75	6.43
16	Czechia	15.09	6.35
17	South Korea	16.96	5.90
18	United Kingdom	16.98	5.89
19	Mexico	17.08	5.87
20	Netherlands	18.24	5.59
21	Croatia	18.42	5.55
22	Canada	19.38	5.31
23	Greece	19.65	5.25
24	Ireland	19.78	5.22
25	Germany	20.68	5.00
26	Poland	21.87	4.71
27	Estonia	21.95	4.69
28	Israel	22.41	4.58
29	United States	23.38	4.35

Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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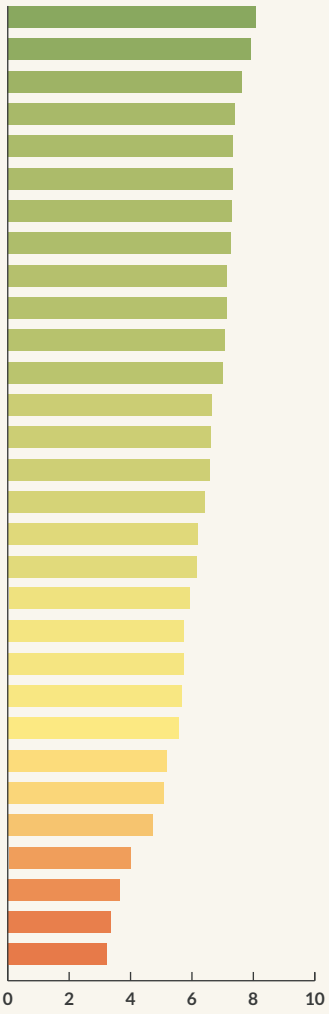
FIGURE 64 **Labor Market Response**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	France	8.07
2	Greece	7.91
3	Switzerland	7.63
4	Denmark	7.41
5	Poland	7.33
6	Belgium	7.32
7	Germany	7.29
8	United Kingdom	7.26
9	Japan	7.13
10	Czechia	7.12
11	New Zealand	7.08
12	Italy	7.01
13	Netherlands	6.64
14	South Korea	6.61
15	Ireland	6.57
16	Croatia	6.41
17	Sweden	6.18
	Average unweighted	6.16
18	Hungary	5.87
19	Turkey	5.74
20	Austria	5.73
21	Portugal	5.67
22	Spain	5.58
23	Israel	5.19
24	Finland	5.09
25	Canada	4.72
26	Mexico	3.96
27	Estonia	3.65
28	Chile	3.36
29	United States	3.24



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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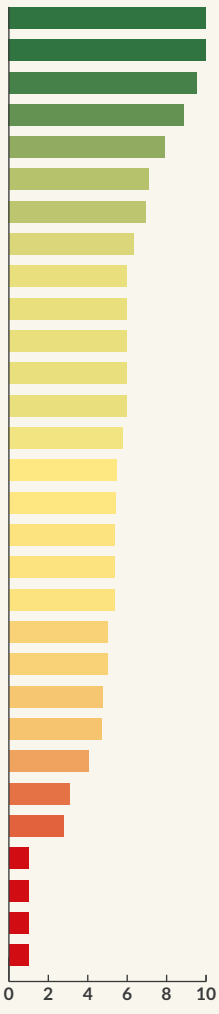
FIGURE 65 **Change in Unemployment Rate**

Rank	Country	Value	Score
1	Greece	-1.00	10.00
	Italy	-0.80	10.00
3	Turkey	-0.60	9.52
4	France	-0.40	8.88
5	Poland	-0.10	7.91
6	South Korea	0.16	7.08
7	Belgium	0.20	6.95
8	Portugal	0.40	6.30
9	Czechia	0.50	5.98
	Japan	0.50	5.98
	Netherlands	0.50	5.98
	New Zealand	0.50	5.98
	Switzerland	0.50	5.98
14	Israel	0.56	5.79
15	United Kingdom	0.67	5.44
	Average unweighted		5.42
16	Denmark	0.70	5.34
	Germany	0.70	5.34
	Ireland	0.70	5.34
19	Austria	0.80	5.02
	Hungary	0.80	5.02
21	Mexico	0.88	4.76
22	Croatia	0.90	4.70
23	Finland	1.10	4.05
24	Spain	1.40	3.09
25	Sweden	1.50	2.77
26	Canada	3.82	1.00
	Chile	3.60	1.00
	Estonia	2.40	1.00
	United States	4.38	1.00



Unit (Value): percentage point
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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previously have well-developed short-time work instruments introduced such policies during the crisis. Countries that established short-time work programs in the short term include **Denmark** (Møller Pedersen et al. 2021), the **United Kingdom** (Busch et al. 2021), **Canada** (Tedds et al. 2021), **Czechia** (Guasti et al. 2021), **Greece** (Sotiropoulus et al. 2021), **Ireland** (Colfer et al. 2021), **New Zealand** (Hellmann et al. 2021), **Croatia** (Kotarski et al. 2021), **Poland** (Matthes et al. 2021), **Spain** (Kölling et al. 2021), **Portugal** (Jalali 2021), **Chile** (Klein et al. 2021) and **Hungary** (Ágh et al. 2021).

Countries with long-established short-time work schemes, such as **France**, **Germany** and **Switzerland**, in some cases supplemented and further expanded these programs with a range of additional measures. In **Germany** (Rüb et al. 2021), for example, the program's scope was extended to include temporary employees, and the wage-replacement rate was increased from 60% to 70% between the fourth and sixth months, and to 80% from the seventh month onward. In **Switzerland** too (Armingeon et al. 2021), the group of people eligible for short-time work schemes was significantly expanded to include workers with fixed-

term or short-term employment contracts, as well as trainees and on-call workers.

By contrast, **Estonia** (Toots et al. 2021), **Israel** (Levi-Faur et al. 2021), **Mexico** (Muno et al. 2021) and the **United States** (Béland et al. 2021) did not introduce comprehensive short-time work programs in the true sense of the term, even during the crisis.

The largest **increases in unemployment rates** during the first year of the pandemic were experienced by the **United States** (+4.3 percentage points), **Canada** (+3.8 percentage points), **Chile** (+3.6 percentage points) and **Estonia** (+2.4 percentage points) (see fig. 64). In the **U.S.** (Béland et al. 2021), in addition to the absence of short-time work programs, the strongly decentralized nature of unemployment insurance significantly weakened the crisis response. Despite the presence of state-level emergency regulations, the country's response was severely hampered by the sometimes widely varying benefit levels and eligibility criteria for unemployment insurance across the 50 states. Many U.S. states also had significant problems processing the rapidly increasing number of unemployment-insurance claims. In **Canada** too, the employment insurance system proved ill-equipped to deal with the shock to the labor market that followed rapidly in the pandemic's wake. This can be seen in a number of indicators, including the long processing times and the comparatively small size of the group that ultimately proved eligible for benefits – just 40% of the unemployed. However, the government did implement a number of emergency programs to expand the pool of eligible workers in the short term and facilitate the rehiring of those who had been laid off (Tedds at al. 2021).

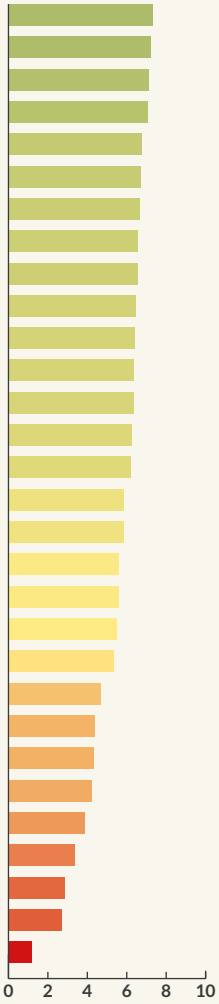
Canada (+9.1 percentage points), **Estonia** (+6.8 percentage points) and the **United States** (+6.5 percentage points) also recorded the highest increases in youth unemployment rates (see Fig. 66). In comparison, the employment rate among older workers fell much less sharply in virtually all countries (see Fig. 67). **Chile** is a notable exception in this regard; here, the youth unemployment rate increased (+5 percentage points) less than the employment rate among older people decreased (-9.9 percentage points).

In all the countries we examined, a number of crisis-related follow-on problems remain as yet insufficiently addressed. One important question, for example, is how **short-time work programs can be phased out** so as to avoid any sudden increase in unemployment. Another key question in this context is how short-time work programs might be used to help employees upgrade their skills and shift into areas of employment with strong future potential.

In **Denmark**, for example, compensation levels for retraining programs have been designed so

FIGURE 66 **Change in Youth Unemployment Rate**

Rank	Country	Value	Score
1	Greece	-0.20	7.31
2	Turkey	-0.10	7.25
3	South Korea	0.07	7.13
4	Italy	0.20	7.05
5	Switzerland	0.60	6.78
6	France	0.70	6.72
7	Mexico	0.78	6.66
8	Poland	0.90	6.59
9	Japan	0.92	6.57
10	Belgium	1.10	6.45
11	New Zealand	1.15	6.42
12	Germany	1.20	6.39
13	Israel	1.24	6.36
14	Hungary	1.40	6.26
15	Denmark	1.50	6.19
16	United Kingdom	1.99	5.87
17	Austria	2.00	5.86
18	Czechia	2.40	5.60
	Netherlands	2.40	5.60
	Average unweighted		5.52
20	Ireland	2.80	5.33
21	Sweden	3.80	4.67
22	Finland	4.20	4.41
23	Portugal	4.30	4.34
24	Croatia	4.50	4.21
25	Chile	5.02	3.87
26	Spain	5.80	3.35
27	United States	6.53	2.87
28	Estonia	6.80	2.69
29	Canada	9.11	1.17



Unit (Value): percentage point
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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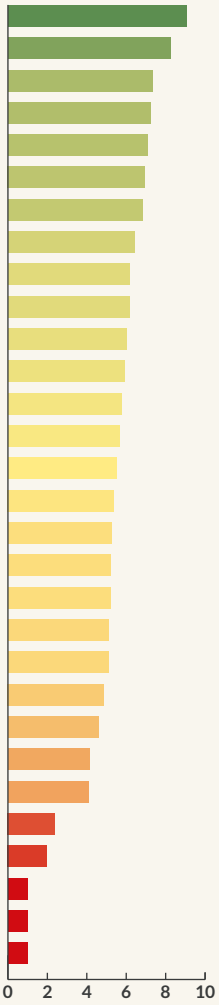
FIGURE 67 **Change in Older Employment Rate**

Rank	Country	Value	Score
1	Hungary	2.90	9.05
2	Poland	2.30	8.26
3	Croatia	1.60	7.34
4	Czechia	1.50	7.21
5	Greece	1.40	7.08
6	Netherlands	1.30	6.95
7	Belgium	1.20	6.82
8	Spain	0.90	6.43
9	Finland	0.70	6.17
	France	0.70	6.17
11	New Zealand	0.59	6.02
12	Switzerland	0.50	5.91
13	Japan	0.37	5.74
14	Portugal	0.30	5.64
15	Austria	0.20	5.51
16	Denmark	0.10	5.38
17	Ireland	0.00	5.25
	Average unweighted		5.22
18	Israel	-0.04	5.20
19	Italy	-0.10	5.12
	Sweden	-0.10	5.12
21	South Korea	-0.29	4.87
22	Estonia	-0.50	4.60
23	United Kingdom	-0.84	4.15
24	Germany	-0.90	4.07
25	Canada	-2.19	2.39
26	Turkey	-2.50	1.98
27	Chile	-9.94	1.00
	Mexico	-3.66	1.00
	United States	-3.34	1.00



Unit (Value): percentage point
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

that the greatest benefits are provided to people retraining in areas experiencing skill shortages (Møller Pedersen et al. 2021).

In many countries, the coronavirus crisis has also exposed a clear need for reform with regard to **protecting persons in non-regular employment or with special support needs**, and in helping members of this population upgrade their skills. In **Switzerland**, for example, people with low incomes in short-time work programs receive a higher wage-replacement rate of 100%, as compared to the usual rate of 80%. However, Switzerland also launched no specific training programs for low-skilled workers during the first year of the pandemic (Armingeon et al. 2021).

Fiscal Preparedness

Economic and social crises pose a major challenge to state budgets. Governments must be able to mobilize the necessary funds for comprehensive economic stimulus programs in the short term, if possible, without burdening future generations with unreasonable mountains of debt.

The fiscal flexibility available to a country also depends to a large extent on the budgetary policies pursued in previous years. For example, was the country able to meet its financial obligations while at the same time driving forward economic growth? Is the state budget based on future-oriented financial planning, or are decisions made at the expense of the next generation?

The countries in our sample show vast differences with regard to the **ratio of government debt-to-GDP**. This is true both of current debt stocks and trajectories over time.

For example, **Estonia** led the ranking with a low debt of only 8.4 of GDP in 2019, with **Japan's** fragile government budget, despite a tentative stabilization in recent years, located at the other end of the scale with a debt of 234.8% of GDP (see Fig. 69).

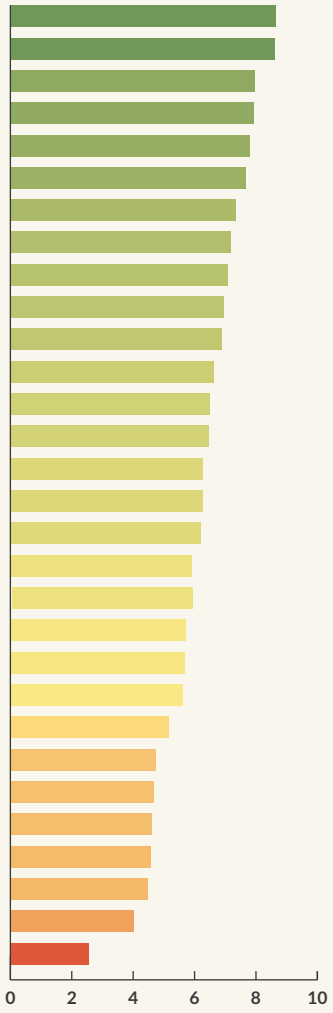
In the years following the global economic and financial crisis, 10 of the 29 countries in our sample were able to reduce their debt stocks relative to GDP. In the period from 2010 to 2019, particularly strong performances in this regard were seen in **Ireland** (-28.5 percentage points), **Germany** (-22.6 percentage points), **Hungary** (-14.8 percentage points), **Austria** (-11.9 percentage points) and the **Netherlands** (-11.8 percentage points). In contrast, there was a notable increase in debt levels in 14 countries, with **Portugal** (+16.6 percentage points), **Chile** (+19.6 percentage points), **Japan** (+29.1 percentage points), **Spain** (+34.9 percentage points) and **Greece** (+37.4 percentage points) standing out as extreme cases.[3]

3 Own calculation based on: IMF World Economic Outlook, Aprll 2021, General government gross debt URL: https://www.imf.org/en/Publications/WEO/weo-database/2021/April, extracted April 12, 2021.

FIGURE 68 **Fiscal Preparedness**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	Switzerland	8.65
2	Sweden	8.61
3	Germany	7.98
4	Netherlands	7.92
5	Denmark	7.81
6	New Zealand	7.68
7	Estonia	7.36
8	Austria	7.19
9	Czechia	7.07
10	Ireland	6.97
11	Chile	6.88
12	South Korea	6.63
13	Portugal	6.51
14	Croatia	6.48
15	Poland	6.28
16	Canada	6.27
	Average unweighted	6.21
17	Greece	5.91
18	Belgium	5.87
19	Finland	5.73
20	United Kingdom	5.70
21	Hungary	5.63
22	Turkey	5.15
23	Mexico	4.73
24	France	4.67
25	Italy	4.62
26	Spain	4.55
27	Israel	4.49
28	United States	4.03
29	Japan	2.57



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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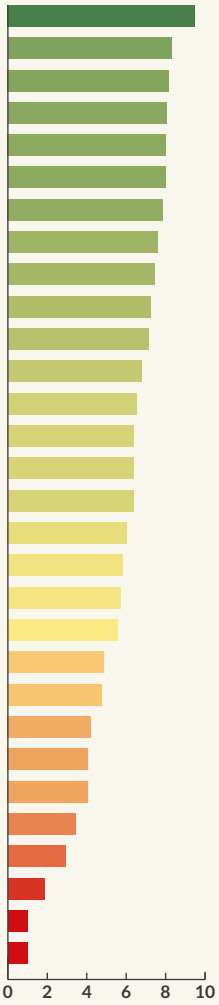
FIGURE 69 **Debt to GDP**

Rank	Country	Value	Score
1	Estonia	8.44	9.49
2	Chile	28.21	8.29
3	Czechia	30.25	8.17
4	New Zealand	32.06	8.06
5	Turkey	32.60	8.02
6	Denmark	33.01	8.00
7	Sweden	35.13	7.87
8	Switzerland	39.76	7.59
9	South Korea	42.25	7.44
10	Poland	45.68	7.23
11	Netherlands	47.60	7.12
12	Mexico	53.30	6.77
13	Ireland	57.39	6.52
14	Finland	59.33	6.40
15	Germany	59.64	6.39
16	Israel	59.98	6.37
17	Hungary	65.33	6.04
	Average unweighted		5.83
18	Austria	70.51	5.73
19	Croatia	72.83	5.59
20	United Kingdom	85.24	4.83
21	Canada	86.82	4.74
22	Spain	95.51	4.21
23	Belgium	98.06	4.06
	France	98.07	4.06
25	United States	108.19	3.44
26	Portugal	116.84	2.92
27	Italy	134.56	1.85
28	Greece	184.90	1.00
	Japan	234.86	1.00



Unit (Value): percent of GDP
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators

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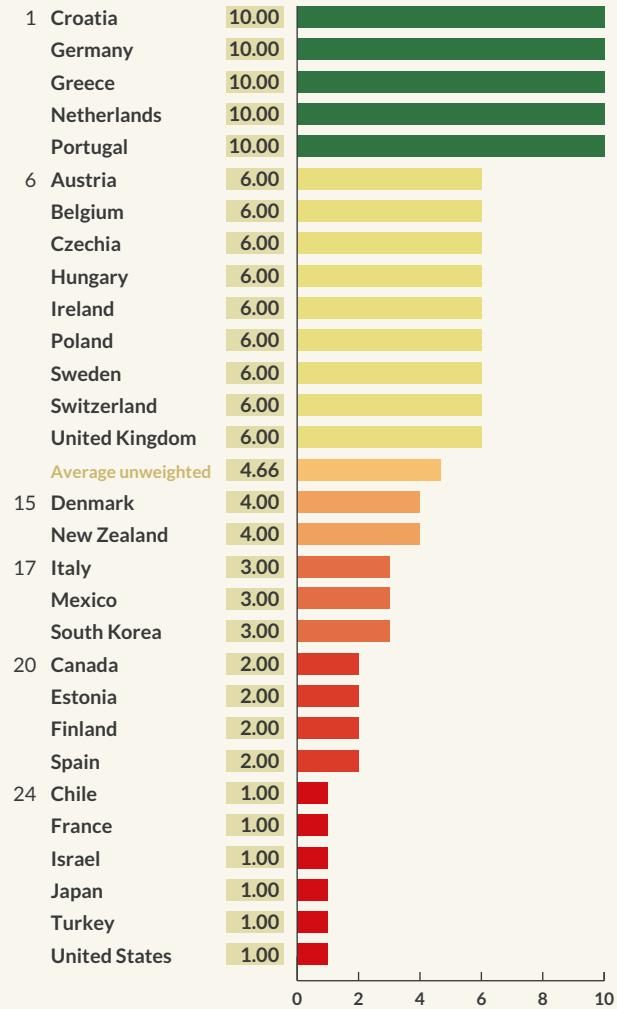
Our country experts regard **New Zealand**, **Denmark**, **Sweden** and **Switzerland** as having particularly sustainable budgetary practices, with effective regulatory frameworks for implementing the related policies. However, each of these systems has different specific characteristics.

In **New Zealand**, the government is required by statute to produce a financial strategy report on the same day the budget is presented. In this report, the government must set out its specific long-term objectives and short-term plans, and indicate the extent to which these objectives and plans are consistent with the principles of good budgeting (Hellmann et al. 2021). **Denmark's** budget targets also extend to consumption spending caps for the country's regional and municipal governments, which are subject to sanctions if they exceed these amounts (Møller Pedersen et al. 2021). The fiscal framework in **Sweden** is less formalized, offering greater flexibility and lacking in sanctions for deviations. This requires a great deal of mutual trust. Nonetheless, the fiscal rules have been widely followed across party lines (Petridou et al. 2021). In **Switzerland**, by contrast, there is a constitutionally anchored debt brake at the federal

FIGURE 70 **Budget Consolidation**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Uwe Wagschal, University of Freiburg

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level. In the past, direct democracy as implemented in Switzerland has also been an effective means of keeping debt within limits (Armingeon et al. 2021).

Many of the countries in our sample have also introduced institutional measures designed to promote responsible fiscal management. This has been driven in large part by the European Fiscal Compact, which applies to all euro area countries and a number of other EU countries, and prescribes a debt ceiling of 60%, a structural deficit of no more than 0.5% of GDP and an annual deficit of no more than 3% of GDP (European Parliament 2021). However, these institutional measures have had mixed effect.

Institutional frameworks are less influential in a number of countries including the **United Kingdom** (Busch et al. 2021) and **Israel** (Levi-Faur et al. 2021). These countries often revise their legally set debt limits upward for political reasons, and postpone deadlines for achieving certain fiscal targets rather than meeting them. **Israel** and **Spain** (Kölling et al. 2021), which share the bottom of our ranking with Japan, also share the dubious distinction of having been repeatedly unable to pass national budgets through their legislatures in recent years, largely due to political polarization. When this happens in **Israel**, the previous year's budget is amended with a few necessary changes and used again in place of a new budget. This practice makes it very difficult to pass forward-looking policies and can prevent the government from making use of financial gains made during the previous year (Levi-Faur et al. 2021).

In **Portugal** (Jalali et al. 2021), by contrast, the introduction of institutional expenditure and debt limits has contributed to a significant improvement in government finances. For example, after exiting the European bailout program in 2015, the country enacted new budget legislation that takes precedence over other national laws. Since that time, Portugal has reduced its debt by 14.3 percentage points,[4] the budget deficit has been kept consistently below the 3% mark set by the EU, and in 2019 the country even generated a budget surplus of 0.2% of GDP. Portugal is thus in the top group in terms of consolidation efforts (see Fig. 70).

In many countries, the experts criticize a lack of **transparency** in budgetary procedures. In **Poland** (Matthes et al. 2021) and **Japan** (Pascha et al. 2021), for example, a significant proportion of government expenditures are routed around parliament in the form of subsidiary budgets. In **Hungary**, budgets are adopted before concrete

4 Own calculation based on: IMF World Economic Outlook, Aprll 2021, General government gross debt URL: https://www.imf.org/en/Publications/WEO/weo-database/2021/April, extracted April 12, 2021.

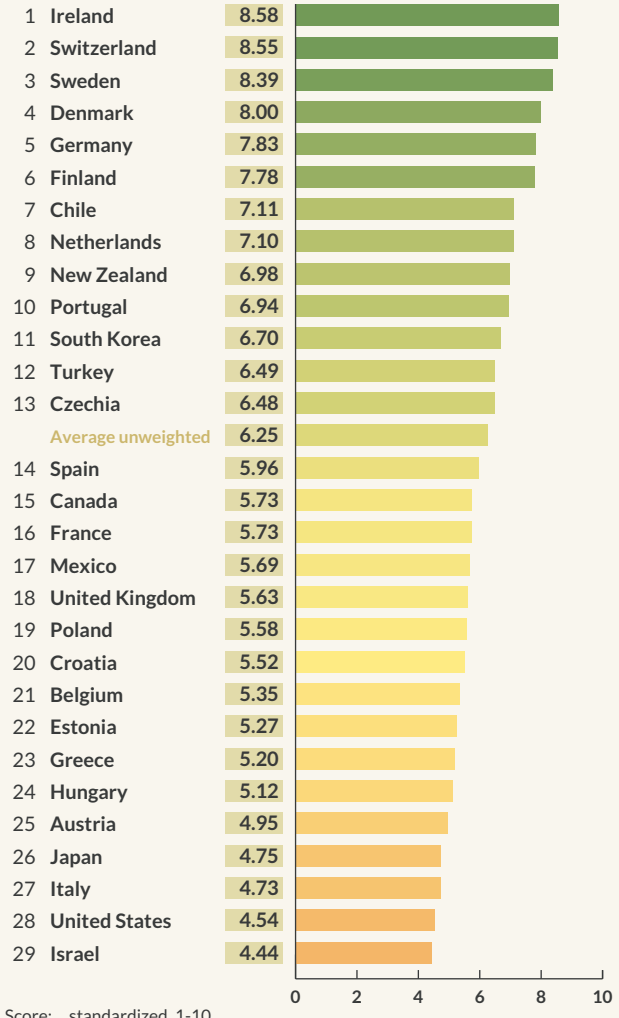
data is available regarding necessary expenditures for the coming year. The grounds for assessing these documents are thus non-transparent, and ultimately questionable (Ágh et al. 2021).

Even before the coronavirus crisis and its need for expensive, comprehensive stimulus packages, a number of countries showed considerable need for reform with regard to **stabilizing future revenues** and **reducing costs for future generations.** For example, **Ireland** continues to rely disproportionately on foreign direct investment (Colfer et al. 2021), while **South Korea** depends financially on tax revenues from a comparatively narrow base (Kalinowski et al. 2021). In **Spain**, the state is losing significant potential revenue due to numerous tax benefits and exemptions (Kölling et al. 2021), while **Mexico** has not yet managed to sustainably address tax evasion or solve problems relating to the large informal sector (Muno et al. 2021).

Due to aging populations, many industrialized countries will face a difficult but foreseeable problem in financing their pension systems over the coming years. For example, **Germany** has considerable implicit debt stemming from previ-

FIGURE 71 **Fiscal Response**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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FIGURE 72 **Change in Public Debt**

Unit (Value): percentage point
Unit (Score): standardized, 1-10
Source (Value): IMF
Source (Score): Sustainable Governance Indicators

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ously made social policy promises. Moreover, the country's buoyant public revenues in recent years have led policymakers to implement even more generous social policies, with risky consequences for the long-term sustainability of public finances in general and the federal budget in particular (Rüb et al. 2021).

Fiscal Response

With the onset of the corona pandemic, national budgets came under considerable pressure. Revenues from both corporate and consumer-good taxes declined in all of the countries in our sample. At the same time, many countries put together expansive rescue packages. As with the sizes of the stimulus packages themselves, the resulting variation in the growth of government debt levels has been immense. **Ireland's** government debt increased by just 2.4 percentage points of GDP in 2020 as compared to 2019. By contrast, **Canada's** already significant public debt increased by a further 31 percentage points of GDP (see Fig. 72).

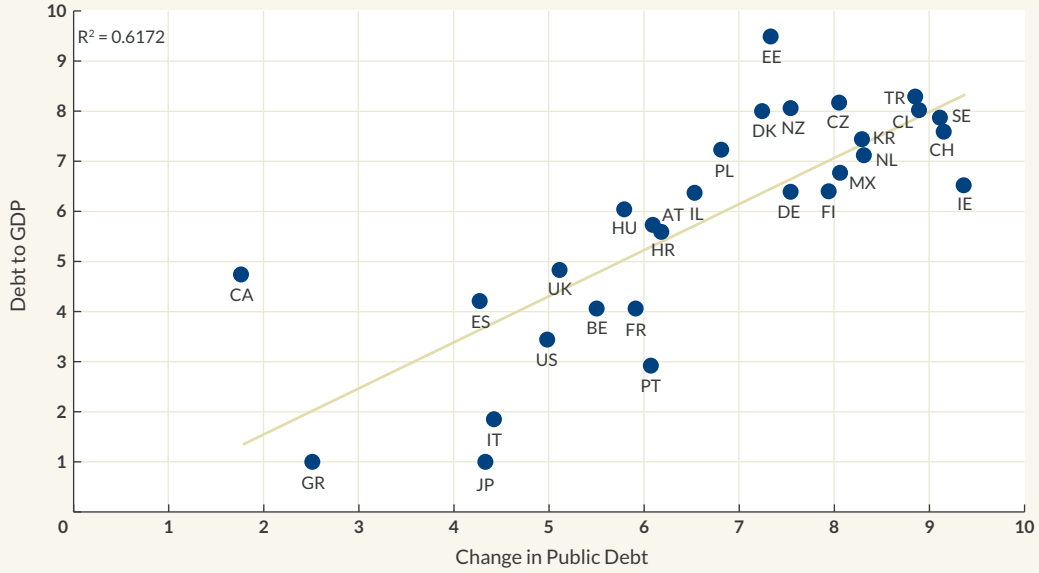
In general, countries that already had high levels of public debt before the crisis typically increased their public debt more significantly during the first year of the pandemic than did less heavily indebted countries. At the same time, fiscally well-positioned countries did not make excessive use of the favorable credit options available to them. It is therefore already foreseeable that the coronavirus crisis will contribute to a widening of the gap between fiscally well-positioned countries and those that were already worse off (see Fig. 73).

Portugal can be seen as an exception to this trend. The government in this country was initially rather cautious in its crisis response, and despite the pandemic has retained measures designed to further reduce its high levels of public debt (Jalali et al. 2021).

New borrowing was possible in part because many countries' statutory fiscal rules contain exceptions for extraordinary circumstances such as natural disasters. The EU Fiscal Compact also contains a clause to this effect. In addition, the EU Commission completely suspended the bloc's deficit rules (Tagesschau 2020) in March 2020. Such flexibility is absolutely necessary in order to avoid constraining national governments' freedom of action during such a crisis.

This need was also recognized in **Israel**. There, because parliament proved unable to pass a budget

FIGURE 73 **Change in Public Debt 2019-2020 and Debt to GDP 2019**



Unit: standardized, 1-10
Source: Sustainable Governance Indicators

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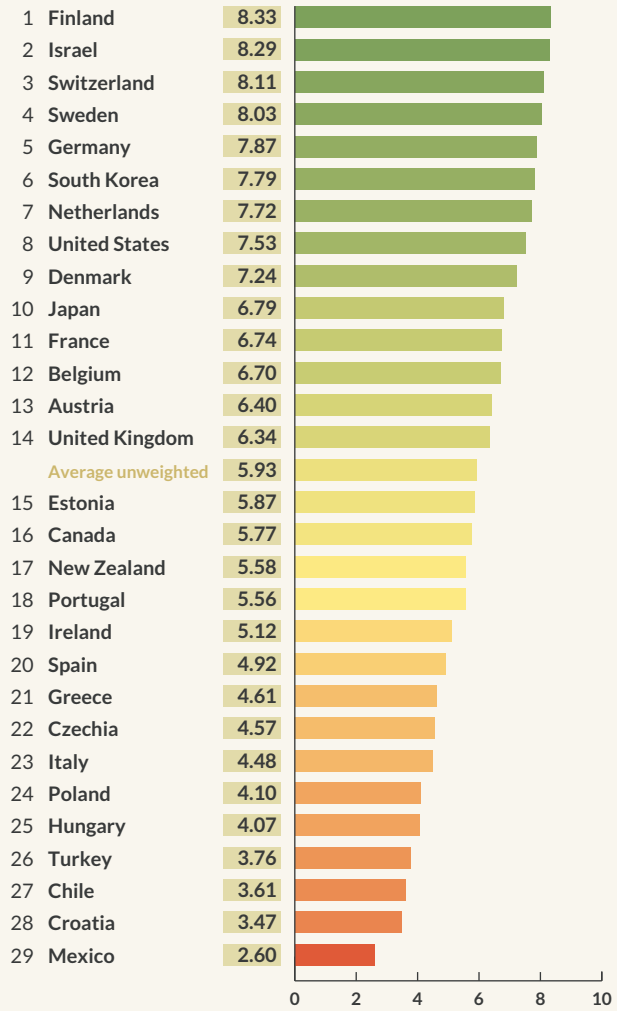
for 2020 properly, the government was forced to continue using same budget as in 2019. Legislated flexibility in the country's fiscal rule allowed the parliament to authorize additional coronavirus-pandemic response funds on a temporary basis, until an actual 2020 budget is passed (Levi-Faur et al. 2021).

However, only a few countries have already developed concrete strategies for reducing their public debt effectively in the coming years. **Germany's** exception clause for special economic emergencies, which is part of the constitutionally anchored debt brake, requires a repayment plan to be prepared at the same time the clause is activated. The county plans to begin paying down the debt incurred during the coronavirus pandemic in 2026 (Rüb et al. 2021). Many of the EU countries in our study are relying on money from the EU recovery fund to fuel their fiscal recovery.

Some countries have already taken additional steps in creating financing sources to cover their public debt. **Spain**, for example, has raised levies such as its value-added tax on sweet drinks, introduced new eco-taxes and at the end of the

FIGURE 74 **Research and Innovation**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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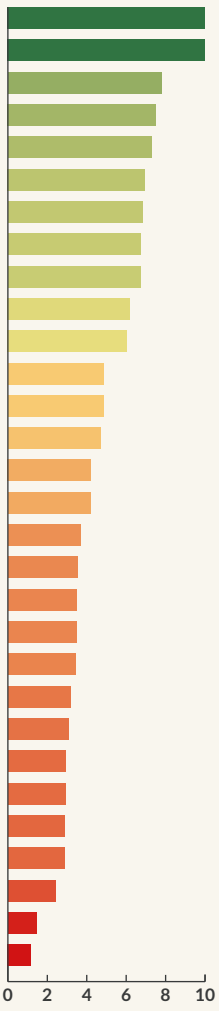
FIGURE 75 **Private R&D Spending**

Rank	Country	Value	Score
1	Israel	4.34	10.00
	South Korea	3.68	10.00
3	Japan	2.73	7.81
4	Belgium	2.61	7.51
5	Sweden	2.52	7.28
6	United States	2.39	6.96
7	Switzerland	2.34	6.83
8	Germany	2.30	6.73
9	Austria	2.29	6.71
10	Denmark	2.08	6.19
11	Finland	2.02	6.04
	Average unweighted		4.84
12	Netherlands	1.54	4.84
13	France	1.48	4.69
14	Czechia	1.29	4.22
15	United Kingdom	1.28	4.19
16	Canada	1.07	3.67
17	Estonia	1.01	3.52
18	Hungary	0.99	3.47
	Italy	0.99	3.47
20	New Zealand	0.97	3.42
21	Ireland	0.88	3.19
22	Portugal	0.84	3.09
23	Poland	0.78	2.94
	Spain	0.78	2.94
25	Greece	0.75	2.87
	Turkey	0.75	2.87
27	Croatia	0.56	2.40
28	Chile	0.18	1.45
29	Mexico	0.07	1.17



Unit (Value): percentage of GDP
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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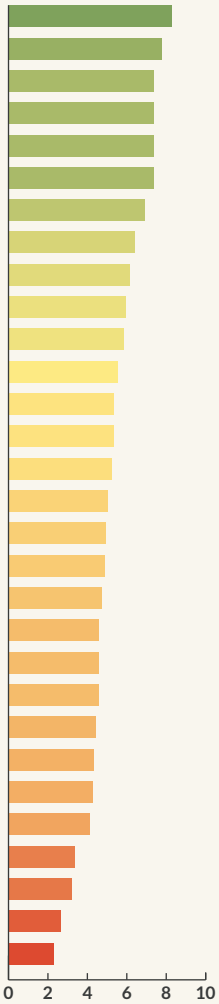
survey's review period was planning new measures to combat tax evasion (Kölling et al. 2021). **South Korea** raised its top income tax rate during the crisis. The country also introduced a new set of fiscal rules, including a statutory debt ceiling and a limit on the size of the annual budget deficit (Kalinowski et al. 2021).

In **Czechia** (Guasti et al. 2021), **Poland** (Matthes et al. 2021), **Hungary** (Ágh et al. 2021) and **Turkey** (Arslantaş et al. 2021), the future fiscal sustainability of the measures adopted during the pandemic is highly questionable. In **Hungary**, for example, pension benefits were increased during the crisis even for the long term. The country is also characterized by very non-transparent budgetary practices. The fund established specifically to combat the coronavirus crisis is also used to finance measures having nothing to do with the pandemic, the costs of which the government then declares to be crisis expenditures (Ágh et al. 2021). **Poland** also uses subsidiary budgets that evade parliamentary and public scrutiny (Matthes et al. 2021).

FIGURE 76 **Public R&D Spending**

Rank	Country	Value	Score
1	South Korea	0.96	8.29
2	Germany	0.89	7.76
3	Austria	0.84	7.38
	Denmark	0.84	7.38
	Sweden	0.84	7.38
	Switzerland	0.84	7.38
7	Finland	0.78	6.92
8	France	0.71	6.39
9	United States	0.68	6.16
10	Czechia	0.65	5.94
11	Netherlands	0.64	5.86
12	Estonia	0.60	5.56
	Average unweighted		5.34
13	Belgium	0.57	5.33
14	Portugal	0.56	5.25
15	Canada	0.53	5.03
16	Greece	0.52	4.95
17	Israel	0.51	4.87
18	Hungary	0.49	4.72
19	Italy	0.47	4.57
	Japan	0.47	4.57
	Spain	0.47	4.57
22	United Kingdom	0.45	4.42
23	New Zealand	0.44	4.34
24	Poland	0.43	4.27
25	Croatia	0.41	4.11
26	Turkey	0.31	3.35
27	Ireland	0.29	3.20
28	Mexico	0.22	2.67
29	Chile	0.17	2.29



Unit (Value): percentage of GDP
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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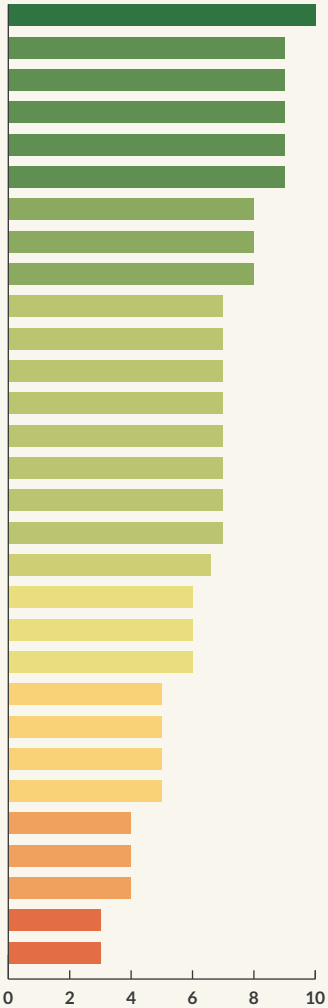
FIGURE 77 **Research and Innovation Policy Preparedness**

SGI 2021 COVID-19 STUDY

Rank	Country	Score
1	Israel	10.00
2	Finland	9.00
	Germany	9.00
	Netherlands	9.00
	Sweden	9.00
	Switzerland	9.00
7	France	8.00
	South Korea	8.00
	United States	8.00
10	Austria	7.00
	Belgium	7.00
	Canada	7.00
	Denmark	7.00
	Estonia	7.00
	Japan	7.00
	Portugal	7.00
	United Kingdom	7.00
	Average unweighted	6.59
18	Ireland	6.00
	New Zealand	6.00
	Spain	6.00
21	Czechia	5.00
	Greece	5.00
	Italy	5.00
	Poland	5.00
25	Chile	4.00
	Hungary	4.00
	Turkey	4.00
28	Croatia	3.00
	Mexico	3.00



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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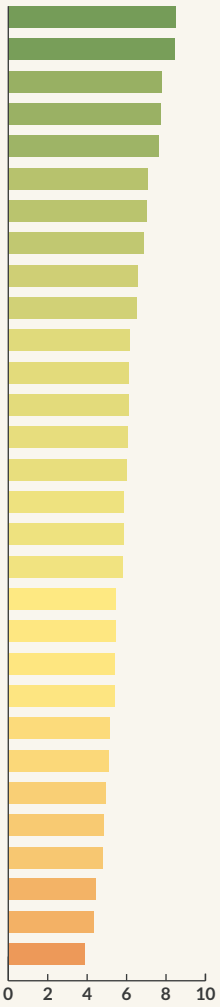
FIGURE 78 **Quality of Overall Infrastructure**

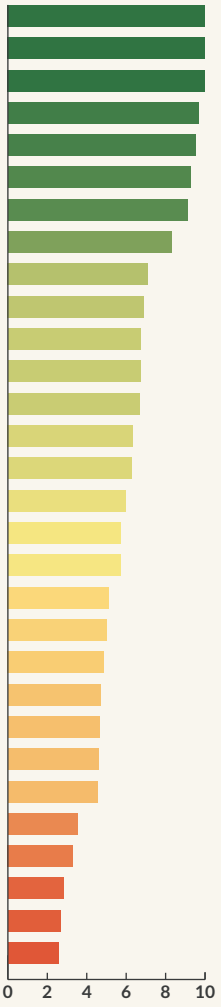
Rank	Country	Value	Score
1	Netherlands	6.25	8.52
2	Japan	6.21	8.44
3	Finland	5.87	7.76
4	Switzerland	5.84	7.71
5	South Korea	5.79	7.61
6	Spain	5.52	7.07
7	United States	5.49	7.01
8	Denmark	5.41	6.85
9	France	5.26	6.56
10	Germany	5.23	6.50
11	Sweden	5.07	6.18
12	Austria	5.04	6.12
	Portugal	5.04	6.12
	Average unweighted		6.04
14	Canada	4.98	6.00
15	Belgium	4.91	5.87
	United Kingdom	4.91	5.87
17	Estonia	4.88	5.81
18	Ireland	4.71	5.47
19	New Zealand	4.69	5.43
20	Israel	4.68	5.41
21	Turkey	4.67	5.39
22	Chile	4.56	5.17
23	Italy	4.53	5.11
24	Greece	4.44	4.94
25	Poland	4.39	4.84
26	Croatia	4.36	4.78
27	Czechia	4.16	4.38
28	Mexico	4.14	4.34
29	Hungary	3.90	3.87



Unit (Value): standardized, 1-7
Unit (Score): standardized, 1-10
Source (Value): World Economic Forum
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

FIGURE 79 **International Internet Bandwidth**

Rank	Country	Value	Score
1	Belgium	134.83	10.00
	New Zealand	166.28	10.00
	United Kingdom	437.54	10.00
4	Chile	127.75	9.65
5	Croatia	125.88	9.52
6	Estonia	122.16	9.27
7	Netherlands	119.77	9.11
8	United States	107.85	8.30
9	Greece	90.23	7.11
10	Denmark	87.14	6.90
11	Switzerland	84.39	6.71
12	Turkey	84.11	6.70
13	Finland	84.01	6.69
14	Ireland	78.79	6.34
	Average unweighted		6.28
15	Canada	73.42	5.97
16	South Korea	69.73	5.72
17	Sweden	69.47	5.70
18	Hungary	60.93	5.13
19	Czechia	59.21	5.01
20	Israel	57.25	4.88
21	France	54.60	4.70
22	Germany	53.76	4.64
23	Portugal	53.08	4.59
24	Austria	52.22	4.54
25	Mexico	37.65	3.55
26	Italy	33.97	3.30
27	Spain	26.86	2.82
28	Japan	24.80	2.68
29	Poland	22.89	2.55



Unit (Value): kbit per second
Unit (Score): standardized, 1-10
Source (Value): International Telecommunication Union
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

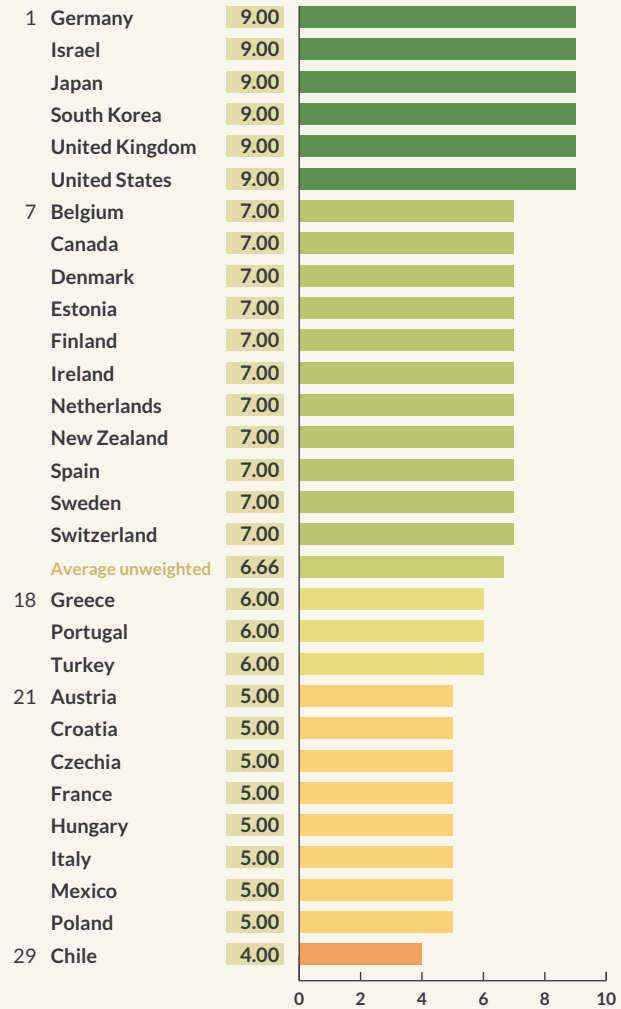
Research and Innovation

The survey also examines the extent to which countries are able to enhance productivity and promote societal progress through technological innovation. Here, there remain immense gaps with regard to the quality of research and development infrastructure between top-ranked countries such as **Finland**, **Israel**, **Switzerland** and **Sweden**, and countries with lower per capita GDPs such as **Mexico**, **Croatia** and **Chile**, which fall at the bottom of our ranking (see Fig. 74).

While private sector expenditure on R&D in **Israel** amounted to 4.3% of GDP in 2019, for example, this figure was just 0.07% in **Mexico**, 0.5% in **Croatia** and 0.1% in **Chile**. However, members of the G-7 group of leading economies also show significant differences with regard to private investment flows. While private R&D expenditure was only between 1% and 1.2% of GDP in **Italy**, **Canada** and the **United Kingdom**, this share was almost twice that high in **Germany**, the **United States** and **Japan** (see Fig. 75).

FIGURE 80 **Research and Innovation Response**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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In addition to this category's top countries of **Finland**, **Switzerland** and **Sweden**, the **Netherlands** too has recently significantly stepped up its efforts to improve the institutional environment for (disruptive) innovations intended to fulfill a specific national mission (see Fig. 77).

Even before the onset of the coronavirus crisis, the **Netherlands** had started work on the implementation and design of a mission-driven innovation approach, modeling this after earlier programs such as the Delta Plan for protection against floods and storm surges. The government's new approach includes four main missions: energy transition and sustainability; agriculture, water and food; health and care; and security. Examples of mission-driven innovation programs include the National Investment Fund, which supports large-scale projects across the country focused on preparing workers for the jobs of the future and was jointly launched by the country's ministers of economic affairs (Eric Wiebes) and finance (Wopke Hoekstra); and the Investment Fund NL, which supports private sector sustainability initiatives (Hoppe et al. 2021).

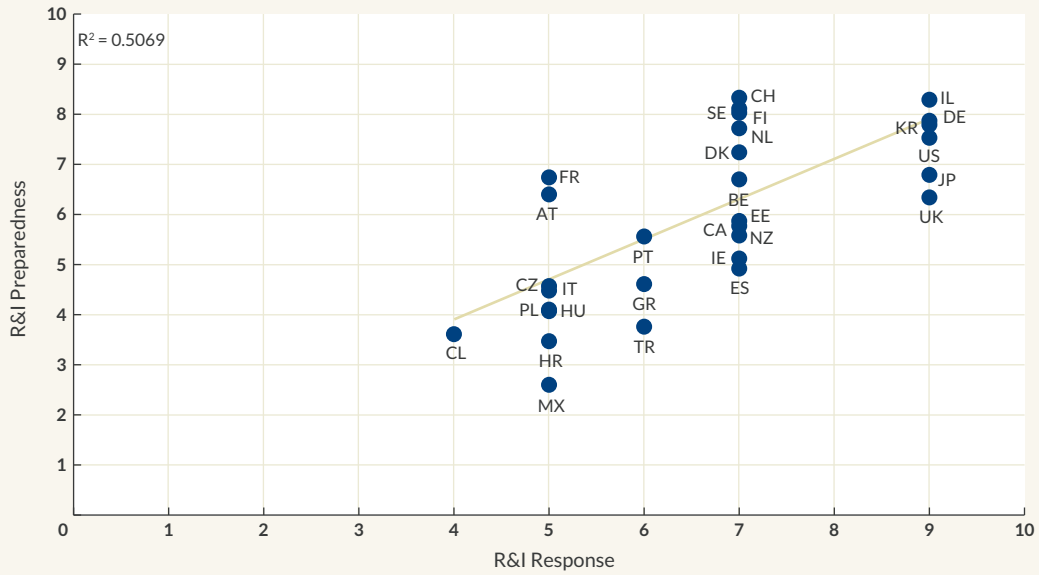
The **Netherlands** also scores highly with regard to its structural environment for innovation – that is, the quality and efficiency of the physical infrastructure supporting non-digital economic activity (e.g., roads, air and rail transport), and the infrastructure for digital data traffic (see Fig. 78 and Fig. 79).

Research and Innovation Response

Crisis management is also more successful when governments and national research and innovation systems make their own contributions to the response. For instance, have there been specific efforts and strategies aimed at integrating research and development capacities into a coherent and effective response to the pandemic? To what extent have countries succeeded in deploying effective coronavirus contact-tracing apps, or in swiftly creating domestic vaccine-production facilities. Has the government launched special efforts and policy programs to develop social innovations designed to improve management of pandemics and other crises in the future?

As in other policy areas, the crisis response mounted by national research and innovation systems reveals a positive correlation between pre-pandemic preparedness and the quality and scope of the subsequent activities (see Fig. 81). However, some countries responded more effectively to the crisis than either their recent efforts or their research and innovation policy outcomes might otherwise have suggested. This is particularly true of **Japan** and the **United Kingdom**. In **Japan**, with the help of two supplementary budgets, public funds were very swiftly made available for research and development associated with new drugs and vaccines (Pascha et al. 2021).

FIGURE 81 **R&I Response and R&I Preparedness**



Unit: score, standardized, 1-10
Source: Sustainable Governance Indicators

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In **France** and **Austria**, on the other hand, our country experts regarded the crisis response within the research and innovation systems as being significantly weaker than activities preceding the crisis. In **France**, the coronavirus crisis exposed a number of structural weaknesses, especially in the pharmaceutical and biotech sectors. These sectors have received diminishing financial support in recent years, unlike in the **United Kingdom** (or **Germany**). The French government has also provided little support for startups in the biotech sector. Finally, pharmaceutical approval procedures are significantly lengthier and more complex than those in Germany, and the interaction between basic research and product-focused innovation is in need of reform (Mény et al. 2021).

Welfare State Resilience

Education System Preparedness

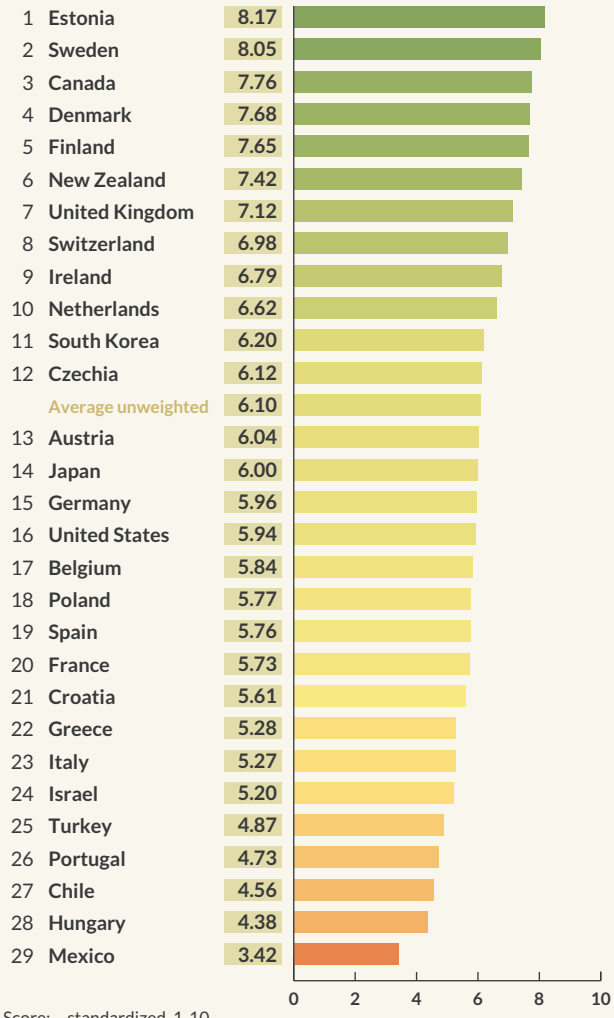
The success of an education system can be measured by the extent to which it succeeds in providing high-quality instruction while ensuring equitable access for all relevant population groups. Even before the onset of the crisis, there were major differences between the various EU and OECD countries in this respect. The degree to which the countries were prepared to achieve these objectives even under crisis conditions varied. In this regard, resilience in the face of crisis depends on several key factors.

Well-prepared countries such as **Estonia**, **Sweden**, **Canada and Denmark** stand out due to the high **degree of digitalization** in their education systems. This is in part determined by the availability and quality of teaching institutions' technical infrastructure (hardware, fast internet connections, online learning platforms, etc.). For example, PISA results from 2018 show that around 90% of schools in **Denmark** were already equipped with effective online learning platforms, while in **Japan** this was true for only 24% of schools (see Fig. 83). In addition to the technical infrastructure, **teaching staffers' digital skills** – that is, the ability to use the digital infrastructure efficiently – are also important.

To be able to supply digital infrastructure of this quality, education systems or schools must in turn be furnished with **sufficient financial resources**. The absence of such resources is consequently problematic in countries such as **Hungary** (Ágh et al. 2021), **Italy** (Cotta et al. 2021), **Poland** (Matthes et al. 2021), and **Turkey** (Arslantaş al. 2021).

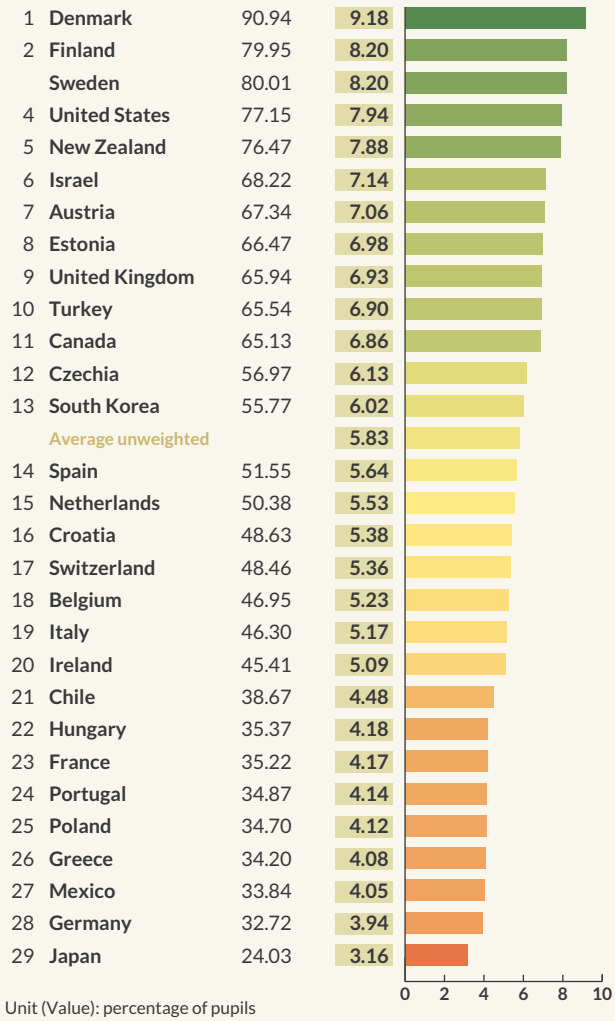
FIGURE 82 **Education System Preparedness**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators | BertelsmannStiftung

FIGURE 83 **Availability of Effective Online Platforms**



Unit (Value): percentage of pupils
Unit (Score): standardized, 1-10
Source (Value): OECD PISA
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

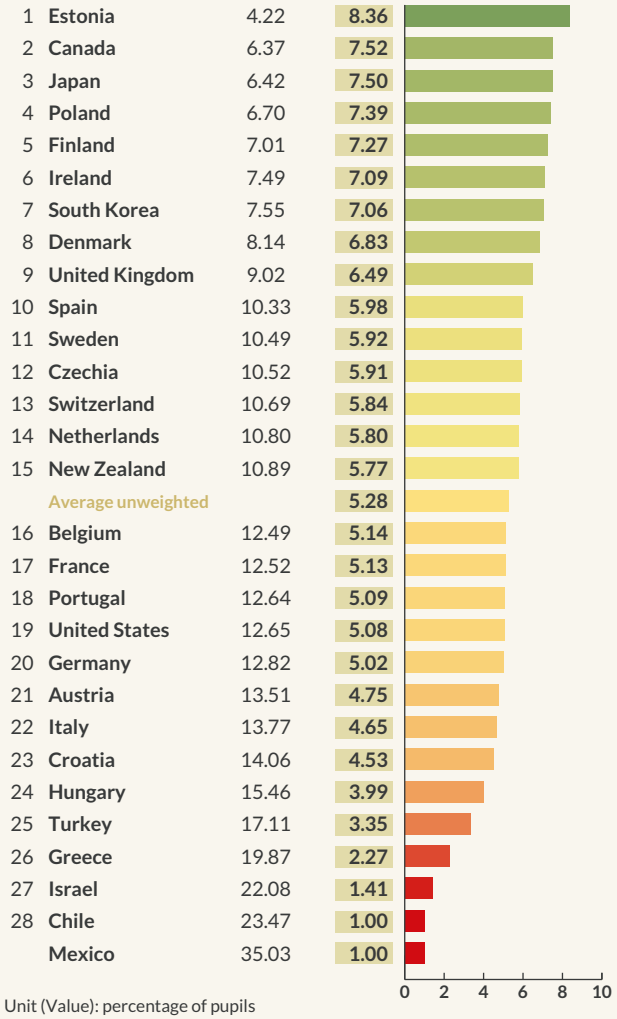
Another common feature of the well-organized education systems in **Estonia**, **Sweden** and **Finland** is a certain degree of **autonomy granted to decentralized local authorities** or to the **teaching institutions** themselves, particularly with respect to instruction methodologies. In **Finland**, for example, municipalities are responsible for organizing schools and developing curricula (Hiilamo et al. 2021). In **Estonia** too, schools enjoy significant autonomy in matters of curriculum and teaching. There, efforts to adapt learning processes to the demands of the pandemic took place in a bottom-up way, at the local level (Toots et al. 2021). Conversely, **Portugal's** education system is relatively inefficient. The SGI experts see this issue as being due to the country's highly centralized institutional framework, which offers little room for innovation and adaptation (Jalali et al. 2021). In **Hungary** (Ágh et al. 2021) and **Italy** (Cotta et al. 2021), the SGI country experts again attribute school systems' difficulties in adapting to changing societal and economic conditions in part to the limited autonomy provided to educational institutions.

The **ability to vary teaching methods** is particularly helpful in addressing the individual needs of disadvantaged pupils. Special programs for pupils with learning difficulties are particularly important because these children often come from difficult socioeconomic circumstances – a factor that negatively impacts learning opportunities in all the countries examined, though to varying degrees.

Quality and equity of opportunity within a given education system can also be measured by the extent to which it succeeds in providing as many young people as possible with the knowledge they need to go on to higher education or vocational training. One important indicator in this regard is the proportion of students who receive poor marks in all three PISA dimensions (reading, mathematics and science), and thus have unfavorable job prospects. While only 4.2% of students in **Estonia** are PISA low performers in all subjects, this applies to 35% of young people in **Mexico** (see Fig. 84).

However, education quality varies significantly not only between countries, but also within them. For example, SGI country experts report significant differences between the quality of private and public educational institutions in **Chile** (Klein et al. 2021), **Mexico** (Muno et al. 2021) and the **United States** (Béland et al. 2021); in Mexico and the United States, quality also varies substantially across regions. In **Israel**, primary education funding is highly dependent on pupils' religious affiliation (Levi-Faur et al. 2021).

FIGURE 84 **Low Achievers in all PISA Subjects**



Unit (Value): percentage of pupils
Unit (Score): standardized, 1-10
Source (Value): OECD PISA
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

Education System Response

Rising coronavirus infection numbers prompted school closures in all 29 countries in our sample. At the same time, schools and preschools in many countries remained open to the children of essential workers, so as to enable parents to go to work. The school closures posed fundamental challenges to education systems. One major question was how to continue providing high-quality education despite the closures. To the extent possible, the goal was to accomplish this without interruptions, as discontinuities risked further jeopardizing the educational success of children from disadvantaged environments in particular.

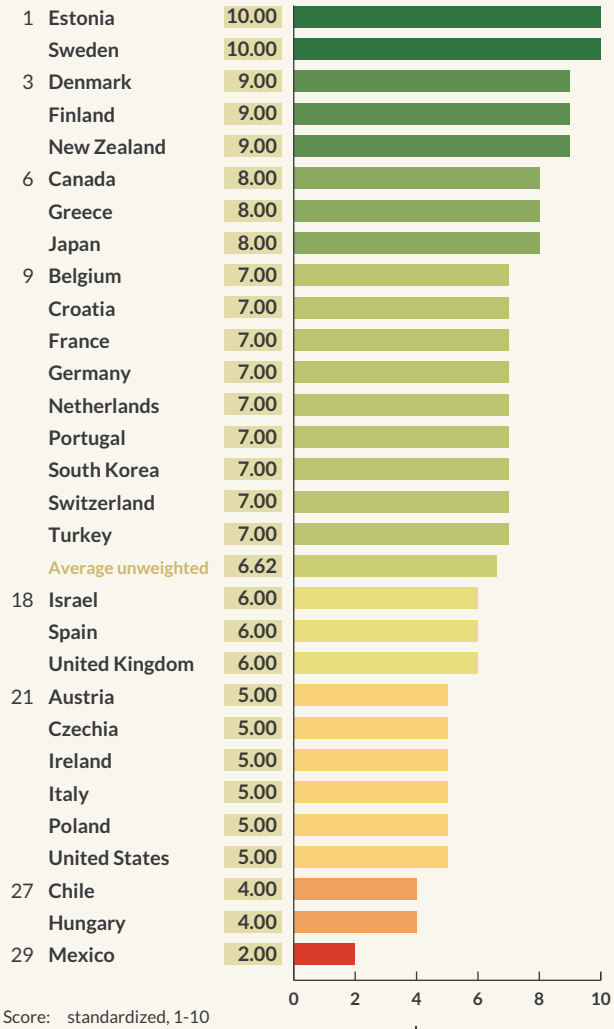
The seamless transition from face-to-face to **online teaching** was particularly successful in the Scandinavian countries, where the **technical preconditions** were already in place and **teaching staff already had the necessary skills**. School systems in these countries also implemented additional measures to ensure that online teaching formats were effective, and to support **pupils with special learning needs**. In **Sweden**, for example, teaching practices were allowed to be modified to fit disadvantaged pupils' requirements. Moreover, additional funding was provided in 2020 for supplementary summer-school classes aimed at

helping students who had not managed to graduate from secondary or college-preparation schools (Petridou et al. 2021). In **Estonia**, pupils with special support needs were provided with individual tutoring assistance and/or supervision by school staffers (Toots et al. 2021). In **Finland**, experts developed new working practices for teaching in online or distance-learning settings (Hiilamo et al. 2021). In **New Zealand**, the Ministry of Education set up dedicated websites to help teachers and parents provide children with high-quality instruction despite the challenges of the pandemic (Hellmann et al. 2021).

The fact that digitalization alone is not enough to ensure universal success in education is shown by the example of **Denmark**. Although the country's digital infrastructure is well developed and virtually all households are connected to the internet, an evaluation by the teachers' union there found that about half of all primary-school students there did not receive any instruction during the periods of school closure, with children from economically disadvantaged backgrounds and ethnic minorities disproportionately affected in this way (Møller Pedersen et al. 2021). In **Canada** too, the equality of opportunity within the education sys-

FIGURE 85 **Education Policy Response**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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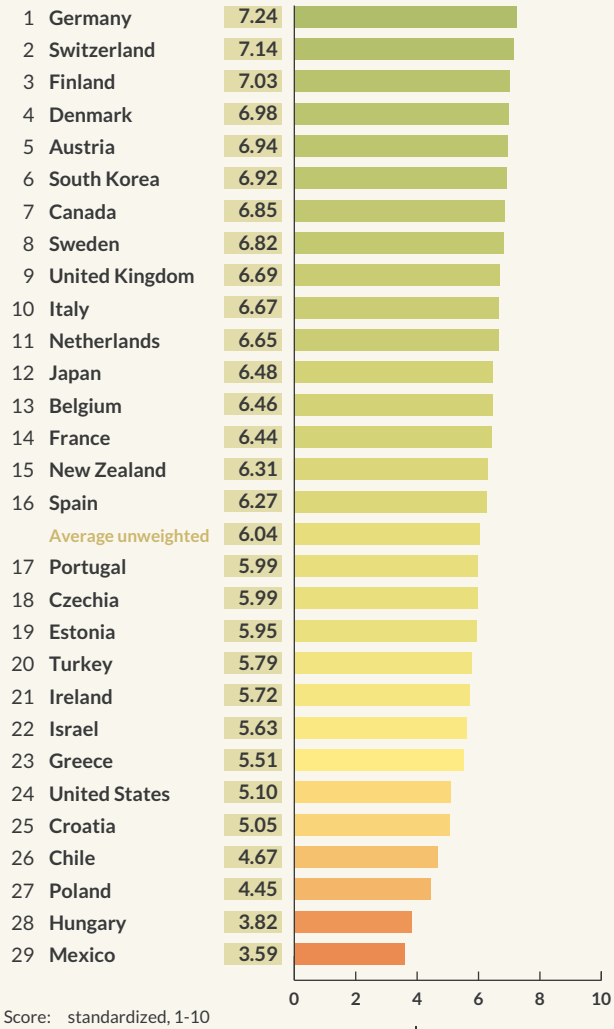
FIGURE 86 **Healthcare System Preparedness**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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tem diminished during the pandemic. Students from disadvantaged socioeconomic backgrounds there were also disproportionately affected by school closures and the shift to online learning, in large part due to a lack of support programs for children with special needs (Tedds et al. 2021).

Like their schools and teachers, **students themselves must have access to the necessary technology and possess the appropriate skills** in order for online instruction to be both possible and successful. In this regard, there are differences not only between countries, but also within them. Children from socially disadvantaged families in particular often lack laptops, fast internet connections, necessary computer skills or even a quiet room in which to study. In addition, parents differ in their ability to provide technical or subject-area help with homework. For example, two-parent families and parents with higher levels of education and comparatively flexible work schedules are better able to support their children at home than are single parents with lower education levels and less flexible work environments (OECD 2020).

Healthcare System Preparedness

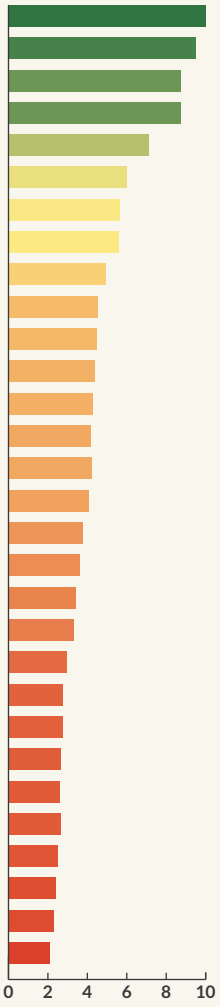
The coronavirus crisis is first and foremost a health crisis, with successful management depending in large part on how well each given health system was prepared for the specific stresses of the pandemic. To what extent did countries succeed in ensuring equitable access to high-quality healthcare for all citizens even before the crisis?

One key prerequisite for the provision of universal healthcare that the **healthcare system be furnished with sufficient human and material resources**. However, a look at the data reveals major differences in this regard between the 29 states examined here. For example, the number of **hospital intensive-care beds** (per 100,000 population), which are vital in the fight against the coronavirus, varied between 31.6 in Germany to 3.6 in Chile (see Fig. 87).[5]

Moreover, simply having intensive-care units and ventilators available is not enough in itself.

FIGURE 87 **Intensive Care Beds**

Rank	Country	Value	Score
1	Germany	31.61	10.00
2	Turkey	28.35	9.50
3	Poland	25.80	8.73
	United States	25.80	8.73
5	Austria	20.38	7.11
6	South Korea	16.59	5.97
7	Croatia	15.55	5.66
8	Belgium	15.29	5.58
9	Hungary	13.20	4.96
	Average unweighted		4.54
10	Czechia	11.62	4.48
11	Canada	11.09	4.32
12	Estonia	10.94	4.28
13	Italy	10.53	4.16
	Sweden	10.53	4.16
15	Switzerland	10.24	4.07
16	France	9.22	3.76
17	United Kingdom	8.81	3.64
18	Netherlands	8.08	3.42
19	Spain	7.78	3.33
20	Denmark	6.49	2.95
21	Japan	5.95	2.78
22	Greece	5.87	2.76
23	Ireland	5.49	2.65
24	Finland	5.45	2.63
	New Zealand	5.45	2.63
26	Portugal	5.03	2.51
27	Israel	4.62	2.38
28	Mexico	4.37	2.31
29	Chile	3.62	2.08



Unit (Value): beds per 100,000 inhabitants
Unit (Score): standardized, 1-10
Source (Value): Eurostat, OECD, University of Washington & World Bank
Source (Score): Sustainable Governance Indicators

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There must also be a **sufficient number of medical staff** on hand who can operate the equipment and provide care for the patients. The data also show considerable differences in terms of staffing levels. While Turkey had just 2.07 nurses per 1,000 population[6], Switzerland's comparable figure was eight times greater, at 17.96 (see Fig. 88).

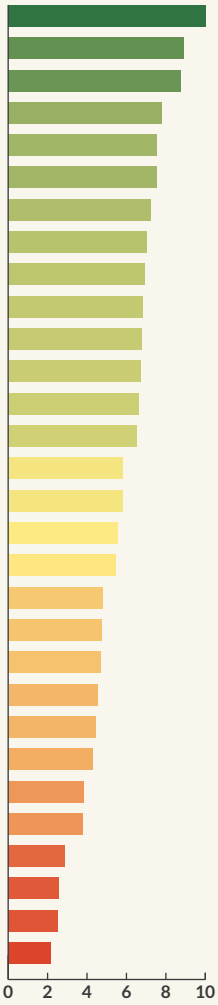
The ability to provide a high-quality range of healthcare services depends significantly on the

5 As no values for December 2019 are available in the official statistics, we use the value from June 23, 2020 as a proxy for the number of ICU beds available.

6 Latest available year (2017).

FIGURE 88 **Nurses**

Rank	Country	Value	Score
1	Switzerland	17.96	10.00
2	Finland	14.26	8.92
3	Germany	13.95	8.75
4	Ireland	12.16	7.76
5	Japan	11.76	7.53
6	United States	11.74	7.52
7	Belgium	11.22	7.23
8	Sweden	10.85	7.03
9	Netherlands	10.69	6.94
10	France	10.48	6.82
11	Austria	10.37	6.76
12	New Zealand	10.24	6.69
13	Denmark	10.10	6.61
14	Canada	9.98	6.54
15	Czechia	8.56	5.76
	Average unweighted		5.76
16	United Kingdom	8.20	5.56
17	South Korea	7.94	5.41
18	Croatia	6.85	4.81
19	Portugal	6.70	4.72
20	Hungary	6.62	4.68
21	Estonia	6.24	4.47
22	Italy	6.16	4.42
23	Spain	5.89	4.27
24	Poland	5.10	3.83
25	Israel	5.01	3.78
26	Greece	3.38	2.88
27	Mexico	2.85	2.58
28	Chile	2.72	2.51
29	Turkey	2.07	2.15



Unit (Value): nurses per 1,000 inhabitants
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

financial resources available to that healthcare system. This is a key factor in determining whether a country can maintain sufficient levels of medical staffing and related resources such as hospital beds, testing capacities and stocks of personal protective equipment. For example, in **Croatia** (Kotarski et al. 2021), **Greece** (Sotiropoulos et al. 2021), **Hungary** (Ágh et al. 2021), **Italy** (Cotta et al. 2021), **Mexico** (Muno et al. 2021) and **Spain** (Kölling et al. 2021), the SGI experts identified inadequate funding as one reason for the countries' shortages of medical personnel and/or medical resources, and for the associated bottlenecks in their healthcare systems.

These financial difficulties are partially driven by rising healthcare costs associated with aging populations and the resulting increase in demand for healthcare services. However, technical progress has also helped elevate expenses. In some countries, the austerity or savings measures implemented in response to these increased costs led to an undersupply of medical services at the beginning of the pandemic.

In **Austria**, **Canada**, **Croatia**, **Finland**, **France**, the **Netherlands**, **Poland**, **Sweden** and the **United Kingdom**, a lack of **coordination** within the healthcare system undermines the population's quality of care, according to the SGI experts. In **Canada**, for example, primary responsibility for public health lies at the provincial/territorial level, while the federal government regulates aspects related to matters of national interest. However, insufficient cooperation between the various levels of government has produced situations in which provincial and territorial governments have pursued different and sometimes contradictory strategies. For example, some provinces have reallocated federal COVID-19 funds for non-healthcare purposes or have been reluctant to adopt the national COVID-19 reporting app (Tedds et al. 2021).

From an equity perspective, **access to healthcare should be equally available** to all citizens. The distribution of health opportunities is particularly inequitable in countries where the public health system does not cover all people. This is true in **Mexico** and the **United States**, where 11% of the population did not have health insurance in 2019. Moreover, high deductibles and out-of-pocket expenses mean that about 30% of the insured in the **United States** are considered to be underinsured, because they have to forgo medical services due to the high costs (Béland et al. 2021).

In some countries, the quality of health services and the degree of equity in accessing them varies depending on the region. In **Italy**, for example, the quality of healthcare is poorer in the south than in the north due to less developed infrastructure and lower staffing levels (Cotta et al. 2021).

In many countries, the state of one's own personal health depends on socioeconomic factors. This is

also true where public health systems, despite being generally accessible to all citizens, provide inadequate services, impose long waiting times or require high private copayments. In such cases, affluent people are often able to take out private insurance that provides better care and shorter waiting times. In **Finland**, for example, the healthcare system is divided into two. While regularly employed people enjoy basic healthcare provided by their employers, the unemployed, temporary workers and the self-employed must rely on the public health service, which has fewer resources and can therefore offer fewer services (Hiilamo et al. 2021).

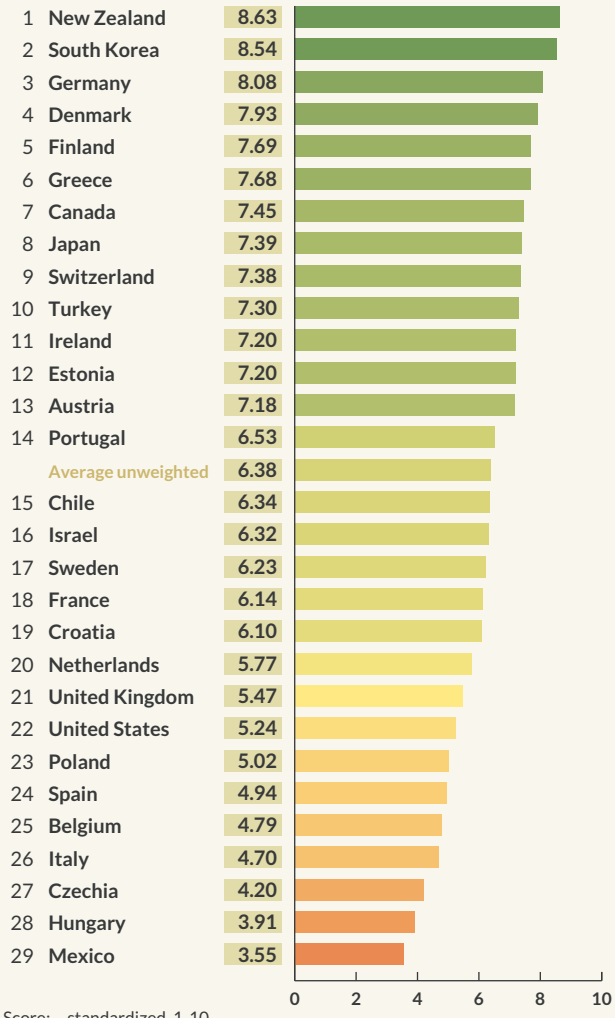
Healthcare System Response

The COVID-19 pandemic presented health systems in all countries with the exceptionally difficult challenge of responding rapidly and adequately to rising numbers of infections. Being able to do this depends on a number of factors: the ability to **mobilize additional staff**, the ability to **increase stocks of the medical equipment** needed to treat and diagnose patients (e.g., intensive-care beds, ventilators and testing equipment), and the **availability of sufficient and appropriate facilities** for safe diagnosis and treatment.

Within our sample, **New Zealand** was most successful in combating the pandemic during the period under review, even though the island state was not well prepared at the outset. The country registered the lowest infection rate (43.05 per 100,000 population) in our sample, as well as the lowest COVID-19 mortality rate, with 0.54 deaths per 100,000 population (WHO 2021). It is also the only country in our sample that did not experience excess mortality in 2020. SGI experts attribute these achievements to the government's "go hard and go early" response. The country's coronavirus strategy, developed in early February 2019, was based on rigorous testing, contact-tracing and isolation. It closed its borders on March 20, and three weeks later imposed a two-week quarantine in government-administered isolation facilities for anyone seeking to enter the country. However, the government seems to have had little alterative to this "go hard and go early" strategy, as the country was not prepared to care for large numbers of patients, or to protect medical personnel adequately. For example, in early 2020, New Zealand only had about 150 ICU beds nationwide, and just over 500 ventilators (Hellmann et al. 2021).

FIGURE 89 **Healthcare System Response**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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South Korea, which ranks second behind New Zealand in terms of good performance on COVID-19 infection figures and mortality rates, took a similar approach from the start in the areas of testing, detection and treatment. This allowed the country to rapidly develop testing and treatment options under the direction of an epidemic control center led by scientific experts. South Korea also has an effective contact-tracing system that allows for exceptional data collection in times of crisis. However, the system's data protection framework

did have to be improved, as it revealed too much personal information, and initially led to social stigmatization and interference with the private lives of affected persons. Following a revision of its underlying guidelines, the system subsequently released only what information was relevant to the prevention and control of infectious disease (Kalinowski et al. 2021).

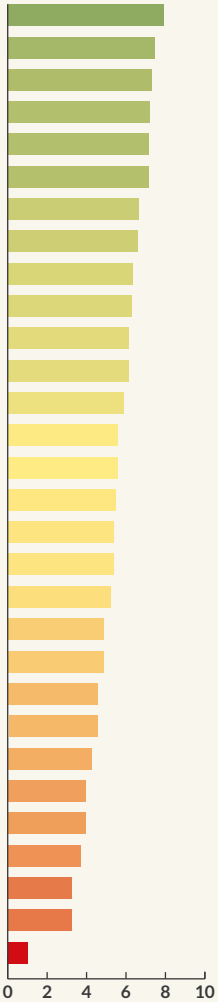
In our sample's other countries, significantly higher infection figures made it necessary to expand staffing and technical capacities (e.g., intensive-care beds) within healthcare systems, especially hospitals, to varying degrees. However, this capacity expansion was often not always rapid enough, or else failed to reach the level demanded by the events of the pandemic. In **Italy**, one of the first countries to be affected by the pandemic, the influx of COVID-19 patients soon pushed the health system to its limits. Here, the number of available intensive-care beds, but also the number of beds for infected patients more generally, was largely insufficient. During the first weeks of the crisis, the country also experienced shortages of medical resources such as testing equipment and protective masks (Cotta et al. 2021).

Moreover, in the majority of countries, the increase in the number of beds came at the cost of **neglecting people with other diseases**. In many places, planned operations were postponed and hospital beds were converted in order to increase COVID-19 treatment capacities. For example, the SGI experts for **Hungary** report that in April 2020, the government ordered the country's hospitals to free up 60% of their beds for the treatment of coronavirus-infected patients. This was to be done "overnight," the government demanded. This resulted in the discharge of many non-coronavirus patients without adequate alternative care, or forced them to share already-full rooms with other patients (Ágh et al. 2021). In **Czechia** too, country experts note that the focus on COVID-19 patients led to significant neglect of people with other diseases (Guasti et al. 2021). In **Poland**, many sick people were unable to be admitted to hospitals even in cases of emergency (Matthes et al. 2021).

Given these circumstances, the COVID-19 mortality rate alone cannot capture the true extent of the pandemic. This statement is particularly true of **Turkey.** While the country ranks fifth in the country comparison with a COVID-19 mortality rate of around 35 people per 100,000 population (WHO 2021), its overall excess mortality is the second-highest in our sample, at around 21%. This is particularly striking given that the country had the second-highest number of intensive-care beds per capita in mid-2020, and that 32,000 new healthcare workers were hired in March, most of whom were nurses and healthcare technicians (Arslantaş et al. 2021). Excess mortality was significantly higher still in **Mexico**, where the death rate in 2020 was about 50% above the 2015 – 2019 average.

FIGURE 90 **Excess Mortality**

Rank	Country	Value	Score
1	New Zealand	-0.27	7.94
2	Denmark	1.85	7.47
3	Finland	2.81	7.26
4	Estonia	3.19	7.18
	Ireland	3.16	7.18
6	Japan	3.35	7.14
7	Germany	5.46	6.67
8	South Korea	5.88	6.58
9	Greece	6.99	6.33
10	Sweden	7.22	6.28
11	Croatia	7.90	6.13
12	Hungary	8.05	6.10
13	Israel	8.93	5.90
14	France	10.47	5.56
15	Austria	10.62	5.53
	Average unweighted		5.43
16	Canada	11.34	5.37
	Portugal	11.34	5.37
18	Netherlands	11.93	5.24
19	Switzerland	13.47	4.89
20	United Kingdom	13.57	4.87
21	Italy	15.08	4.54
22	Belgium	15.27	4.49
23	Czechia	16.34	4.26
24	Spain	17.61	3.97
25	Chile	17.69	3.96
26	Poland	18.80	3.71
27	United States	20.84	3.26
28	Turkey	20.96	3.23
29	Mexico	50.04	1.00



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): New York Times & Our World in Data
Source (Score): Sustainable Governance Indicators | BertelsmannStiftung

Recruiting additional medical staff proved to be a particularly great challenge in all of the countries examined here. Indeed, this often became a critical bottleneck. As a consequence, hospitals were often unable to use their newly expanded intensive-care facilities to full capacity, and could not guarantee that all patients would receive the proper care. To address this shortage, the countries took what were in some cases unusual approaches. **Japan**, for example, expanded staffing levels at public health centers by 3.8 times, in part by asking retired medical professionals to help out. In addition, the country sought the aid of military nurses in particularly hard-hit areas (Pascha et al. 2021). In the **Netherlands** too, the army was occasionally called in to provide support (Hoppe et al. 2021). That country – like **Czechia** and **Estonia** – also recruited medical students to act as auxiliary staffers. In countries that were unable to recruit sufficient additional staff, existing medical staffers' working hours were sometimes extended, often forcing them to work at – or even beyond – the limit of their capacities.

In **Czechia**, the staff shortage was further aggravated by the closure of schools and kindergartens, as some hospital employees had to care for their children and were thus unable to come into work. Some hospitals there established childcare groups in which professionals cared for children throughout the working day (Guasti et al. 2021). Instances in which doctors and nurses themselves contracted COVID-19 further exacerbated the situation. In **Ireland**, for example, more than 7,000 healthcare workers were unable to work at the beginning of January 2021 due either to a COVID-19 diagnosis or close contact with an infected person (Colfer et al. 2021).

Since COVID-19 is particularly dangerous for the elderly, a lack of **clear hygiene rules in elder-care facilities** posed a deadly risk to residents. In the **United Kingdom**, for example, patients were transferred from hospitals to nursing homes without first being tested for the coronavirus (Busch et al. 2021). In **Belgium** (Castanheira et al. 2021) and **Italy** (Cotta et al. 2021) infected nursing home residents were placed in elder-care facilities rather than in hospitals. The situation provided particularly dramatic in **Canadian** nursing homes. Here, 81% of the country's COVID-19 deaths occurred in long-term care homes, more than double the OECD average of 38%. Among the factors cited as being responsible were the insufficient use of personal protective equipment, understaffing and poor service quality (Tedds et al. 2021).

Furthermore, in many places – at least during the first wave – there was a lack of **personal protective equipment, testing capacity and ventilators**, again due to previously implemented cost-cutting measures. For example, the SGI experts for **Canada** blame underfunding and mismanagement for the fact that in Ontario, more than 80% of the 55 million face masks stockpiled to protect health workers had expired and were not being replaced (Tedds et al. 2021). In the **United Kingdom**, testing capacity was significantly increased in spring 2020, but due to insufficient coordination of the testing services, this measure's efficacy was limited (Busch et al. 2021).

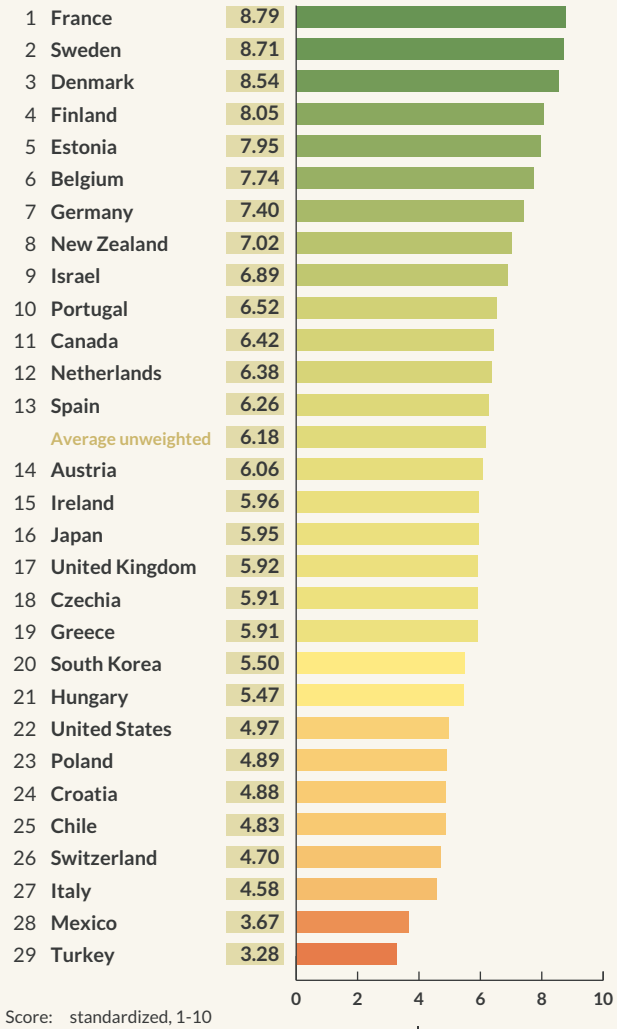
Coordination within country healthcare systems was also needed to respond effectively to regional differences in infection patterns, and to compensate for regional imbalances. **Germany** offers a positive example of such activity. There, hospitals were legally obliged as of April 2020 to report their intensive-care and ventilator capacities to the DIVI Intensive Care Register on a daily basis. This meant that regional bottlenecks became visible at an early stage, and patients could be transferred as necessary (Rüb et al. 2021). In **Denmark**, the national health authority issued guidelines on the national coordination of hospital bed capacities (Møller Pedersen et al. 2021). In **Sweden**, regions have mutual aid mechanisms that allow health facilities to admit patients from outside their area of coverage (Petridou et al. 2021).

Decentralized measures were also effective in **Finland**, but according to the SGI experts, the health system's decentralized nature made it more difficult to manage aspects such as the purchase of personal protective equipment and the conduct of tests. In addition, individual communities differed in their response to the epidemic. Large joint municipal authorities were better able to allocate resources and shift staff between primary and specialist medical care as needed (Hiilamo et al. 2021). In **Italy,** problems in individual regions led in turn to coordination problems between the national Ministry of Health and regional author-

ities, which lacked the organizational resources to address the crisis effectively. In addition, the division of responsibilities between the national state and the regions was not clearly regulated. Moreover, during the first wave of the pandemic, there was a lack of coordination and cooperation between the individual regions and their health institutions (Cotta et al. 2021). In **Spain**, powers normally held by the autonomous communities were transferred to the minister of health, who then assumed responsibility for coordinating health policy decisions in the 17 communities. However, the SGI experts indicated that this approach did not prove highly effective, as it proved difficult for the Ministry of Health to procure and provide even basic operational data. The ministry also ran into troubles coordinating joint action with the autonomous communities, for example in procuring protective clothing and masks, as well as in managing data (Kölling et al. 2021).

FIGURE 91 **Families**

SGI 2021 COVID-19 STUDY



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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Families

The main family-policy challenge during the coronavirus crisis has been to enable parents of younger children in particular to **reconcile work and family commitments** despite school closures and the additional childcare responsibilities these have entailed. But even before the outbreak of the pandemic, how well did the 29 EU and OECD states succeed in enabling their citizens to reconcile work and family life in a gender-equitable way? What support services were in place to protect new parents in particular from falling into poverty?

The analysis shows that the **Scandinavian countries and France** were best positioned in terms of family policy. These countries are characterized by the widespread availability of **well-developed and flexible childcare facilities** (e.g., day care centers or kindergartens). In **Denmark**, for example, 66% of children under the age of three were in day care. As comparison, in **Turkey**, the lowest-performing country on this measure, the corresponding figure was just 0.3% (see Fig. 92).

However, childcare slots must not only be available, but also be affordable for parents. While poor parents in **Denmark** are provided with free kindergarten slots (Møller Pedersen et al. 2021) for their children, low-income families with children under five years of age in the **United States** often have to spend more than one-third of their income on childcare services, which are generally offered by the private sector (Béland et al. 2021).

To ensure that parents can reconcile the demands of work and family life, the **opening hours of childcare facilities must reflect parents' needs**. The SGI experts for **Chile** (Klein et al. 2021), **Germany** (Rüb et al. 2021), the **Netherlands** (Hoppe et al. 2021) and the **United Kingdom** (Busch et al. 2021) note that limited or inflexible opening hours in these countries are a barrier to employment for parents who work outside normal working hours.

In addition to well-developed childcare infrastructures, countries that are well-positioned in terms of family policy have **generous, flexible and gender-neutral parental leave arrangements for mothers and fathers.** In **Sweden,** for example, each parent is entitled to full-time leave until the child is 18 months old. In addition, parents with joint custody are each entitled to 240 days of paid parental leave, which can be taken until the child's 12th birthday. This paid leave can be utilized on a full- or part-time basis, and can be combined with unpaid leave. Those making use of parental leave benefits also receive credits toward their pension (Petridou et al. 2021). The **United Kingdom** has offered a shared parental benefit since 2014. This grants parents 90% of their average weekly earnings and allows for flexibility in taking parental leave. Parents may take the leave period together, at different times or divided into three separate blocks of at least one week (Busch et al. 2021).

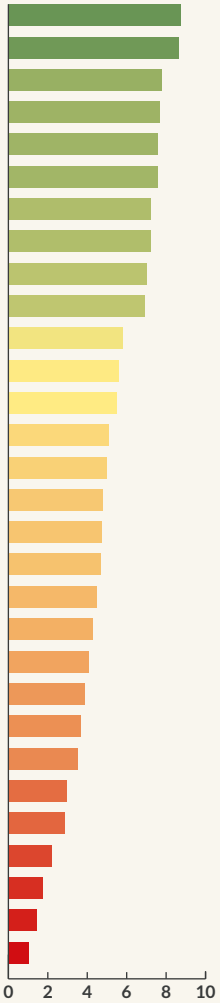
Moreover, the well-positioned countries in this area offer extensive financial support for parents. In **Canada**, for example, an annual income-dependent child benefit of up to CAD 6,400 is paid for each child under age six, with up to CAD 5,400 provided for older children up to age 17. The amount of the child benefit is calculated based on net family income and decreases when annual income exceeds $30,000 (Tedds et al. 2021).

Aside from these conventional family policy benefits, other aspects also play a role in ensuring compatibility between family and working life. **Flexible working time models** are particularly helpful in this regard, as is the ability to **work from a home office**. Thus, the SGI experts in **Croatia** (Kotarski et al. 2021), **Czechia** (Guasti et al. 2021), **Israel** (Levi-Faur 2021), **Poland** (Matthes et al. 2021) and **South Korea** (Kalinowski et al. 2021) see these countries' lack of flexible working arrangements as making it more difficult to reconcile family and work life.

The fact that women are still often paid less than men presents an obstacle to the sharing of childcare responsibilities between men and women in a gender-equitable way. The **gender wage gap** that exists in all countries means that women tend to be more likely to take a break from work, as the family's reduction in income is lower in such a case. Aspects of **income tax policy** also play a role in determining whether men and women have equal ability to reconcile family and working life. For example, the SGI country experts for **Belgium** (Castanheira et al. 2021), **Germany** (Rüb et al. 2021) and the **Netherlands** (Hoppe et al. 2021) see the joint taxation of couples and the high effective marginal tax rate imposed on second earners as a disincentive to women's full-time employment. In **Canada**, this disincentive is avoided through a policy that taxes the individual, and thus does not subject lower-earning spouses to their partners' higher tax rates (Tedds et al. 2021).

FIGURE 92 **Childcare Enrollment, 0-2 Year Olds**

Rank	Country	Value	Score
1	Denmark	66.0	8.77
2	Netherlands	64.8	8.63
3	Spain	57.4	7.76
4	South Korea	56.3	7.63
5	Israel	56.0	7.59
6	Belgium	55.5	7.53
7	Sweden	53.1	7.25
8	Portugal	52.9	7.23
9	France	50.8	6.98
10	New Zealand	50.1	6.90
11	Ireland	40.8	5.80
12	United Kingdom	38.6	5.54
13	Finland	38.2	5.50
	Average unweighted		5.12
14	Switzerland	33.9	4.99
15	Greece	32.4	4.81
16	Estonia	31.8	4.74
17	Germany	31.3	4.68
18	Japan	29.6	4.48
19	United States	28.0	4.30
20	Italy	26.3	4.10
21	Canada	24.2	3.85
22	Austria	22.7	3.67
23	Chile	21.7	3.55
24	Hungary	16.9	2.99
25	Croatia	15.7	2.85
26	Poland	10.2	2.20
27	Czechia	6.3	1.74
28	Mexico	3.7	1.44
29	Turkey	0.3	1.04



Unit (Value): percent
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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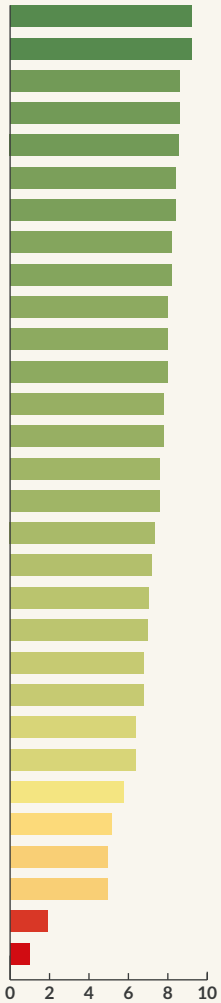
The continued prevalence of **traditional ideas about family and gender roles**, which mainly see women as being responsible for childcare tasks, is another factor in the comparatively unfavorable family policy situation in countries such as **Hungary**, **Italy**, **Mexico**, **Poland**, **South Korea** and **Turkey**, Childcare infrastructure in such locations is often poorly developed, and family policy benefit systems and service models do not always meet families' real needs. But even in more progressive countries, social norms hamper higher labor-force participation rates among women, according to SGI experts. In **Germany** (Rüb et al. 2021) and **the United Kingdom** (Busch et al. 2021), for example, country experts regard these norms as being partially responsible for the fact that the use of paid parental leave has a strong gender skew despite gender-neutral regulations. In Germany, for instance, 24.5% of women with children under six took parental leave in 2019, but only 1.6% of the men did so (Rüb et al. 2021).

FIGURE 93 **Female Labor Force Participation Rate**

Rank	Country	Value	Score
1	Finland	0.96	9.19
	Sweden	0.96	9.19
3	Denmark	0.93	8.58
	Israel	0.93	8.58
	Portugal	0.93	8.58
6	Canada	0.92	8.38
	Estonia	0.92	8.38
8	France	0.91	8.18
	Switzerland	0.91	8.18
10	Germany	0.90	7.98
	Netherlands	0.90	7.98
	New Zealand	0.90	7.98
13	Belgium	0.89	7.78
	United Kingdom	0.89	7.78
15	Austria	0.88	7.57
	Spain	0.88	7.57
17	United States	0.87	7.37
18	Croatia	0.86	7.17
	Average unweighted		7.01
19	Ireland	0.85	6.97
20	Czechia	0.84	6.76
	Japan	0.84	6.76
22	Hungary	0.82	6.36
	Poland	0.82	6.36
24	Greece	0.79	5.75
25	South Korea	0.76	5.15
26	Chile	0.75	4.94
	Italy	0.75	4.94
28	Mexico	0.60	1.91
29	Turkey	0.50	1.00



Unit (Value): ratio women/men
Unit (Score): standardized, 1-10
Source (Value): Eurostat & OECD
Source (Score): Sustainable Governance Indicators

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A look at the labor-force participation rate among women in the 29 EU and OECD countries examined here indicates that a good family policy is a key prerequisite for integrating women more fully into the labor market. For example, the labor-force participation rate among women in **Finland** and **Sweden** is very close to that of men. In **Turkey**, by contrast, the rate among women is only about half that of men (see Fig. 93).

The link between good family policies and child poverty seems to be less pronounced. While in **Denmark**, the at-risk-of-poverty rate among children is 3.8% (earning the country the top slot in the country comparison), fully 13.9% of minors are at risk of poverty in **Sweden** (20th place). In **Israel**, this applies to 22.2% of those under 18 (rank 28).

Family Policy Response

The pandemic-driven closure of schools and kindergartens posed major challenges for families, as the additional care requirements made it much more difficult to reconcile the responsibilities of family, school and work. This was especially true during the pandemic's first wave in spring 2020, as there were fewer closures in the second wave. Single parents, large families, families with modest incomes and families living in small residences were particularly burdened by these policies and their consequences.

The 29 EU and OECD countries covered by this study introduced a number of measures intended to facilitate the combination of work and family life, and to provide financial support to families coping with income losses. In many countries, despite the coronavirus' dangers, early childhood education and care institutions were kept open for parents deemed "essential workers." In **Sweden**, early childhood care facilities were kept

open throughout 2020 for all children of this age group, no matter what their parents' professions (Petridou et al. 2021).

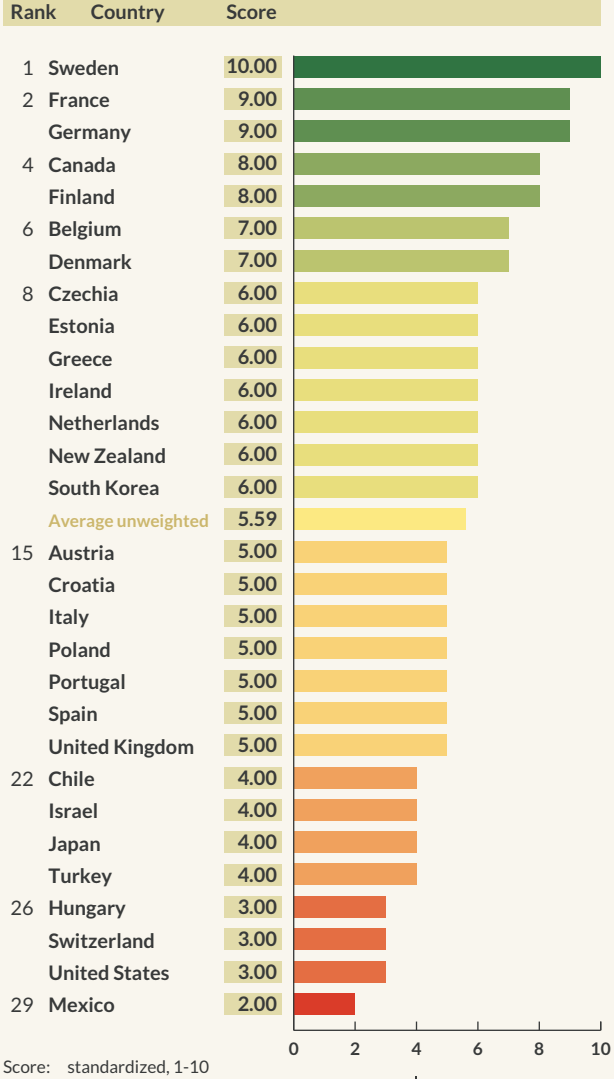
In cases where it proved impossible to keep kindergartens open, **financial support** services for families were in many places either offered or expanded. For example, **Germany** introduced a compensation program for parents. This was designed to replace 67% of any earnings lost by a parent who had to stay home due to school closures. The entitlement can be claimed by parents with children under 12 years of age, and is granted for a maximum of 10 weeks (or a maximum of 20 weeks for single parents). In addition, the tax deduction granted to single parents was increased from €1,908 to €4,008 per year for 2020 and 2021 (Rüb et al. 2021). The Canada Recovery Caregiving Benefit, introduced in October 2020, provides a similar example. This provides income support to employees and self-employed individuals who are unable to work due to the responsibilities of caring for their child or another family member in need of care (Tedds et al. 2021).

Many states have revised or introduced other financial benefits as well. For example, these include top-ups to child benefits, one-time bonus payments for families, the introduction of additional benefits for poor families and the provision of subsidies to employers in order to enable flexible working.

Overall, these various **support measures** have cushioned the negative impact of the crisis on families. However, they have had **little discernible influence on the distribution of responsibilities within families**. On the contrary: The vast majority of SGI country experts reported that women lost their jobs more frequently than men during the crisis, while also having to bear the majority of the increased workload associated with caring for children and other family members in need of care. For example, during the periods of school closure in **Switzerland**, mothers wound up assuming the additional childcare responsibilities 80% of the time (Armingeon et al. 2021). A similar picture emerges in the **United Kingdom**, where women took on two-thirds of the additional childcare responsibilities (Busch et al. 2021).

This underscores the fact that previous family policy measures have done little to make the household division of labor between women and men more equitable. Indeed, the coronavirus crisis seems to have reinforced adherence to **traditional family roles**. The inequality between men and women in the **distribution of housework and childcare tasks** has only increased further during the crisis. This apportionment is still strongly influenced by traditions, incomes, the size of families and access to flexible working arrangements.

FIGURE 94 **Family Support Policies**



Score: standardized, 1-10
Source: Sustainable Governance Indicators

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Measuring Sustainable Crisis Management

The SGI Approach: Generating Better Governance Data Through an Iterative Process

The Sustainable Governance Indicators (SGI) study addresses one of the most pressing questions facing the highly developed states of the OECD and the European Union in the 21st century: How can we achieve sustainable policy outcomes while ensuring that policymaking processes remain focused on long-term goals?

To deliver answers to this question, the SGI provides an itemized comparison of the sustainability of policy outcomes, the quality of democracy and the extent of governance capacities in OECD and EU states, drawing upon a customized catalogue of indicators, categories and indices to do so.

To ensure the proper operationalization of the individual index components, the SGI relies on a combination of qualitative and quantitative data. This allows for an analysis in which the strengths of both types of data can be applied, and avoids the pitfalls associated with the use of purely quantitative or qualitative surveys. In the SGI, the "objectivity" of quantitative data from official statistical sources is complemented by experts' context-sensitive qualitative assessments. This combination delivers a detailed portrait of policy outcomes, the quality of democracy and governance capacities.

The quantitative data underlying the SGI is drawn from official statistical sources, in particular those provided by the OECD and EU. While the SGI project team compiles this quantitative data centrally, the qualitative data is procured from a global network of more than 100 experts in a multiphase process of survey and validation (see Fig. 95). Each country is evaluated by (at least) two country experts (political scientists and economists) as well as a regional coordinator, each of whom respond to the questions posed in the SGI codebook. The SGI codebook details the rationale behind the qualitative indicators, thereby ensuring a shared understanding of each question among the SGI experts. The questions comprising this codebook include a range of answer options allowing for precise evaluations on a scale of 1 (lowest score) to 10 (highest). The response to each question includes both a numerical score and a written response that substantiates and illustrates the score given. These country reports are produced through an iterative evaluation process involving reviews and comments by each expert. Throughout the course of the online survey process, experts refer to the quantitative indicators for all countries as benchmarks, allowing assessments to be made on the basis of sound empirical data.

To ensure the comparability of quantitative and qualitative data, all quantitative data are standardized through a process of linear transformation on a scale of 1 to 10. These figures are then subject to simple aggregation in establishing the indices. The SGI evaluation process yields two products: detailed rankings and comprehensive reports on each state surveyed (available free of charge at www.sgi-network. org).

FIGURE 95 **Survey Process**

Source: Sustainable Governance Indicators

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SGI 2021 Special Survey on the Sustainability and Effectiveness of COVID-19 Crisis Management

It is today evident that the COVID-19 crisis marks a pivotal event that will have a lasting impact on the socioeconomic and political development of all countries worldwide for years to come. The pandemic is very likely to intensify a number of pre-existing trends, such as the digital transformation of economies, the increase of social tensions, and the political fragmentation and instabilities currently being felt in many countries. At the same time, the maturation of challenges such as socio-demographic change and the need to transform economies in a resource-efficient and environmentally friendly way requires swift, resolute and tailor-made policy actions rather than further hesitation and dithering on the part of the governments. Indeed, governments must now accomplish a dual feat: that of achieving the immediate recovery of their economies, while at the same time initiating a longer-term transformation toward a more resilient, sustainable and inclusive economic and social model. This arguably requires that "success" in overcoming this crisis be defined differently than was the case in previous crises.

This is reason enough for us to pause our annual monitoring of the general policy performance, democratic quality and governance capacities of the 41 OECD and EU countries for a year and instead, with the help of a special survey, take a closer look at the question of which factors are central to coping successfully with the manifold political, economic, health and social consequences of the coronavirus pandemic.

The focus of our study is accordingly the appropriateness of states' *crisis preparedness* and *crisis responses* across the various aspects of economic, health and social policy, as well as the areas of governance quality and democratic structures. To be deemed appropriate, a country's crisis preparedness and crisis response should be expected, and in fact observed to effectively alleviate the acute political, economic and social consequences of the pandemic over the short to medium term. However, it is equally important that crisis policy lays the foundations for sustainable policymaking, and itself takes key steps in this direction. This means that crisis measures must also take into account the planetary boundaries, as well as the welfare of both current and future generations, in the best possible way. Moreover, political-administrative decision-making processes must be guided by this longer-term goal, while also being conducted in an inclusive and transparent way. In the skillful combination of successful crisis preparation and response, we then see a key precursor to improved *crisis resilience*. In addition to effective crisis preparedness and response, we examine the degree to which states have created the institutional conditions for systematic *policy and organizational learning* both during and after the crisis. No comprehensive evaluation of this learning process will be possible until some time has passed since the crisis. However, in this study we take a first look at promising approaches and positive examples within our country sample.

In our "economic resilience" dimension, we compare states' performances on the basis of numerous indicators in the general categories of crisis preparedness and response but falling further into the following four policy areas: general economic and regulatory policy, labor market policy, budgetary policy, and research and development policy. Our "resilience of the welfare state" dimension encompasses a total of three areas: education policy, health policy and family policy. Taken together, the two dimensions offer a valuable look at the extent to which, on balance, countries have thus far succeeded in developing and sustaining policies that are equally effective and forward-looking (*resilience of policies*).

Realizing forward-looking policy solutions in turn depends strongly on the presence of a reliable and robust democratic framework and adherence to the rule of law. However, the restrictions on democratic civil liberties enacted during the pandemic, despite their underlying public health rationale, have severely tested the resilience of democratic processes and institutions. How well have checks and balances on the executive power functioned during the pandemic, both factually and de jure? How credible are the executive's assurances that civil liberties will be reinstated at the first opportunity? We examine these and other questions in our *resilience of democracy* dimension, using the criteria of media freedom, civil rights and political liberties, judicial review and informal democratic rules.

A government's capacity to respond quickly, effectively and prudently to crises in turn depends both on the existence of an appropriate portfolio of policies and the quality of the political-administrative crisis-management system. In assessing the thoroughness of crisis preparedness, it is thus crucial to ask whether the institutional and procedural provisions in place are swiftly able to identify nascent crises, whether the risks can be assessed and averted, and whether suitable expertise is available. We examine this aspect of preparation through the category of *executive preparedness*.

After the crisis is before the (next) crisis. However, the real test of a government's ability to act comes only during the crisis itself. How quickly and effectively can the government formulate appropriate countermeasures in a crisis? Does it regularly evaluate its measures and adapt them to new circumstances as necessary? How successful are its crisis communication efforts? And to what extent does the government manage to coordinate its policy measures nationally so as to be both locally appropriate and consistent across the country's territory? We address these and other questions in the *executive response* category. The interaction of preparedness and response, together with learning capacity, provides an important indication of the resilience of a state's institutional arrangements, which in turn has significant influence on a government's ability to act during a crisis (*executive capacity resilience*).

However, while effective governance derives in part from the government's observable capacity

to act during a crisis, it also requires that citizens, NGOs and other organizations be empowered to participate in the policymaking process, and that they can effectively inform and monitor government action on an ongoing basis. Thus, with the criterion of *executive accountability*, we examine the extent to which the government, during the coronavirus crisis, has made available data and information on the development of the pandemic, as well as on the countermeasures implemented, in a comprehensive, timely and clearly understandable manner. We also look at parliaments' de facto and de jure ability to oversee the government's work effectively. Taken together, the selected criteria in the categories of executive response and executive accountability can provide important initial indications regarding whether, on balance, states have to date succeeded in developing capacities for the sustainable and effective sociopolitical management of a comprehensive crisis (*crisis governance*).

Thus, the survey overall uses a total of 66 quantitative and 28 qualitative indicators, comprising 1,848 individual points of observation, to develop a detailed profile of the strengths and weaknesses of the highly developed industrialized world with regard to their crisis resilience. Our country sample consists of the following 29 OECD and EU countries.

Our analysis covers the period from November 15, 2019 to January 15, 2021. Thus, we include in our analysis both the period immediately preceding the discovery of the outbreak of the novel COVID-19 respiratory disease in Wuhan, China, on December 31, 2019, and the complete subsequent year, during which the disease spread, to the vast majority of countries around the world, often in multiple waves.

With the exception of **New Zealand**, **South Korea** and **Japan**, all countries in our sample were relatively severely affected by the pandemic during this period. Whereas, according to WHO data, there were only between 43 (New Zealand) and 355 (Japan) cases of COVID-19 infection out of every 100,000 people registered in the three countries by March 15, 2021 – about a year after the coronavirus outbreak was declared a global pandemic by the World Health Organization – the average for our country sample was 5,077 registered cases per 100,000 people. But there is a broad spectrum here too, ranging from 1,207 cases per 100,000 population in **Finland** to 13,096 cases per 100,000 in **Czechia** (WHO 2021). However, countries such as **South Korea** or **Japan** undoubtedly have very important prior experience in dealing with pandemics. This must be taken into account when assessing the findings.

FIGURE 96 **Survey Structure**

Resilience of Democracy

- Media Freedom
- Civil Rights and Political Liberties
- Judicial Review
- Informal Democratic Rules

Resilience of Governance

Executive Capacity Resilience

Executive Preparedness

- Crisis Management System

Executive Response

- Effective Policy Formulation
- Policy Feedback and Adaptation
- Public Consultation
- Crisis Communication
- Implementation of Response Measures
- National Coordination

Crisis Governance

Resilience of Executive Accountability

- Open Government
- Legislative Oversight

Resilience of Democracy

How well do democratic checks and balances function in a crisis?

Resilience of Governance

How forward-looking and effective is the political process of crisis management organized?

Resilience of Policies

How vulnerable are economic, health and social security systems in OECD and EU countries?

How effective and sustainable is their crisis response?

Source: Sustainable Governance Indicators

Resilience of Policies

Economic Resilience

Economic Preparedness

Economic Preparedness

- Economic Policy Preparedness
- GDP per Capita
- Gross Fixed Capital Formation
- Real GDP Growth Rate
- Energy Productivity
- Greenhouse Gas Emissions
- Material Footprint
- Renewable Energy

Labor Market Preparedness

- Labor Market Policy Preparedness
- Unemployment Rate
- Long-Term Unemployment Rate
- Youth Unemployment Rate
- Employment Rate
- Low Pay Incidence
- Employment Rates by Gender
- Involuntary Part-Time Employment
- Net Unemployment Replacement Rate
- Older Employment Rate

Fiscal Preparedness

- Fiscal Policy Preparedness
- Debt to GDP
- Primary Balance
- Gross General Government Interest Payments
- Budget Consolidation

Research and Innovation

- Research and Innovation Policy Preparedness
- Public R&D Spending
- Private R&D Spending
- Total Researchers
- Intellectual Property Licenses
- PCT Patent Applications
- Quality of Overall Infrastructure
- International Internet Bandwidth

Economic Crisis Response

Economic Response

- Economic Recovery Package
- Workplace Closing
- Change in GDP Growth Rate
- Change in Gross Fixed Capital Formation
- Fiscal Measures in Response to COVID-19 Pandemic

Sustainability of Economic Policy Response

- Recovery Package Sustainability

Labor Market Response

- Labor Market Policy Response
- Change in Unemployment Rate
- Change in Employment Rate
- Change in Youth Unemployment Rate
- Change in Older Employment Rate

Fiscal Response

- Fiscal Policy Response
- Change in Public Debt
- Change in Primary Balance

Research and Innovation Response

- Research and Innovation Policy Response

Welfare State Resilience

Welfare State Preparedness

Education System Preparedness

- Education Policy Preparedness
- Upper Secondary Attainment
- PISA Results, Socioeconomic Background
- Pre-primary Expenditure
- Low Achievers in all PISA Subjects
- PISA Availability of Effective Online Learning Platforms
- PISA Availability of Digital Learning Resources for Teachers
- PISA Quality of Schools' Internet Connection
- PISA Availability of Portable School Computers

Healthcare System Preparedness

- Health Policy Preparedness
- Spending on Preventive Health Programs
- Healthy Life Expectancy
- Perceived Health Status
- Out of Pocket Expenses
- Physicians
- Influenza Vaccination
- Daily Smokers
- Prevalence of Diabetes
- Nurses
- Intensive Care Beds

Families

- Family Policy Preparedness
- Childcare Enrollment, 0-2 Year Olds
- Childcare Enrollment, 3-5 Year Olds
- Fertility
- Child Poverty
- Female Labor Force Participation

Welfare State Response

Education System Response

- Education Response
- School Closures

Healthcare System Response

- Health Policy Response
- Excess Mortality
- Testing Policy
- COVID-19 Mortalities
- SARS-CoV-2 Infections

Family Policy Response

- Family Support Policies
- Change in Ratio of Female to Male Employment

- Qualitative Indicator
- Quantitative Indicator

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Methodological approach and evaluation

In addition to the breadth of its content and concepts, the SGI's extensive collection of qualitative data is a particular strength. Our analyses are on the one hand able to include what will later be the measurable output of certain measures or political decisions in the form of quantitative indicators. However, the qualitative indicators also enable us to examine the process itself, along with effects that are not directly expressed in quantitative data, but which are just as important for successful and sustainable crisis management.

The operationalization of the country-expert survey combines the strengths of qualitative surveys with the strengths of internationally comparable indices and scoreboards: On the one hand, the country reports contain nuanced, detailed and precise explanations of the status and development of the sample countries' policy performance, democratic quality and governance capacity. On the other, the uniform allocation of scores provides for comparability – both longitudinally, over a certain period of time, and on a cross-country basis, across the country sample. In this regard, when assigning the scores, it is particularly important to ensure that high standards are maintained for each of the data-collection quality criteria – validity, reliability and objectivity. The data is thus evaluated with reference to each of these standards both during and after collection.

With the help of statistical analyses, we determine the size of the variances in the scores awarded during the various calibration steps (see Fig. 95), both for individual countries and individual indicators. Large variances could indicate the possibility of ambiguities in the question, for example. As part of a quantitative measurement error analysis, we evaluated the following for each of the qualitative indicators: For how many countries do the first and second country experts provide different scores on the 10-point scale, and how often is this reflected in a categorical difference in the response category *(% of Disagreement ASM&REV)*? What is the average level of disagreement between the first and second country experts *(Average Disagreement ASM&REV)?* In how many cases, after the process of reaching consensus with the regional coordinator, is a score assigned that is beyond the score range initially chosen by the first and second country experts, and how often is a category other than that selected by the first two experts chosen *(% RC Out-Ranging ASM&REV)*? We also examined how often subsequent panel meetings (e.g., the calibration committee or the board meeting) agreed to make changes to scores in such a way that the results fell outside the range of scores or category assignments previously proposed by the three experts *(% SGI Board Out-Ranging Experts' Consensus)*. Finally, we examined the distribution of the score values. Serving as a proxy for this was the share of countries assigned to the most-used category (*Share of countries in most-used category*).

The individual analyses also aim to provide conclusions regarding the unanimity or ambiguity in assigning scores. For example, small average deviations could be a sign that the data is reliable, and thus of high quality. Larger deviations could in turn indicate that there is no uniform assessment of a country's performance with regard to a specific indicator, and thus imply greater uncertainty.

The results of the measurement error analysis show that the design of the indicators has enabled reliable and consistent assessments to be made. The first and second reviewers assigned different scores on the 10-point scale in 71% of cases. However, these disagreements on average resulted in scores reflecting different categories in just over one-third of cases (38%). The indicator producing categorical differences between the first and second country experts in the greatest number of cases is G10.1 (open government). The assessments made by the first and second experts for this indicator differed in 16 out of 29 cases. Overall, however, there is a gratifyingly high degree of agreement with regard to the experts' use of the response categories. The average point spread between the first and second experts' assigned scores is also rather low, at 1.18. The indicators P10.1 (recovery package sustainability) and P18.1 (international cooperation) show the highest point discrepancies between the first and second country experts, by a comparatively large distance. However, these do not result in categorical differences, as point scores on these indicators tend to cluster in the middle of the possible range. On average, the first and second country experts show a satisfactory level of agreement

FIGURE 97 **Measures of Uncertainty**

	10-Point-Scale	4-Point-Scale
Average Disagreement ASM&REV	1.18	0.41
% of Disagreement ASM&REV	71 %	38 %
% RC Out-Ranging ASM&REV	3 %	1 %
% Board Out-Ranging Experts' Consensus	6 %	2.56 %
Share of countries in most-used category	/	54.29 %

Source: Sustainable Governance Indicators

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across the indicators. Accordingly, the scores can be considered reliable. The relative infrequency of intervention by the board also suggests that the scores were well-balanced on both an intra- and interregional basis. The board selected final scores outside the range proposed by the country experts and regional coordinators for only 6% of the indicators using the 10-point scale, and for only 2.56% of those using a four-point scale. The regional coordinators' interventions earlier in the process were even more minimal. These reviewers selected scores outside the range proposed by the first and second country expert for only 3% of the indicators with 10-point scales, and for 1% of those with four-point scales.

The quantitative measurement error analysis was supplemented by various additional quality-control steps. For example, a survey was carried out among regional coordinators with the goal of identifying any systematic problems in understanding individual indicators. Each of the regional coordinators oversees several country experts, thus enabling them to identify any recurring difficulties.

In addition to the quality check for the qualitative data, both the quantitative data alone and the combination of the quantitative and qualitative indicators were subjected to statistical checks using of a principal component analysis (PCA) and a multicollinearity analysis (MCA). These calculations are used to identify potentially redundant variables. A variable can be classified as redundant and thus dispensable if it does not contribute any significant explanatory content to the issue at hand, which can be verified using PCA, or if it is statistically indistinguishable from other variables, which would be shown through an MCA.

The result of the PCA shows that the explanatory power of the indicators in the individual dimensions and categories is satisfactory. The range of variables that have significant explanatory power for the latent dimensions is reasonably wide. This shows that the individual indicators each contribute an additional gain in information, and that their inclusion in the model is therefore meaningful and useful.

While the PCA examines the relationship of individual variables to the target model, an MCA provides the ability to identify relationships within a data set. By running pairwise correlation tests for all indicators, it can be shown how variables are related to each other. This can be used to determine collinearity, for example. The multicollinearity analysis shows a balanced picture: Many indicators show correlations in the range of 0.3 to 0.7. This degree of correlation is to be expected for our object of study: It shows that the indicators are not completely independent of each other, but instead measure similar concepts or related issues. At the same time, their correlation is not so strong that we need to assume we have unintentionally overweighted a topic by including it multiple times, or that we have included multiple variables measuring very similar issues. In some isolated cases, stronger correlations of the order of more than 0.8 are present. This is increasingly the case for both labor market indicators on the one hand and for research and development indicators on

the other. For example, the indicators for private R&D spending and patent applications show a correlation coefficient of 0.88. Indicators for the overall unemployment rate and youth unemployment rates have a high correlation coefficient of 0.95. However, this is neither surprising in terms of content nor conceptually problematic: Both pairs of indicators flow into common criteria (respectively "research, innovation and infrastructure" and "vulnerability of labor markets"). Thus, although the pairs of indicators are empirically closely related, their inclusion does not create problems for the model or the analyses being drawn from them.

However, the combination of different levels of quality assurance checks does identify two indicators as problematic: indicator G 8.1, or international coordination, and indicator P18.1, or international cooperation. Even during the data-collection process, indicator G8.1 was classified as being in parts difficult to answer by the country experts and the regional coordinators. The PCA test also shows that it contributes very little explanatory power to the first latent dimension of its category (governance response). On the other hand, it is the only indicator that bears strongly on another latent dimension in the governance response category. The MCA shows that, across the board, this indicator has significantly lower correlations with the other indicators within its category than the other indicators have with each other. The combination of these results is a sign that it may be measuring something other than the intended subject area, and that it may not fit exactly into the designated category. For this reason, we have elected not to use this indicator in the data evaluation or in generating the index. In the measurement error analysis of the qualitative data, indicator P18.1 shows the most variation between the first and second country experts on the 10-point scale. In addition, the country experts' qualitative reports reveal difficulties in using uniform criteria to assess this question. For this reason, indicator P18.1 is not included in the analysis or evaluation.

The following additional indicators have been excluded from the aggregated index values, but are nevertheless evaluated qualitatively: P6, or social inclusion; P15, or social inclusion response; G9, or learning and adaptation; and G12 or independent supervisory bodies. G9 is an indicator designed to measure the capacity for policy and organizational learning. G12 is the category of independent supervisory bodies, which, along with the indicators for auditing and data protection, is intended to assess the effectiveness of audit offices and data protection authorities during the crisis. However, given the limited period of our observation (end date: January 15, 2021), it is not yet possible to provide systematic and internationally comparable statements and scores regarding these capabilities. We have therefore refrained from including these indicators in the "resilience of governance" dimension. For the indicators P6, or social inclusion, and P15, or social inclusion response, the country experts' qualitative reports also reveal difficulties in using uniform criteria to assess this issue. Thus, we are also excluding these two indicators.

Handling missing values

(Time series) data for several quantitative indicators are incomplete. These missing data points have to be replaced. To deal with the problem of missing values, the following methods have been adopted.

If data is unavailable for only some reporting years, the missing value is replaced by the value seen during the preceding year. For example, if for a given country no data is available for the year 2019, the missing value is replaced using data for the year 2018; if this also unavailable, the data for a year further back in time are used. If no earlier data is available, data for more recent years are used.

If for a given country there is no data at all for any point in the time series, the missing values are imputed using a full estimation maximum likelihood (FIML) approach, as recommended by the EU Commission (OECD/EU/JRC 2008). The FIML approach maximizes the sample log-likelihood function in order to estimate the regression parameters, meaning that the parameter values found would most likely produce the estimates from the sample data being analyzed. An FIML approach presupposes that the data follow a multivariate normal distribution, and that the missing data is either missing completely at ran-

dom (MCAR), indicating that "missingness" is not related to any other variable, or missing at random (MAR), indicating that it is possible to control for the factors of "missingness" (OECD/EU/JRC 2008). This approach was chosen for its merit of being a comprehensive, well-designed and scientifically recognized method of imputation. The FIML approach was first introduced by Hartley and Hocking (1971). FIML is easy to reproduce, since, compared to other procedures such as methods of multiple imputation, it requires fewer decisions in the calculation process, and produces deterministic results every time the estimation is run.

As a pre-imputation step, indicators and possible explanatory variables are investigated to ensure that the missing data are either MCAR or MAR, and thereby meet the necessary requirements for employing conventional imputation methods. Then, for the purpose of identifying suitable models, several models employing various regressor variables are run. Subsequently, a number of scientifically recognized goodness-of-fit and specification tests are performed: The models are checked for omitted variables, multicollinearity, outliers and influential observations, normality and heteroskedasticity. In addition, kernel density functions as well as probability-probability and quantile-quantile plots are examined. Extreme outliers responsible for violations of the tests and thereby leading to biased estimates are eliminated. Under the assumptions stated above, the ordinary least squares (OLS) estimator is a best linear unbiased estimator (BLUE), and the estimated parameters and predicted values should be identical with those the FIML estimator produces.

Once the best model is determined based on the results of the regression diagnostics, the model is re-run using the FIML approach. For this purpose, the *sem* command in StataR is used. Results are then back-checked, comparing them with the previous results of the OLS estimator. The predicted values for the countries with missing values are then used to impute the missing data.

Standardization and transformation

In order to ensure the comparability of quantitative and qualitative data, all quantitative indicators are standardized using a process of linear transformation onto a scale ranging from 1 to 10. On this scale, higher values indicate better results, and lower values worse results.

Standardization is achieved by adopting fixed boundary values to assure comparability over time and among various subgroups. The minimum and maximum values are calculated according to the so-called 1.5 interquartile range (IQR) method. The idea is to determine boundary values that will be universally valid for all SGI data waves included in a specific SGI publication, thus making it possible to compare indicator values generated in different data waves. Because the SGI is subject to ongoing refinement and development, these boundary values are calculated anew for each SGI publication. This approach has been chosen so as to account for the addition of updated data, retrospective corrections of formerly published data, changes in indicator definitions or data sources, and the addition of new countries.

The method is based on the IQR, the distance between the 75th and 25th percentile of each indicator. Upper and lower boundaries are calculated by adjusting the upper and lower bounds of the middle 50% of the observations by an amount equal to 1.5 times the interquartile range (1.5*IQR). We thus obtain the following minima and maxima:

$$X_{min} = P_{25} - 1.5 * IQR$$

$$X_{max} = P_{75} + 1.5 * IQR$$

where P25 denotes the 0.25 percentile (lower quartile) and P75 denotes the 0.75 percentile (upper quartile). The boundaries are calculated using long-term time series for all countries included in the SGI. The use of the 1.5 IQR method has the advantage of being less dependent on distribution, and ensures that the calculation of the boundaries is not distorted by extreme singular outliers in the data.

In cases where the boundaries calculated using the 1.5 IQR method are below or above natural boundaries of the variables (e.g., 0 or 100% for the poverty rate), they are replaced with the natural boundaries.

Based on the boundaries thus derived, for each SGI wave, all observations are subsequent-

ly transformed to a 1 through 10 scale. For this purpose, preliminary scores are first calculated using a linear transformation of the raw data based on the xmin and xmax values determined as described above. The formula differs depending on the nature of the indicator:

If higher values indicate a superior result (as, for example, with the employment rate):

$$\text{Score} = 1 + 9*(x-x_{min})/(x_{max}-x_{min})$$

If higher values indicate an inferior result (as, for example with the poverty rate):

$$\text{Score} = 10 - 9*(x-x_{min})/(x_{max}-x_{min})$$

This transformation process ensures that for each indicator, a higher score indicates a better result with respect to sustainable governance.

As the xmin and xmax values are calculated using the 1.5 IQR method, it is possible that the calculation of the preliminary scores will yield scores higher than 10 or lower than 1. In such cases, the preliminary scores are replaced with the maximum or minimum possible SGI score of 10 or 1, respectively. This means that in the final scores, values that lie outside the boundary values can no longer be distinguished.

Aggregation

The "resilience of democracy," "resilience of governance" and "resilience of policies" index scores, as well as those for the sub-indices, are derived by calculating the arithmetic means of the scores for their respective categories. For example, the resilience of policies score is derived by calculating the average of the subdimensions "economic resilience" and "welfare state resilience."

The individual category scores are derived by calculating the arithmetic mean of the criteria scores. For example, the "welfare state preparedness" score is derived by calculating the average of the criteria "education system preparedness," "healthcare system preparedness" and "families." For criteria composed exclusively of qualitative indicators, final scores are the arithmetic mean of those indicators. For criteria composed of both qualitative and quantitative indicators, the scores are weighted, with 50% of each criterion's score coming from the arithmetic mean of the qualitative indicator(s) and 50% from the arithmetic mean of the quantitative indicator(s).

Questionnaire

RESILIENCE OF DEMOCRACY

D 1.1 Media Freedom

***To what extent are the media independent from government and free in their coverage*?**

This question asks to what extent the media have been subject to government influence and the influence of actors associated with the government during the crisis. The question focuses on media regulation and government intervention, which includes addressing whether the country features legislation that prohibits the (deliberate) provision of misinformation and combines this with penalties of fines or imprisonment. The rules and practice of supervision should guarantee sufficient independence for publicly owned media. Privately owned media should be subject to licensing and regulatory regimes that ensure independence from government.

(9-10) Public and private media are independent from government influence and free in their coverage; their independence has been institutionally protected and fully respected by the incumbent government during the crisis.

(6-8) The incumbent government largely respects the independence of media, and media are free in their coverage. However, there have been occasional attempts to exert influence during the crisis.

(3-5) The incumbent government seeks to ensure its political objectives indirectly by influencing the personnel policies, organizational framework or financial resources of public media, and/or the licensing regime/market access for private media.

(1-2) Major media outlets are frequently influenced by the incumbent government as it promotes its partisan political objectives. To ensure pro-government media reporting, governmental actors exert direct political pressure and violate existing rules of media regulation or change them to benefit their interests.

D 2.1 Civil Rights and Political Liberties

To what extent is the government committed to granting and protecting political and civil rights – also in times of crisis?

During the COVID-19 pandemic, some of these rights have been curtailed by the vast majority of states (e.g., right of assembly, freedom of religion, freedom of movement). How committed has the government been to a full restoration of these rights at the first possible opportunity? How proactive has the government been in its efforts to compensate for the restrictions placed on civil rights and political liberties? For example, has the government provided a clear and transparent timetable based on a set of criteria outlining how long the emergency regulations would apply? Has it provided a clearly defined end to such regulations? This might involve providing a step-by-step plan for lifting or relaxing restrictions in ways commensurate with scientific findings and data. Have the restrictions placed on freedoms and rights been necessary and proportionate? Have the penalties for the violation of regulations been necessary and proportionate? And have citizens continued to have access to legal recourse for the violation of their rights?

(9-10) All state institutions seek to grant and effectively protect political liberties and civil rights.

Some of these rights have been restricted during the crisis, but the government's commitments to lifting these restrictions at the first possible opportunity are very credible.

(6-8) All state institutions for the most part grant and protect political liberties and civil rights. Some of these rights have been restricted during the crisis, but the government's commitments to lifting these restrictions at the first possible opportunity are mostly credible.

(3-5) State institutions grant and protect political liberties and civil rights, but these rights have been regularly infringed upon in practice, and there is little or no active and credible effort to lift these restrictions.

(1-2) The COVID-19 pandemic is being exploited to place permanent restrictions on political liberties and civil rights.

D 3.1 Judicial Review

To what extent have independent courts controlled whether the government and administration act in conformity with the law throughout the COVID-19 pandemic?

This question examines how well the courts can review actions taken and norms adopted by the executive during the crisis. To what extent was judicial review curtailed in practice (e.g., through restrictions on the right to assembly, contact restrictions) and officially (e.g., through the declaration of a state of emergency and the right to issue decrees)? How quickly have the courts been able to react to new laws?

(9-10) Independent courts have effectively reviewed executive action during the crisis and ensured that the government and administration act in conformity with the law.

(6-8) Independent courts have usually managed to control effectively whether the government and administration act in conformity with the law.

(3-5) Courts are independent, but often fail to control effectively whether the government and administration act in conformity with the law.

(1-2) Courts are not independent from the government and fail to control effectively.

D 4.1 Informal Democratic Rules

To what extent does party polarization undermine the ability to enable cross-party cooperation in crisis management?

In a democratic setting, competition between parties is necessary if citizens are to have choices among several political options, while extensive party polarization can impede the ability to build compromises and even paralyze the political system. The question assesses the extent of party polarization in government and the legislature and whether this poses an obstacle to enabling cross-party cooperation in policymaking and implementation. The ability to build consensus and cross-party cooperation is particularly important in times of crisis. Cross-party consensus on measures strengthens public confidence in the measures, which is crucial to their success and public compliance. Cross-party consensus also prevents the measures from being subject to strong politicization during their implementation, which can undermine their impact.

(9-10) Party polarization is not an obstacle to policymaking and the coordination and implementation of crisis response measures.

(6-8) Party polarization is a minor obstacle to policymaking and the coordination and implementation of crisis response measures.

(3-5) Party polarization is major obstacle to policymaking and the coordination and implementation of crisis response measures.

(1-2) Party polarization leads to gridlock.

RESILIENCE OF GOVERNANCE

Category: Executive Preparedness

G 1.1 Crisis Management System

What was the quality and capacity of crisis management systems in the country at the outbreak of the crisis?

Effective crisis management depends on the pre-existing crisis management system in place and its capacity to detect and monitor an incipient crisis through an effective early-warning system, appropriate risk assessment mechanisms and relevant expertise. The allocation of competences among involved agencies as well as their independence, openness and authority are also important. Please address as well the existence of updated pandemic plans, regular plan implementation drills and whether or not the country's national stock of personal protective equipment (for medical personnel and citizens) is adequate.

(9-10) The crisis management system was well prepared for the outbreak of the COVID-19 pandemic. Independent as well as open expert-based institutions were in place with the appropriate capacity and expertise to detect and monitor the crisis, as well as warn the government. An updated pandemic plan was in place, drills were held regularly, and the country featured a national stock of personal protective equipment.

(6-8) The crisis management system was generally well prepared for the outbreak of the COVID-19 pandemic. Independent as well as open expert-based institutions were in place with the appropriate capacity and expertise to detect and monitor the crisis, as well as warn the government. A pandemic plan was in place, but drills were not held regularly, and protective protective gear availability was limited to medical workers.

(3-5) The crisis management system was prepared for the outbreak of the COVID-19 pandemic. Institutions were in place to detect and monitor the crisis, as well as warn the government – however with limited independence, expertise and capacity. The pandemic plan was outdated, had not been subject to drills for many years and access to protective gear was very limited.

(1-2) The crisis management system was not prepared for the outbreak of the COVID-19 pandemic. No independent, expert-based institutions with appropriate capacity were in place to detect and monitor the crisis, as well as warn the government. The country did not have a pandemic plan, no drills were held, and protective gear was not available.

Category: Executive Response

G 2.1 Effective Policy Formulation

Did the government respond immediately, with credible and effective policies, to mitigate the crisis?

The swift formulation of a credible, effective and coherent response to the COVID-19 pandemic is essential for sustainable crisis management. Responding to the pandemic also requires the input of expert advice from medical experts, virologists and/or epidemiologists. The same is true with regard to the economic and social impact of the crisis, which requires the input of expert advice from economists and other social scientists. In your assessment, please also elaborate on (1) whether the circle of experts was sufficiently open to new members, and (2) to what extent the government succeeded in balancing different expert opinions.

If the government responded quickly, but with little credibility and only with declarations of intent, please assign a low score (range 3-5) on this item. Similarly, if the government was slow to respond but delivered reasonably coherent and viable policies, a low score (range 3-5) should be given for this item.

(9-10) The government was quick to formulate coherent and viable COVID-19 response policies that are informed by expert advice.

(6-8) The government was rather quick to formulate COVID-19 response policies that were broadly coherent and viable and were, for the most part, informed by expert advice.

(3-5) The government was hesitant to formulate COVID-19 response policies, and the policies were not particularly coherent or viable and only loosely coupled with expert advice.

(1-2) The government formulated COVID-19 response policies at a late date into the crisis that were inconsistent, not viable and which ignored experts' advice.

G 3.1 Policy Feedback and Adaptation

To what extent does the government assess the effectiveness and efficiency of its crisis response measures?

The focus of this question is the ability of the government to regularly assess if measures require adaptation in order to combat the COVID-19 pandemic and mitigate its social and economic impact. Sustainable crisis management involves the ability to respond in real time to the changing circumstances of a pandemic, including infection rates. It also requires being able to gather information and knowledge on the impact and appropriateness of implemented measures as well as the institutional capacity to manage such measures. Please comment on the frequency and quality of policy feedback and policy adaptation.

(9-10) The government frequently assesses its COVID-19 response and adapts measures when circumstances or the available body of expert knowledge changes.

(6-8) The government regularly assesses its COVID-19 response measures and, most of the time, adapts measures when circumstances or the available body of expert knowledge changes.

(3-5) The government sometimes assesses its COVID-19 response measures and occasionally adapts measures when circumstances or the available body of expert knowledge changes.

(1-2) The government does not assess its COVID-19 response measures and does not adapt measures when circumstances or the available body of expert knowledge changes.

G 4.1 Public Consultation

To what extent does the government consult with societal actors in preparing its policy response?

This question assesses how successfully the government consults with societal actors such as trade unions, employers' associations, leading business associations, religious communities, and social and environmental interest groups in preparing its policy response. Successful consultation is conceived here as an exchange of views and information (beginning at an early stage of policy development and continuing through to policy implementation) that improves the quality of government's policy response and induces societal actors to support them.

(9-10) The government always consults with societal actors in a fair and pluralistic manner.

(6-8) The government in most cases consults with societal actors in a fair and pluralistic manner.

(3-5) The government does consult with societal actors, but its approach is often unfair and clientelistic.

(1-2) The government rarely consults with any societal actors.

G 5.1 Crisis Communication

Does the government actively communicate to the public and account for the rationale behind its response to the COVID-19 pandemic?

Consistent and proactive government communication is crucial. Governments should explain their policy measures and why specific measures have been chosen. This includes clear communication regarding which crisis assessment has informed selected policy measures, and their timelines. Good crisis communication effectively addresses uncertainties, misinformation and fosters public acceptance of the measures taken, and strengthens the legitimacy of steps taken. Transparent, proactive, encompassing, and ongoing crisis communication through a variety of channels (including social media) on the part of the government can sustain trust among citizens while enabling the government to assess the impact of measures taken. In your assessment, please also elaborate on the exact mode of communication, that is, to which degree (and how frequently) politicians and/or public health officials kept the public up to date on reliable information and shifts in policy.

(9-10) The government proactively and frequently communicates its assessment of the situation, consistently accounts for the rationale behind measures taken, and consistently states how long it anticipates the measures will be required.

(6-8) The government proactively and frequently communicates its assessment of the situation, often accounts for the rationale behind measures taken, and often states how long it anticipates the measures will be required.

(3-5) The government proactively and frequently communicates its assessment of the situation, sometimes accounts for the rationale behind measures taken, and sometimes states how long it anticipates the measures will be required.

(1-2) The government does not engage in proactive communication, does not account for the rationale behind measures taken, and gives no indication of how long it anticipates the measures will be required.

G 6.1 Implementation of Response Measures

Has the implementation of COVID-19 pandemic measures been swift, effective and impartial?

The swift, effective and impartial implementation of measures to contain the spread of the virus and soften the blow of its social and economic impact is crucial to sustainable crisis management. Swift and effective implementation requires the necessary administrative capacity as well as the political capacity and willingness to deal with vested interests that openly oppose the government's crisis measures. Administrative capacity for implementation includes available budgets and the availability of trained staff in the agencies that implement measures. It also requires that implementing authorities have the organizational competences and policy instruments they need to implement measures. For example, tracing apps or similar tools that facilitate the identification or tracing of individuals who have come into contact with those who have tested positive for the virus can support implementation and help authorities implement quarantine rules. Other markers of effective implementation include the availability of staff resources for monitoring infection rates, contact-tracing capacity and being able to prevent the misuse of emergency economic aid.

(9-10) The government implemented its COVID-19 response measures immediately after they were adopted. Implementation has been effective and impartial.

(6-8) The government implemented most of its COVID-19 response measures immediately after they were adopted. Implementation is mainly effective and impartial.

(3-5) The government implemented its COVID-19 response measures soon after they were adopted. Implementation is mainly ineffective and biased.

(1-2) The implementation of COVID-19 response measures has been delayed, ineffective and biased.

G 7.1 National Coordination

To what extent does the central/ federal government cooperate with regional and local government in order to ensure solidarity among subnational units, while empowering subnational government to act effectively and to develop varying, locally adapted policies?

This question explores the extent to which national decision-makers effectively cooperate with regional and local governments to tackle the public health, economic and social consequences of the COVID-19 pandemic. This implies that subnational governments are able to act effectively and to develop varying, locally adapted policies. At the same time, it is paramount that these policies are in line with the national regulatory framework.

At another level, it involves ensuring that the impact of regional and local policies is systematically assessed and then incorporated into the formulation, coordination and monitoring of policies across government. Communication across different tiers of government is critical. For example, are there new coordination platforms that enable the development of strategies and the coordination of their implementation?

(9-10) The government is able to shape and implement national collective efforts to mitigate the consequences of the COVID-19 pandemic. It can empower subnational governments to act effectively and to develop varying, locally adapted policies that are compatible with national policies.

(6-8) The government is largely able to shape and implement national collective efforts to mitigate the consequences of the COVID-19 pandemic. It can, for the most part, empower subnational governments to act effectively and to develop varying, locally adapted policies that are compatible with national policies.

(3-5) The government is to some extent able to shape and implement national collective efforts to

mitigate the consequences of the COVID-19 pandemic. Processes empowering subnational governments to act effectively and to develop varying, locally adapted policies that are compatible with national policies show deficiencies.

(1-2) The government does not have sufficient institutional capacities to shape and implement national collective efforts to mitigate the consequences of the COVID-19 pandemic. It does not have effective processes to empower subnational governments to act effectively and to develop varying, locally adapted policies that are compatible with national policies.

G 8.1 International Coordination

To what extent is the government capable of collaborating effectively with international efforts to address the public health, economic and social consequences of the COVID-19 pandemic?

This question explores the extent to which the government has the institutional capacity to contribute actively to international efforts to tackle the public health, economic and social consequences of the COVID-19 pandemic. This capacity is manifest in collective action and cooperation aimed at coordinating responses efforts. At one level, this requires institutional capacities to help shape and implement strategic frameworks for such international efforts. An indication of such capacity might be the existence of appropriate interministerial coordination groups with leadership from centers of government.

At another level, it involves ensuring that the impact of national policies on these global challenges are systematically assessed and then incorporated into the formulation, coordination and monitoring of policies across government. On both levels, communication with the legislative branch and domestic stakeholders is critical.

(9-10) The government is able to shape and implement international collective efforts to mitigate the consequences of the COVID-19 pandemic. It can ensure coherence in its national policies and that they are harmonized with international policies.

(6-8) The government is largely able to shape and implement international collective efforts to mitigate the consequences of the COVID-19 pandemic. Existing process enabling the government to ensure the coherence of its national policies and their harmonization with international policies are, for the most part, effective.

(3-5) The government is partially able to shape and implement international collective efforts to mitigate the consequences of the COVID-19 pandemic. Processes designed to ensure the coherence of national policies and their harmonization with international policies show deficiencies.

(1-2) The government does not have sufficient institutional capacities to shape and implement international collective efforts to mitigate the consequences of the COVID-19 pandemic. It does not have effective processes to ensure coherence in national policies affecting progress.

G 9.1 Learning and Adaptation

Does the government evaluate the efficiency and effectiveness of the crisis management system? Does it reform its system in order to improve its preparedness?

Sustainable crisis management requires the ability to learn from past experience and to assess demands for change that can improve the resilience of the crisis management system and executive governance. The COVID-19 pandemic has exposed strengths and weaknesses in all countries, both in terms of vulnerability and resilience. With a view to future pandemics or further waves of COVID-19, countries should take a systematic approach to learning from their and others' experiences. This question focuses on the extent to which the government evaluates its crisis management system and thus addresses the government's evaluative and learning capacity.

(9-10) The government systematically evaluates the capacity of its crisis management system and has initiated reforms accordingly.

(6-8) The government evaluates, for the most part, the capacity of its crisis management system and has initiated some reforms to enhance its preparedness.

(3-5) The government selectively evaluates the capacity of its crisis management system and has not initiated reforms to enhance preparedness.

(1-2) The government does not evaluate the capacity of its crisis management system and has not initiated reforms to enhance preparedness.

Category: Resilience of Executive Accountability

G 10.1 Open Government

Does the government publish information on the COVID-19 pandemic in a way that strengthens citizens' capacity to hold the government accountable during the crisis?

This question assesses whether or to what extent (diversity and detail of information, timeliness of publication, availability of retrospective time periods, relevance compared to demand) the government publishes data that allows citizens to hold the government accountable and how comprehensible the information is. Up-to-date infection rates and their temporal development, local distribution of infections, information on specific outbreaks, information on indicators upon which the government bases its risk assessment are key to comprehensive information and should be communicated in plain language. In addition to information on how the pandemic is unfolding, the government should also publish information on their crisis management policies.

(9-10) The government consistently publishes comprehensive data and information that is timely and accessible.

(6-8) The government generally publishes comprehensive data and information that is timely and accessible.

(3-5) The government periodically publishes limited data that is neither timely nor accessible.

(1-2) The government publishes (almost) no relevant information.

G 11.1 Legislative Oversight

Are members of legislature able to monitor government activity effectively during the crisis?

Please explain in more detail to what extent legislative oversight rights were in fact curtailed (i.e., de facto curtailment through restrictions on the right to assembly, contact restrictions) and officially curtailed (i.e., de jure curtailment through the declaration of a state of emergency and the right to issue decrees) during the crisis and whether the government made any credible commitments to ending restrictions. Which new specific parliamentary oversight mechanisms were set up during the crisis to ensure parliamentary continuity? How effective have they been?

(9-10) Members of the legislature have been able to monitor the actions of government effectively during the crisis.

(6-8) For the most part, members of the legislature have been able to monitor the actions of government effectively during the crisis.

(3-5) Members of the legislature have rarely been able to monitor the actions of government effectively during the crisis.

(1-2) Members of the legislature have not been able to monitor the actions of government during the crisis.

G 12.1 Auditing

Is the audit office in your country in a position to effectively assess and monitor financial risks associated with the government's policy response during the crisis?

Please explain in more detail to what extent the audit office in your country is in a position to effectively assess financial risks associated with the government's policy response during the crisis and effectively advocate sound fiscal performance management vis-à-vis the government. To what extent were audits curtailed in practice? How quickly could the audit office react to the new situation?

(9-10) The audit office has been able to effectively monitor the financial risks associated with the government's policy response during the crisis.

(6-8) For the most part, the audit office has been able to effectively monitor the financial risks associated with the government's policy response during the crisis.

(3-5) The audit office has rarely been able to effectively monitor the financial actions of the government during the crisis.

(1-2) The audit office has not been able to monitor the financial actions of the government during the crisis.

G 12.2 Data Protection

Is there an independent authority in place that effectively holds government offices accountable for handling issues of data protection and privacy – also in times of crisis?

Most countries have a data protection authority (or office/ commissioner/ authority for data protection or information). Please respond by referring to the country's functional equivalent.

The question assesses whether the country features a data protection authority at the national level and whether it has the capacities, structural and personnel resources to effectively advocate data protection and privacy issues vis-à-vis the government and to continue to do so during the crisis. To what extent was data potection curtailed in practice? How quickly and effectively could the data protection office react to the new situation?

(9-10) An independent and effective data protection authority exists, and it has the capacity to effectively advocate data protection and privacy issues vis-à-vis the government.

(6-8) An independent and effective data protection authority exists, but it has played a somewhat limited role during the crisis.

(3-5) A data protection authority exists, but both its independence and effectiveness have been severely limited during the crisis.

(1-2) There is no effective and independent data protection office.

RESILIENCE OF POLICIES

Category: Economic Preparedness

P 1.1 Economic Policy Preparedness

To what extent is economic policy in your country prepared to address growth and sustainability challenges?

This question evaluates the extent to which regulatory policies in place before the onset of the crisis prepared the country to pursue economic growth, even in the face of the pandemic. Evidence of preparedness might include the support of technological readiness and business sophistication. However, a country's economic regulatory framework must not be limited to the short-term increase of economic competitiveness. It must also create the basis for resource-efficient economic activity able to promote social well-being and economic empowerment in the future. Potential indicators include strategies to lower resource demands with constant output or to increase output with constant resource demands, as well as strategies that provide incentives for eco-innovation in business operations and eco-innovative behavior in society. The question therefore seeks a general assessment of economic competitiveness and resource-efficient economic activity before the crisis.

(9-10) Economic policy fully succeeded in creating a reliable regulatory framework. It contributed to the creation of an improved competitive position for the country and created incentives for sustainable development.

(6-8) Economic policy largely provided a reliable economic framework, contributed to the creation of an improved competitive position for the country, and created incentives for sustainable development.

(3-5) Economic policy somewhat contributed to providing a reliable economic framework and helped – to a certain degree – foster the country's competitive position and create incentives for sustainable development.

(1-2) Discretionary actions dominated economic policy, which has had a destabilizing effect on the economic environment. Coordination across economic policy institutions was limited or nonexistent. Economic policy generally failed in fostering the country's competitive capabilities and in providing incentives for sustainable development.

P 2.1 Labor Market Policy Preparedness

To what extent are labor market policies and institutions prepared to reduce unemployment, ensure employment security, and balance supply and demand on the labor market?

This question addresses the extent to which a government is prepared to reconcile the following objectives: sustainable unemployment reduction, employment security, balancing supply and demand on the labor market (e.g., skilled labor shortage) and incentives to enter the labor market. To assess labor market policy comprehensively, special emphasis should be placed on the positive or detrimental effects resulting from labor market regulation (e.g., dismissal protection, minimum wages, collective agreements) or indirectly from other policies (e.g., tax policies) and from the modus operandi of unemployment insurance. Several labor market policy tools have the capacity to cushion the negative impact of a crisis on the labor market. These include measures to provide protection at the workplace, income-substitution benefits for sick workers and their families, short-time work schemes, unemployment benefits to non-standard workers and/or efforts to promote the uptake of training in order to invest in the skills of employees during the economic downturn. Please comment on the availability and quality of these instruments and on the cost-effectiveness of the work of the employment agencies (sustainability of placement activities etc.).

Where possible, please refer to evidence supporting a causal relationship between the government's labor market policy and unemployment trends.

(9-10) Successful strategies ensure unemployment, employment insecurity and disequilibria in the labor market are not a serious threat.

(6-8) Labor market policies have been more or less successful in reducing unemployment, creating employment security, and balancing supply and demand on the labor market.

(3-5) Labor market policies have shown little or no significant success in reducing unemployment, creating employment security and in balancing supply and demand on the labor market.

(1-2) Labor market policies have been unsuccessful and have even effected a rise in unemployment.

P 3.1 Fiscal Policy Preparedness

How successful was budgetary policy – in the period immediately before the crisis began – in creating a sustainable situation for public finances?

Sustainable budgeting should enable a government to pay its financial obligations (solvency), sustain economic growth (growth), meet future obligations with existing tax burdens (stable taxes) and pay current obligations without shifting the cost to future generations (intergenerational fairness). Also of interest are the use and impact of budgetary institutions, such as debt limits and other fiscal rules that prevent excessive public debt. A transparent budget process with no or few subsidiary budgets would also be an important indication of fiscal sustainability. For example, is a specific program or measure part of the normal budget/ integrated into the budgetary cycle, or is it financed primarily from sources outside of the formal budget? Are there reliable burden-sharing arrangements (e.g., debt insurance, fund transfers) in place, and are they coordinated across government levels (i.e., between central and regional governments).

(9-10) Budgetary policy was fiscally sustainable, and effective budgetary institutions were in place prior to the crisis.

(6-8) Budgetary policy achieved most standards of fiscal sustainability, and functioning budgetary institutions were in place prior to the crisis.

(3-5) Budgetary policy achieved some standards of fiscal sustainability, and budgetary institutions were weak prior to the crisis.

(1-2) Budgetary policy is fiscally unsustainable.

P 4.1 Research and Innovation Policy Preparedness

To what extent does research and innovation policy support technological innovations that foster productivity and social innovations?

This question aims to determine whether a country's research and innovation policy is effective in driving basic and applied research among research institutions, supporting startups that transfer scientific output into products, and fostering productivity as well as social innovations. Does the country feature an agency or other institutions that promote and coordinate the development of (social) innovations that improve the country's global economic competitiveness?

(9-10) Research and innovation policy and organizations were very effective in supporting innovations that foster the creation of new products and enhance productivity.

(6-8) Research and innovation policy and organizations were largely effective in supporting innovations that foster the creation of new products and enhance productivity.

(3-5) Research and innovation policy were only partially successful in supporting innovations that foster the creation of new products and enhance productivity.

(1-2) Research and innovation policy has largely failed to support innovations that foster the creation of new products and enhance productivity.

Category: Welfare State Preparedness

P 5.1 Education Policy Preparedness

To what extent is education policy in the country prepared to provide high-quality, equitable education that benefits from efficiency in resource allocation – also in times of crisis?

This question assesses the extent to which a government's education policy facilitates high-quality learning for everyone with the most efficient allocation of resources across the different levels of education (e.g., preschool, primary/secondary, tertiary, etc.) and which seems able to ensure that this is maintained during a crisis such as a pandemic. Your response should focus on the following issues, irrespective of how the education system is organized: the contribution of education policy toward providing a skilled labor force, the graduate output of upper secondary and tertiary education, and equitable access to education. Please consider the extent to which the existing education infrastructure and both educator and student capabilities contribute to resilience. Are there learning platforms? To what extent have curricula been adapted in the recent past to reflect future skills and newer learning methods (e.g., project-based work and collaborative learning processes)? To what extent have schools been given the opportunity to experiment with new learning methods? How well developed is the digital hard- and software in schools? How developed are educators' and students' ICT literacy skills and levels? Are there efforts underway that target their further development? While the latter pertains to issues of fairness and distributive justice, it also has implications for a country's international competitiveness as unequal education implies a waste of human potential. Of the three criteria – quality, equity in access and efficiency in resource allocation – efficiency should be given less weight if the first two criteria are fulfilled.

(9-10) Education policy fulfills all the criteria.

(6-8) Education policy fulfills most of the criteria.

(3-5) Education policy fulfills only some of the criteria.

(1-2) Education policy does not fulfill any of the criteria.

P 6.1 Social Welfare Policy Preparedness

To what extent is social policy in the country prepared to foster people's participation in society – also in times of crisis?

Reducing the various risks of social exclusion is a core task of social policy. The prevention of poverty and the provision of enabling conditions for equal opportunity in society are essential elements of such a policy. This question focuses on the extent to which various policies have been successful in effectively reducing poverty and social exclusion for all groups in society before the crisis. Such policies include social assistance or basic income schemes, cash transfers, housing subsidies, earmarked financial support (e.g., school meals, at-home care facilities) or benefits in kind. In addition to poverty, please take into

account other dimensions of exclusion such as the experience of marginalization and the desire to be recognized as equal citizens when evaluating socioeconomic disparities.

(9-10) Social welfare policies are very effective in fostering social inclusion, and they ensure equal opportunities.

(6-8) For the most part, social welfare policies are effective in fostering social inclusion, and they ensure equal opportunities.

(3-5) Social welfare policies generally fail to ensure social inclusion and equal opportunities.

(1-2) Social welfare policies exacerbate unequal opportunities and social exclusion.

P 7.1 Health Policy Preparedness

To what extent is the healthcare system prepared to provide equal access to high-quality healthcare and disease protection – also in times of crisis?

This question aims to explore to what extent the existing healthcare system has been prepared to cope with a pandemic (e.g., in terms of its ability to provide equal access to high-quality healthcare and disease protection).

In addition to the existence of prevention policies (e.g., early detection and treatment, functioning disease management programs), the adequate availability of necessary resources should be evaluated. Were there enough test capacities (e.g., laboratories), intensive-care beds, ventilation devices, protective materials (e.g., disinfectants, masks) and personnel in place to deal with a pandemic?

(9-10) The healthcare system ensures that everyone has access to high-quality disease prevention and treatment.

(6-8) For the most part, the healthcare system ensures that everyone has access to decent-quality disease prevention and treatment.

(3-5) The healthcare system only partially ensures that diseases can be properly treated, and this applies only to a limited share of the population.

(1-2) The healthcare system does not ensure that diseases can be treated properly.

P 8.1 Family Policy Preparedness

To what extent is family policy in the country prepared to enable the combination of parenting with participation in the labor market – also in times of crisis?

This question focuses on the preparedness of the family support system to enable the combination of parenting with participation in the labor market – also in times of crisis. The family support system should ensure that no gender identity experiences an unfair distribution of responsibilities when parenting is combined with the labor market participation of one or both of the parents. Parents should be able to decide freely whether and when they want to take up or proceed with full- or part-time employment. Support for the pursuit of parenting and work among single parents in particular should be assessed.

(9-10) Family support policies ensure that parents are able to combine parenting with employment also during the crisis.

(6-8) Family support policies ensure that parents are somewhat able to combine parenting and employment.

(3-5) Family support policies provide limited opportunities for parents who want to combine parenting and employment.

(1-2) Family support policies force most parents to choose between parenting or employment.

Category: Economic Crisis Response

P 9.1 Economic Recovery Package

How timely, comprehensive and targeted were the measures of the economic recovery package?

This question aims to capture the appropriateness of the recovery package in terms of its timeliness, scope and accuracy. Was the scope of the measures sufficient to provide an economic stimulus and to support purchasing power, also in the longer run? In terms of scope, please do not limit your comments to the actual size of the recovery package

as a percentage of the country's GDP but address as well the extent to which the recovery package can be extended into the future. In terms of accuracy, please comment on whether policies in support of businesses are adequately targeted and delineated in ways, for example, that safeguard future-oriented jobs and competitive businesses. Were these measures guided by considerations of future growth potential? To what extent did the design of the measures prevent deadweight effects? A wide range of fiscal measures should be considered, including subsidies, transfers, tax deferrals, cash payments, corporate tax cuts, income tax measures, reductions in value-added taxes and excise duties. Cases in which measures have targeted special interest groups alone should be viewed critically. Measures that deliver deadweight effects or which take the shotgun approach are to be seen as negative. Where possible, please also refer to evidence indicating a causal relationship between a country's crisis response measures and its economic performance.

(9-10) The government has responded swiftly with a comprehensive recovery package that is adequate and targets the appropriate sectors and businesses in such a way as to effectively mitigate the negative economic consequences of the crisis.

(6-8) The government has responded reasonably quickly with a comprehensive recovery package that is broadly adequate and sufficiently targets the appropriate sectors and businesses in such a way as to help mitigate the negative economic consequences of the crisis

(3-5) The government has responded slowly with a recovery package that is largely inadequate and which does not sufficiently target the appropriate sectors and businesses in such a way as to mitigate the negative economic consequences of the crisis.

(1-2) The government responded too slowly with a recovery package that cannot mitigate the negative economic consequences of the crisis

P 10.1 Recovery Package Sustainability

To what extent were recovery packages used to leverage transformative opportunities in the transition toward a sustainable economy?

Ideally, stimulus packages should be anchored as much as possible in efforts to target net-zero-emissions, plans for a sustainable infrastructure, pricing (including carbon pricing, elimination of fossil fuel subsidies) and smart regulations (i.e., incentivizing eco-friendly behavior). Please comment on the extent to which the recovery packages were designed to leverage opportunities in energy transition (e.g., renewable energy, grid development), sustainable transport (e.g., electromobility, mass transit), sustainable cities (e.g., bicycle paths, transforming existing buildings into green buildings, green spaces) and to promote investment in biodiversity and natural capital (e.g., land restoration, forests and landscapes).

(9-10) The government's economic stimulus measures pursued the goal of a sustainable transformation of the economy in a very coherent fashion.

(6-8) The government's economic stimulus measures were very strongly oriented toward the goal of a sustainable transformation of the economy.

(3-5) The government's economic stimulus measures took little account of environmental and sustainability objectives. The aspect of a sustainable transformation of the economy played only a minor role.

(1-2) The government measures did not take sustainable development goals into account. The aspect of a sustainable transformation of the economy played no role at all.

P 11.1 Labor Market Policy Response

To what extent do the labor market policy measures taken effectively contribute to reducing the negative effects of the crisis on the labor market?

Please comment on and assess the extent to which labor market tools (e.g., short-time work schemes, unemployment benefits, training measures, income-substitution benefits for sick workers and their families) were introduced or updated and effective in cushioning the crisis's negative impact on the labor market. Please give particular attention to the extent to which there have been specific passive and active labor market policies for the most vulnerable groups during the crisis such as low-skilled and low-paid workers, single parents, older workers or the long-term unemployed. Where possible, please also refer to

evidence indicating a causal relationship between the government's crisis response measures and unemployment trends.

(9-10) The labor market policy measures taken ensure that the negative effects on the labor market are manageable.

(6-8) Labor market policies have been more or less successful in cushioning the negative effects on the labor market.

(3-5) Labor market policies have shown little or no significant success in stabilizing employment, creating employment security and in balancing supply and demand on the labor market.

(1-2) Labor market policies have been completely inadequate and/or have not mitigated the negative consequences of the crisis on the labor market.

P 12.1 Fiscal Policy Response

To what extent have budgetary policy measures, such as increasing spending and public debt, been guided by considerations of fiscal sustainability and future economic viability?

Expansionary fiscal measures and rising public debt make perfect sense for the duration of the crisis. When designing budgetary measures for the response, however, it is also important to take into account aspects of intergenerational justice and future economic viability. For example, do budgetary policy measures include tax breaks for families with children, and has the government made credible commitments regarding the termination of expansionary fiscal policies? If so, under what kind of post-crisis conditions? Please elaborate on whether the government has had a credible and clearly formulated exit strategy in cases where long-term and comprehensive payment obligations have been entered into. Are future-oriented investments in critical infrastructure given high priority? There should be transparency in the budgetary process and burden-sharing arrangements, and both should be sustainable. For example, is a specific program or measure part of the normal budget/ integrated into the budgetary cycle, or is it financed primarily from sources outside of the formal budget? Are there reliable burden-sharing arrangements (e.g., debt insurance, fund transfers) in place, and are they coordinated across government levels (i.e., between central and regional governments)?

(9-10) Budgetary response measures are transparent and guided by considerations of fiscal sustainability and intergenerational fairness. Future investments are given high priority.

(6-8) Budgetary response measures are mostly transparent and guided by considerations of fiscal sustainability and intergenerational fairness. Future investments are given high priority.

(3-5) Budgetary response measures are rather opaque, and considerations of fiscal sustainability and intergenerational fairness play only a minor role. Public spending is focused primarily on fostering consumption.

(1-2) Budgetary response measures are fiscally unsustainable and unfair in intergenerational terms. Public spending is aimed solely at fostering consumption.

P 13.1 Research and Innovation Policy Response

To what extent does research and innovation policy support the government's objectives of managing the COVID-19 pandemic and fostering social innovations?

Have there been special efforts and strategies to use research and development in delivering a coherent and effective response to the pandemic? Appropriate measures include the development of technical solutions such as a tracing app, research on vaccines and establishing vaccine production facilities. Have research budgets been fast-tracked and redirected? To what extent has the government sought to engage in new international research cooperations? Has the government introduced any special efforts and policy programs targeting the development of social innovations for the future handling of pandemics and other crises?

(9-10) The government invested heavily in research and innovation as well as coordinated strategic policy efforts in order to combat the COVID-19 pandemic and foster social innovations.

(6-8) The government invested in research and innovation and coordinated strategic policy efforts in order to combat the COVID-19 pandemic and foster social innovations.

(3-5) The government invested very little in research and innovation and did little to coordinate strategic policy efforts in order to combat the COVID-19 pandemic and foster social innovations.

(1-2) Investments in research and innovation are completely inadequate.

Category: Welfare State Response

P 14.1 Education Response

To what extent have education policy interventions in the country ensured a high-quality and equitable education system that benefits from efficient resource allocation – also throughout the COVID-19 pandemic?

During the COVID-19 pandemic, the closure of schools posed an important challenge to education policy. School closures might have had a negative impact on education system quality and the efficient allocation of resources across different education levels (preschool, primary/secondary, tertiary etc.). Please describe to what extent the education system has succeeded in ensuring equal and uninterrupted access to an efficient and high-quality education supply, even during the crisis. Your response and evaluation should focus on the following issues, irrespective of how the education system is organized: To what extent is schooling guaranteed, even during the crisis? In the context of a gradual reopening of a school or preschool, is there priority access to preschool care and school for the socioeconomically disadvantaged? Do students and pupils have access to hardship compensation (e.g., extended entitlement periods for financial aid or student loans, lowered/cut tuition or other fees). To what extent is the crisis also seen as an opportunity to rethink testing and teaching methods?

(9-10) Education policy interventions fulfill all the criteria.

(6-8) Education policy interventions fulfill most of the criteria.

(3-5) Education policy interventions fulfill only some of the criteria.

(1-2) Education policy interventions fulfill only one or none of the criteria.

P 15.1 Social Welfare Policy Response

To what extent do social policy responses to the crisis in the country foster people's participation in society?

Measures to contain the COVID-19 pandemic affect certain groups in society more strongly than others. Those particularly affected include – depending on the country – the solo self-employed, artists, the chronically ill, single parents, migrants or people in insecure employment. Most of these groups were already at greater risk of poverty and social exclusion before the crisis. Has the government pursued plans and measures that aim to mitigate social inequalities during the crisis? Did the government intervene with adequate and updated measures in the areas of social assistance or basic income schemes, cash transfers, housing subsidies, earmarked financial support (e.g., school meals, at-home care facilities) or benefits in kind? How effective and targeted were these measures to support groups that are particularly disadvantaged by the crisis?

(9-10) Social welfare policies are very effective in fostering social inclusion, and they ensure equal opportunities for disadvantaged groups are maintained, also during the crisis.

(6-8) For the most part, social welfare policies are effective in fostering social inclusion, and they ensure equal opportunities for disadvantaged groups are maintained, also during the crisis.

(3-5) Social welfare policies generally fail to ensure social inclusion and to combat growing social inequality.

(1-2) The lack of effective social welfare policies exacerbates unequal opportunities and social exclusion among disadvantaged groups.

P 16.1 Healthcare System Response

To what extent could the healthcare system respond quickly and implement suitable measures to fight the effects of the COVID-19 pandemic?

The COVID-19 pandemic has posed a particular challenge for health policy with regard to responding quickly and adequately to a changing body of scientific knowledge. Its capacity to do so

depends on the following resources: the ability to take this knowledge into account, the ability to mobilize additional staff, the ability to increase medical equipment supplies (e.g., intensive-care beds, and ventilator or testing equipment) needed to treat and diagnose patients, and having sufficient and adequate facilities for safe diagnosis and treatment. The assessment should also take into account the extent to which it was possible to balance regional imbalances in emergency measure supply and demand.

(9-10) The healthcare system was able to respond swiftly and appropriately to the crisis while providing the necessary resources.

(6-8) For the most part, the healthcare system was able to respond swiftly and appropriately to the crisis while providing most of the necessary resources.

(3-5) The healthcare system responded slowly and, for the most part, inadequately to the crisis and has struggled with providing the necessary resources.

(1-2) The healthcare system responded too slowly and completely inadequately to the crisis and has struggled immensely with providing the necessary resources.

P 17.1 Family Support Policies

To what extent has it been possible to achieve and maintain a fair distribution of job-related work, household work and parenting responsibilities between the partners during the crisis?

The crisis in several countries led to a resurgence of traditional roles.

In some countries, women have shouldered the largest share of the burden with regard to parenting and household work.

The indicator assesses whether updated family support policies ensure a fair distribution of this burden between the partners during the crisis. Examples include an extension of cash benefits (e.g., parental allowances, social assistance), an extension of benefits in kind (childcare) or an increase in the flexibility of existing parental leave legislation. Crisis response measures could, for example, include emergency childcare for families in which both parents participate in the labor market.

(9-10) Family support policies effectively ensure a fair distribution of responsibilities shouldered by families during the crisis.

(6-8) Family support policies largely ensure a fair distribution of responsibilities shouldered by families during the crisis.

(3-5) Family support policies hardly ensure a fair distribution of responsibilities shouldered by families during the crisis.

(1-2) Family support policies fail to ensure a fair distribution of responsibilities shouldered by families during the crisis.

P 18.1 International Cooperation

Has the government actively contributed to international efforts to fight the pandemic?

This question explores the extent to which the government actively and coherently engages in international efforts to fight the pandemic by demonstrating international solidarity through, for example, cooperation and financial support in the areas of vaccine development, delivery of medical equipment or the admission of sick persons from other countries.

(9-10) The government was highly credible as it demonstrated international solidarity in the fight against the pandemic.

(6-8) Most of the time, the government demonstrated international solidarity in the fight against the pandemic

(3-5) The government did not demonstrate international solidarity in the fight against the pandemic.

(1-2) The government not only failed to demonstrate international solidarity in the fight against the pandemic, it also undermined these efforts.

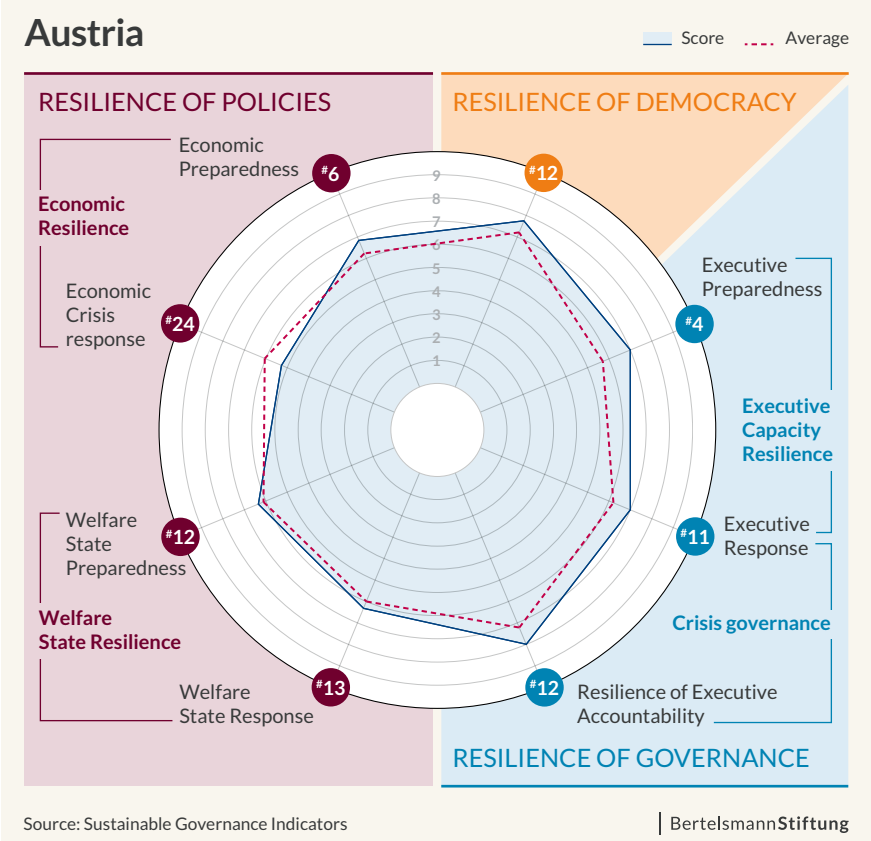
Country Profiles

Austria

Austria ranks 16th among the 29 countries on resilience of policies in scoring 6.19 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Austria ranking 12th along with Estonia and the Netherlands (score: 7.75). Following the collapse of the first Sebastian Kurz government and subsequent snap elections in September 2019, Austria was governed by an interim government led by Brigitte Bierlein between June 2019 and January 2020. The second Kurz administration governed from January 2020 until October 2021. Austria places 11th on resilience of governance (score: 7.33).

Austria's healthcare system performed in line with the average for EU member states during the coronavirus pandemic. As of mid-March 2021, the cumulative infection rate was 5,448 per 100,000 (rank: 16th) and excess mortality averaged 10.62% in 2020 (rank: 15th). After the first wave receded in late spring 2020, overconfidence led to the lifting of most government restrictions, which ultimately fueled a second wave in October and the reimposition of restrictions in November. Furthermore, deficits in the healthcare system became apparent early in the first wave as the government struggled to acquire sufficient testing kits. Laboratory capacity for DNA sequencing remains insufficient and the healthcare sector as a whole lags on digitalization. Effective contact-tracing and quarantining have likewise proved challenging to achieve.

Austria's vital tourism industry was particularly hard hit by the pandemic. An early outbreak in the ski resort Ischgl, in Tyrol, became a major hotspot of the pandemic in Europe, damaging the country's international reputation among tourists. The government's economic interventions included the Kurzarbeit scheme, guarantees for business loans and subsidies for lost business



revenue. These policies, however, generally failed to proactively address existing structural weaknesses (e.g., inadequate digitalization in education and healthcare) that could better prepare Austria for the next pandemic or combat long-term challenges, including the climate crisis. Alleviating unemployment will require the rapid deployment of reintegration and retraining programs.

Austria's coalition government partners, Kurz's Austrian People's Party (ÖVP) and the Greens, were successful in bridging their ideological differences in a common effort to fight the pandemic. Their coalition agreement granted the Greens a dominant role in environmental policymaking, while the ÖVP retained primacy over all other policy areas. Nonetheless, the Kurz administration failed to adequately prepare for a second wave of infections. Following the successful lowering of the infection rate in early summer 2020, the opportunity was missed to learn, adapt and prepare for the foreseeable increase in infections that would come in the fall. The pandemic has also exposed deficits in the division of governmental powers, as epidemiological responsibilities are split between the federal and regional governments. In 2021, the Kurz administration has struggled to coordinate an effective vaccination campaign, particularly for the elderly and persons without internet access.

The complete qualitative assessment by country experts Anton Pelinka and Rudolf Winter-Ebmer, and regional coordinator Reimut Zohlnhöfer is available at: sgi-network.org

Belgium

Belgium ranks 13th among the 29 countries on resilience of policies scoring 6.41 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Belgium ranking 15th long with Chile and Czechia (score: 7.50). Prior to the formation of the current government, Belgium was governed by a temporary minority government under Sophie Wilmès, as the May 2019 elections had resulted in a highly fragmented parliament and Belgium's political parties proved unable to form a cabinet. Since October 2020, the government has been headed by Alexander De Croo. Belgium places 20th on resilience of governance (score: 5.83).

Among European countries, Belgium was particularly severely impacted by COVID-19. By mid-2020, Belgium had the second-highest reported fatalities per capita worldwide. As of mid-March 2021, the cumulative infection rate exceeded the sample average, with 6,974 per 100,000 (rank: 24th), and excess mortality averaged 15.27% in 2020 (rank: 22nd).

Due to overconfidence in its healthcare system and being misadvised by its national public health institute, Sciensano, Belgium initially adopted a very sanguine approach. This initial lack of urgency was exacerbated by the absence of a full-fledged government and disagreements between Belgium's three regions (Brussels, Flanders and

Wallonia). When the political parties agreed in March 2020 to form a temporary government with special powers to combat the crisis, the pandemic was already at an advanced stage. With the first wave behind it, the temporary government's special powers were allowed to expire in June 2020. With only a caretaker government, Belgium was unable to draw lessons from the first wave and prepare for the second. Only in late September 2020, when a second wave had already begun, did the country's major political parties agree to form a coalition government. Ultimately, the government's response to the second wave – as to the first – was implemented too late.

When the temporary government did act to combat the first wave, it swiftly implemented a strict lockdown. The government assembled a team of scientific experts to guide its policymaking. Armed with the experience of the 2008 crisis, the government protected jobs. Within the healthcare system, hospital capacity was preserved at the expense of the elderly living in care homes. In addition, communication with medical personnel, contact-tracing and the procurement of medical supplies (including face masks) were inadequate. At the end of the first wave, Belgium reopened the economy too quickly, ultimately fueling a second wave.

The complete qualitative assessment by country experts Micael Castanheira, Guillaume Périlleux and Benoît Rihoux, and regional coordinator Nils C. Bandelow is available at: sgi-network.org

Canada

Canada ranks 12th among the 29 countries on resilience of policies scoring 6.46 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Canada ranking ninth along with Finland (score: 8.25). The Justin Trudeau administration's performance in terms of the resilience of governance places Canada seventh (score: 7.78).

The pandemic has unfolded heterogeneously across the vast country. As of mid-March 2021, the cumulative infection rate was 2,409 per 100,000 (rank: seventh) and excess mortality averaged 11.34% in 2020 (rank: 16th).

Canada began the crisis with unemployment at its lowest point in over a decade and strong job growth (mainly in the service sector). In response to the crisis, the government directed more than $300 billion to the healthcare and social welfare systems. Developed and deployed in collaboration with the provinces, government measures included direct support for businesses and subnational governments. Many of these measures were extended during the second wave. The Trudeau administration also announced a CAD 70–100 billion (about 4–6% of GDP) three-year stimulus package to drive economic recovery.

Canada was, nonetheless, ill-prepared for a pandemic due to inadequate na-

tional crisis response policies. In the absence of a sufficient policy framework to mount a coordinated national response, provincial governments pursued a patchwork of interventions. Provinces and local governments declared their own states of emergency, and closed schools and businesses. The Trudeau administration also initially underestimated the magnitude of the threat and missed opportunities to contain the coronavirus early on. Public health measures, including widespread testing and contact-tracing as well as mandates on wearing face masks and social distancing, were enacted too late. Similar policy failures occurred during the SARS-CoV outbreak in 2003. To prepare for the next pandemic, the government must invest in crisis preparedness, including in the Canadian healthcare system.

The complete qualitative assessment by country experts Lindsay Tedds and Andrew Sharpe, and regional coordinator Martin Thunert is available at: sgi-network.org

Chile

Chile ranks 28th among the 29 countries on resilience of policies scoring 4.74 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Chile ranking 15th along with Belgium and Czechia (score: 7.50). The Sebastián Piñera administration's performance in terms of the resilience of governance places Chile 17th (score: 6.06).

Chile was in the midst of a political crisis when the COVID-19 pandemic hit the country. Social unrest fueled by deep inequalities within Chilean society had been ongoing since October 2019. A referendum on whether to draft a new constitution was postponed to October 2020, during the height of the first wave. Ultimately, over 78% of voters supported the establishment of a constitutional convention, whose members would be elected in May 2021.

When the coronavirus was first detected in affluent neighborhoods of Santiago, local authorities instituted quarantines and increased capacity in the public healthcare system. These measures were somewhat successful in initially managing the pandemic. However, when the coronavirus spread to poorer areas, where conditions hindered effective social distancing, transmission accelerated. By the second wave, Chile's healthcare system was at risk of collapse. As of mid-March 2021, the cumulative infection rate was 4,688 per 100,000 (rank: 12th) and excess mortality averaged 17.69% in 2020 (rank: 25th).

The Piñera administration's crisis management has been inconsistent and insufficient for the enormity of this historic challenge, especially in light of the existing political crisis. Over the course of 2020, President Piñera dismissed nine ministers, including the health minister. Citizens' confidence in government dropped to historic lows. In December 2020, public approval of the government's performance was just 8%.

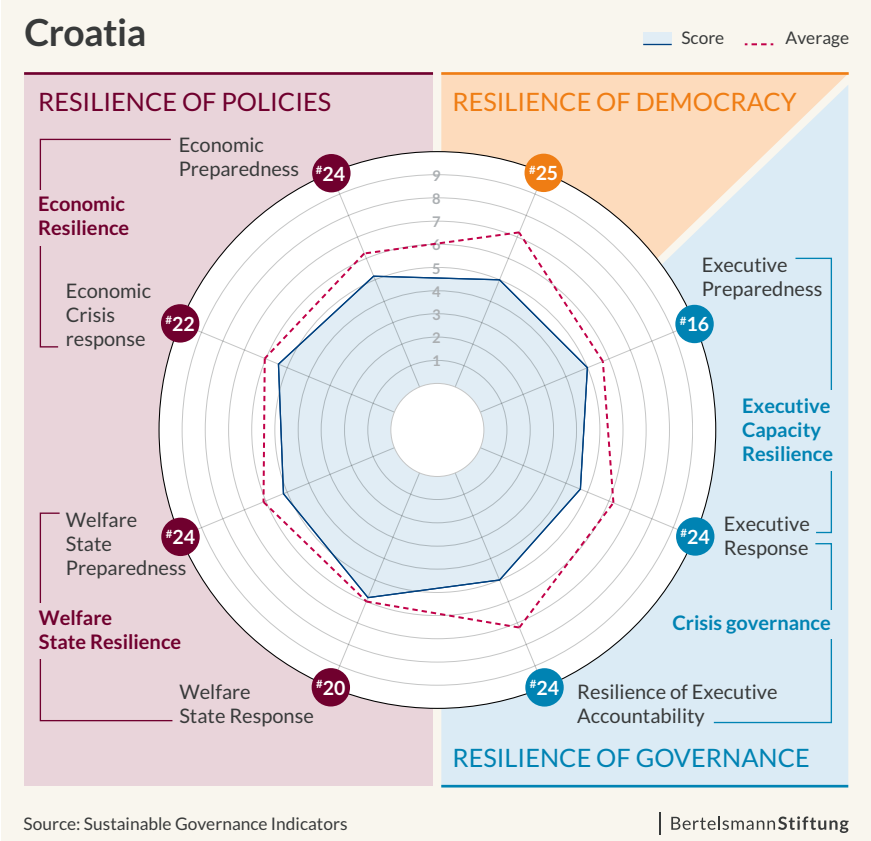
Over the previous 20 years, Chile's performance on economic indicators had been solid. Fiscal discipline by recent administrations had left the state with the budgetary resources to alleviate some of the economic impacts of the crisis. In 2020, Chile registered its largest fiscal deficit in 30 years. Notwithstanding these fiscal interventions, unemployment in 2020 rose 50% over 2019 to 11%. The COVID-19 crisis has further highlighted severe structural deficits and massive social inequalities – particularly in education, healthcare and social protection. For workers in informal employment, the crisis has further emphasized the urgency of transitioning this vulnerable labor force into the formal labor market, with improved conditions.

The complete qualitative assessment by country experts Fabian Klein and Claudia Zilla, and regional coordinator Martin Thunert is available at: sgi-network.org

Croatia

Croatia ranks 22nd among the 29 countries on resilience of policies scoring 5.39 out of 10. This historic crisis further challenged democratic norms and institutions in the country, with Croatia ranking 25th (score: 5.00). The Andrej Plenković administration's performance in terms of the resilience of governance places Croatia 25th (score: 4.89).

The Croatian government's response to the pandemic was initially rapid and effective. In March 2020, the government established a scientific council to advise on COVID-19, adopted among the strictest lockdowns in the European Union and authorized the civil protection authority to manage the crisis. As a consequence, daily infections declined to the single digits as early as the second half of April 2020 and remained low until June 2020. Regrettably, the Plenković administration has been less successful in containing the second wave of the pandemic. It failed to heed scientific advice, prepare its healthcare and education systems for an eventual resurgence, and reintroduce lockdown measures. In November 2020, Croatia had one of the highest daily incidence rates of any EU member state. As of mid-March 2021, the cumulative infection rate was 6,118 per 100,000 (rank: 17th) and excess mortality averaged 7.90% in 2020 (rank: 11th).



In delegating management of the crisis to the civil protection authority, the Plenković administration sidelined pre-established statutory procedures for controlling infectious diseases. Ultimately, the parliament was forced to retroactively enact several legislative amendments to codify the government's actions.

Croatia was experiencing a period of economic growth, falling unemployment and budget surpluses when the pandemic hit the country. However, the Plenković administration failed to utilize the boom years beginning in 2015 to implement critically needed reforms to

the healthcare system and public administration, among others. COVID-19 has exposed the vulnerability of the Croatian economy, of which tourism is a key driver and personal remittances from abroad accounted for nearly 6% of GDP in 2019. Nonetheless, despite one of the sharpest economic contractions in the European Union over the second and third quarters of 2020, the government prevented large-scale layoffs through furlough schemes. Entrepreneurs and the self-employed were also provided financial assistance to help weather the crisis.

In recovering from this crisis, Croatia has the opportunity to modernize its economy and public administration. The country has been allocated a record €22 billion in the European Union's Multiannual Financial Framework 2021–2027 and can expect additional funding through the European Union's COVID-19 recovery package. These offer the government an opportunity drive modernization while remaining compliant with the European Union's Stability and Growth Pact, a requirement for joining the euro area in 2023. Unfortunately, the Plenković administration presented an altogether incoherent and unambitious strategy for recovery in November 2020 that lacked key performance indicators. To effectively recover from this crisis, the government must improve its strategic planning as well as its policy formulation and implementation.

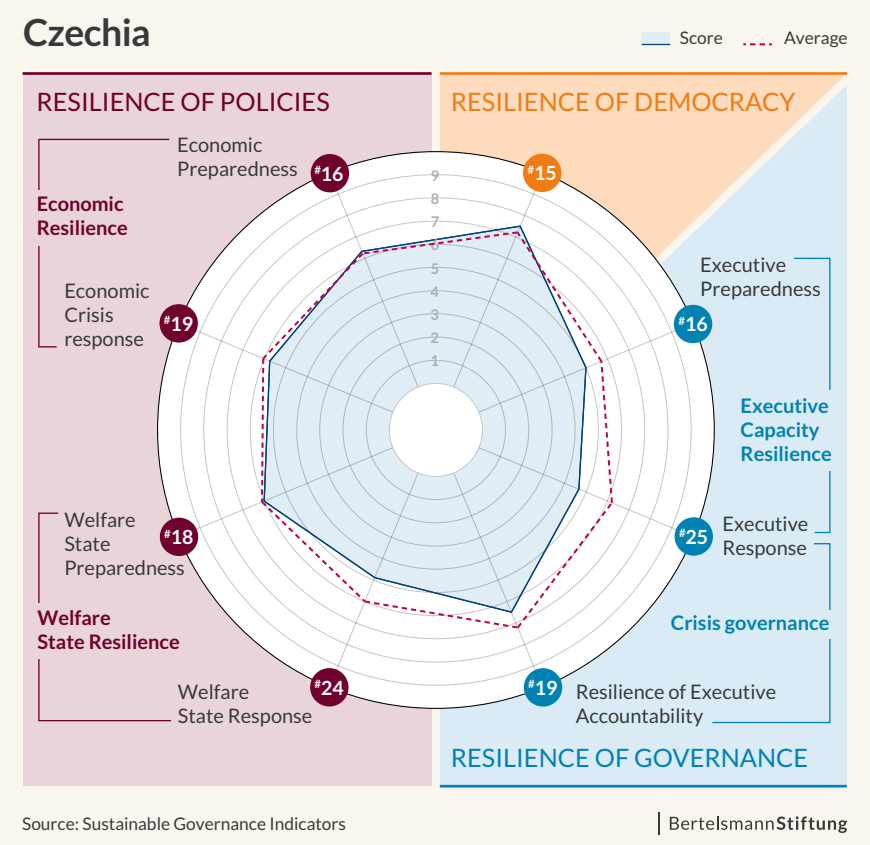
The complete qualitative assessment by country experts Kristijan Kotarski, Zdravko Petak and William Bartlett, and regional coordinator Frank Bönker is available at: sgi-network.org

Czechia

Czechia ranks 20th among the 29 countries on resilience of policies scoring 5.74 out of 10. This historic crisis challenged democratic norms and institutions in the country, with Czechia ranking 15th along with Belgium and Chile (score: 7.50). The Andrej Babiš administration's performance in terms of the resilience of governance places Czechia 22nd along with the United States (score: 5.39).

The Czech public healthcare system was able to cope with the first wave of the pandemic, despite insufficient medical staff and resources. With the first recorded COVID-19 case on March 1, 2020, the Babiš administration rapidly declared a state of emergency with stringent lockdown measures. These measures, regrettably, were gradually relaxed as early as mid-April, even though the rate of new infections remained high. By late June, recorded infections were again rising and, by early September, over 5% of those tested were infected. By the end of October, this rate had exceeded 30%, as the coronavirus spread evidently uncontrolled through the population, overwhelming the healthcare system. As of mid-March 2021, the cumulative infection rate was 13,096 per 100,000, the highest in our sample of 29 countries, and excess mortality averaged 16.34% in 2020 (rank: 23rd).

In contrast to this public health failure, Czechia's economy proved to be somewhat prepared for this



crisis. The sectors hardest hit by the pandemic comprise only a small share of economic activity. Manufacturing exports, for example, recovered quickly; the country has also played a minor role in manufacturing vaccines. Additionally, public debt was low before the pandemic (30.25% of GDP in 2019, rank: third) and thus could better absorb government spending on support measures. The Babiš administration increased public healthcare spending and implemented income supports for sectors forced to close in 2020 due to the lockdown measures. These measures ultimately increased the budget deficit by 5.15 percentage points in 2020.

Prime Minister Babiš founded and maintains control over his populist political party and major media outlets remain loyal to him. The second lockdown was delayed in order to bolster the prime minister and his party in the October 2020 regional elections. As a consequence, the crisis spiraled apparently out of control in the latter half of 2020. To successfully manage future crises, Czechia requires more effective and transparent structures to channel expert advice into government policy-making. Existing consultation structures are often tokenistic and fail to take into account a diversity of viewpoints. In addition, to be effective, consultations must give greater weight to trade unions, business associations and NGOs.

The complete qualitative assessment by country experts Petra Guasti, Zdenka Mansfeldová and Martin Myant, and regional coordinator Frank Bönker is available at: sgi-network.org

Denmark

Denmark ranks third among the 29 countries on resilience of policies scoring 7.46 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Denmark ranking 18th along with Italy and Japan (score: 7.25). The Mette Frederiksen administration's performance in terms of the resilience of governance places Denmark fourth (score: 7.94).

Source: Sustainable Governance Indicators

BertelsmannStiftung

The Frederiksen administration's strategy to manage the crisis has emphasized limiting coronavirus transmission through lockdowns and other contact restrictions. During the first and second waves, public health was given priority over other policy concerns. Overall, the Danish healthcare system has performed comparatively well under the strain of this historic crisis. Even so, the second wave saw a steep rise in infections, forcing hospitals to reduce nonessential procedures to free up beds for COVID-19 patients. As of mid-March 2021, the cumulative infection rate was 3,806 per 100,000 (rank: 10th) and excess mortality averaged a comparatively low 1.85% in 2020 (rank: second).

The lockdown restrictions imposed in March 2020 substantially reduced economic activity, although a corresponding rise in unemployment was avoided via a wage compensation scheme. With this intervention, the government pro-

vided extensive economic support to protect the incomes of employees and the self-employed. In the Danish tradition, economic interventions relied on numerous tripartite agreements and consultations between the three central components of the Danish labor market – labor organizations, employers' associations and government. Mid-2020 saw a lifting of restrictions and subsequent rapid economic rebounding. With the arrival of the second wave and the reintroduction of lockdown measures, the emergency economic supports were also reactivated. Given Denmark's comparatively moderate public debt (33.01% of GDP in 2019, rank: sixth), the government had sufficient space to accommodate these emergency interventions without jeopardizing long-term fiscal sustainability.

On March 12, 2020, the Danish parliament approved an emergency reform to the Epidemic Act, transferring unprecedented peacetime powers to the health minister and away from Denmark's five regional epidemic commissions. This allowed the Frederiksen administration to often bypass normal parliamentary oversight. Particularly the culling of 17 million mink in November 2020, in response to outbreaks at more than 200 farms, raised questions about the legal basis for the government's actions. In response, a political agreement was reached in December 2020 on a new epidemic act to be enacted in 2021. In future crises, the government should rapidly establish ad hoc expert groups to advise policymakers as well as increase transparency in public decision-making.

The complete qualitative assessment by country experts Kjeld Møller Pedersen and Torben Andersen, and regional coordinator Thurid Hustedt is available at: sgi-network.org

Estonia

Estonia ranks eighth among the 29 countries on resilience of policies scoring 6.56 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Estonia ranking 12th along with Austria and the Netherlands (score: 7.75). Estonia's governing coalitions prior to and as the pandemic hit were led by Jüri Ratas (Centre Party). Following a corruption scandal, however, Ratas resigned in January 2021 and a new coalition government was formed, led by Kaja Kallas (Reform Party). The Ratas and, subsequent, Kallas administrations' performance in terms of the resilience of governance place Estonia 16th (score: 6.22).

The Ratas administration showed an alertness to the advice of medical experts. With the arrival of the first wave, the government declared a two-month state of emergency and imposed restrictions. Overall, the Estonian healthcare system managed the strain of the first and second waves of the pandemic effectively. The health insur-

ance budget was boosted to cover rising costs. In contrast, long-term care facilities received little support. Meanwhile, public care facilities and home care workers were only supplied with personal protective equipment from the government's second procurement round. With infections again rising sharply in the first months of 2021, the Kallas administration introduced a strict lockdown, closing all schools, nonessential shops and most services. As of mid-March 2021, the cumulative infection rate was 6,490 per 100,000 (rank: 20th) and excess mortality averaged 3.19% in 2020 (rank: fifth).

Leading into the crisis, Estonia boasted robust economic growth and by far the lowest public debt in our 29-country sample, just 8.44% of GDP (2019). Given this strong fiscal position, the government could better absorb spending on support measures. Instead, the Ratas administration's economic response was slow and clientelistic. Porto Franco real estate development in Tallinn, for example, received a €39 million state loan, while the entire tourism sector received just €2 million. Labor market supports were disproportionately skewed toward employer subsidies; SMEs, farmers and the self-employed were left out. The government must become more agile when allocating emergency aid. In the first quarter of 2021, €400 million in relief remained unspent, even as many Estonian businesses struggled to survive.

The second Ratas administration, formed after the March 2019 elections, included the far-right populist Conservative People's Party, which secured the two ministries that proved instrumental in the government's economic response to the crisis. The governing coalition's approval of the Porto Franco loan ultimately led to the government's collapse and Prime Minister Ratas' resignation. In terms of the resilience of governance, the pandemic underscored long-running issues, including poor interministerial coordination and the government's struggles with implementing policy strategies.

The complete qualitative assessment by country experts Anu Toots and Allan Sikk, and regional coordinator Thurid Hustedt is available at: sgi-network.org

Finland

Finland ranks fourth among the 29 countries on resilience of policies scoring 7.08 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Finland ranking ninth along with Canada (score: 8.25). Yet, the first wave impacted on democratic processes, with municipal elections postponed from April to June 2020. In office since December 2019, following the resignation of the previous prime minister and his cabinet, the Sanna Marin administration's performance in terms of the resilience of governance places Finland 10th (score: 7.39).

The first COVID-19 case in Finland was recorded in the northern-most region Lapland in January 2020 and was one of the first recorded cases in Europe. Compared to most other countries in our sample, Finland was not hard hit by the pandemic in 2020, even when the second wave arrived in November. To maintain preparedness, the country's hospitals prioritized care for COVID-19 patients and scaled back non-urgent medical procedures. In March 2021, a third wave hit Finland. This was harder than the first wave in spring 2020. With infections rising again, the Marin administration again declared a state of emergency and instituted lockdown measures in high contagion regions of the country. As of mid-March 2021, the cumulative infection rate was 1,207 per 100,000 (rank: fourth) and excess mortality averaged 2.81% in 2020 (rank: third).

Finland was in a comparatively favorable position to meet the challenges posed by the COVID-19 pandemic. In spite of spending cuts over the past few decades, the Finnish welfare state maintained a comprehensive safety net. This included a relatively well-functioning public healthcare system. The healthcare system, nonetheless, lacked sufficient personal protective equipment for several months until late spring 2020.

The government has mitigated the crisis through measures to financially secure businesses, buffer workers against income losses and compensate falling public revenues for municipalities. Access to benefits was also extended to the self-employed. Notwithstanding, the economic consequences of measures to contain transmission have been considerable. Already before the crisis, austerity policies had resulted in cuts to social security benefits, increasing income and wealth inequalities. The crisis has prompted the government to review these past austerity commitments, with the possibility that fiscal policy will shift away from mechanical cuts in public spending. Fundamentally, the government's policy interventions during the crisis have focused on maintaining economic demand and compensating workers for income losses, rather than on encouraging workers to find new jobs. In addition, fiscal interventions to mitigate the crisis substantially increased the public deficit in 2020.

The Marin administration's crisis response benefited from the generally high level of public trust in government. Furthermore, opposition political parties did not challenge the government's interventions in 2020 – even though these entailed a centralization of power. Nonetheless, a clear tension between maintaining public health and civil rights remains. Under the Emergency Powers Act, all policy communication has been concentrated in the Prime Minister's Office.

The complete qualitative assessment by country experts Heikki Hiilamo and Johannes Kananen, and regional coordinator Thurid Hustedt is available at: sgi-network.org

France

France ranks 11th among the 29 countries on resilience of policies scoring 6.50 out of 10. This historic crisis further challenged democratic norms and institutions in the country, but they continue to demonstrate resilience, with France ranking 11th (score: 8.00). In office since May 2017, the Emmanuel Macron administration's performance in terms of the resilience of governance places France 18th (score: 5.94).

The Macron administration swiftly responded to the evolving crisis. A state of emergency was declared and later prolonged until at least June 2021. A first nationwide lockdown was announced in March 2020 and ultimately extended until May 2020. A second nationwide lockdown was announced in October 2020 and a third in April 2021. Notwithstanding, as of mid-March 2021, the cumulative infection rate exceeded the sample average, with 6,131 per 100,000 (rank: 18th), and excess mortality averaged 10.47% in 2020 (rank: 14th). Within France's healthcare system, a lack of preparedness was evident, with initially inadequate testing capacity and insufficient medical equipment (particularly face masks).

The government implemented policies combining economic recovery with stimuli for innovation, generally absorbing the economic and labor market shocks inflicted by the crisis. The crisis has, nonetheless, exposed weaknesses in an economy that relies too heavily on consumption and

services. GDP has plummeted compared to 2019 due to the collapse of the service and industrial sectors, including the aeronautics and automotive industries.

The government's COVID-19 response has been handicapped by systemic weaknesses. Macron's centralized, top-down governance – a feature of the Fifth Republic – along with insufficient regional, local and civil society engagement risked government decisions failing to reflect France's regional and social diversity. The country remains deeply divided between supporters and opponents of Macron's policies. Populist protests that began in November 2018 and continued through 2019 have continued to smolder, fueling distrust in government and the proliferation of conspiracy theories as well as alternate realities radically opposed to the government's policies. As a consequence, the crisis exploded at a time when distrust of government and the president had reached a peak.

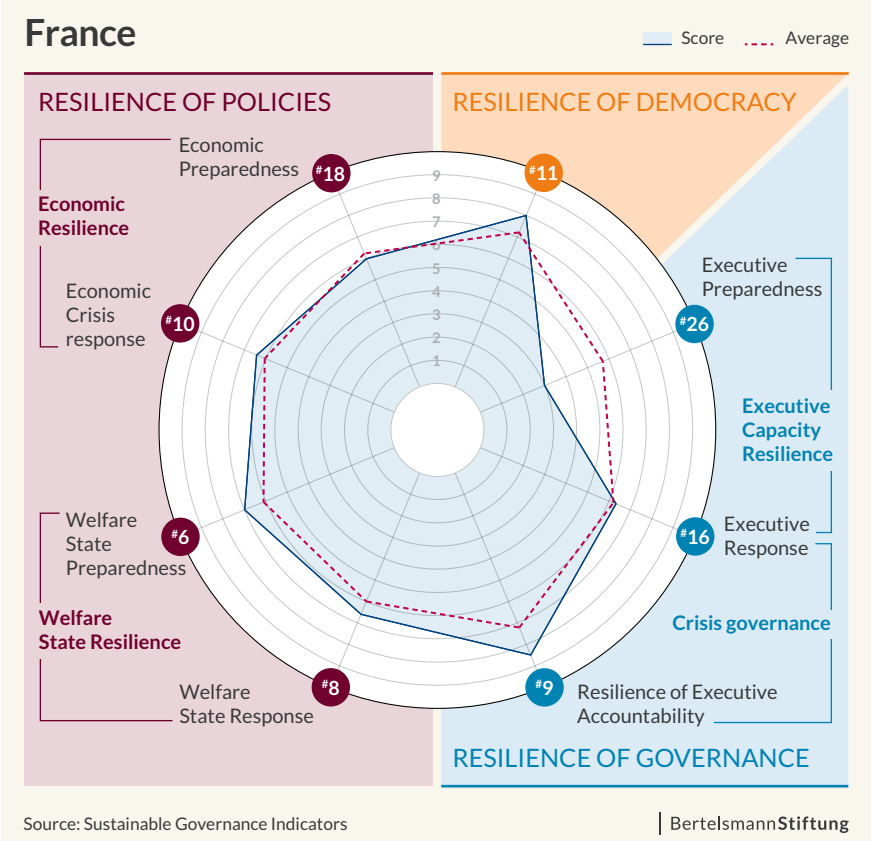
The complete qualitative assessment by country experts Yves Mény and Henrik Uterwedde, and regional coordinator Reimut Zohlnhöfer is available at: sgi-network.org

Germany

Germany ranks second among the 29 countries on resilience of policies scoring 7.66 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Germany ranking sixth along with Portugal (score: 8.75). The Angela Merkel administration's performance in terms of the resilience of governance places Germany fifth (score: 7.89).

Germany began the crisis with a growing economy, high employment and increasing public revenues. This economic state, combined with political consensus, enabled the government to rapidly advance comprehensive economic interventions of historic magnitude. These interventions notably included both short-term-oriented relief measures, and long-term-oriented policies to address climate change and promote digitalization. For example, the government announced a CO2 tax in May 2020 that went into effect in January 2021. As during the global financial crisis, Germany's Kurzarbeit scheme proved crucial for stabilizing the labor market. Already in April 2020, during the first partial lockdown, six million workers were receiving Kurzarbeit benefits.

The German healthcare system effectively coped with the first, second and third waves, providing care to the seriously ill. As of June 2020, the system featured the highest intensive-care beds (per 100,000 inhabitants) in our sample. In addition, hospital capacity was effectively coordinated to address regional shortages. Furthermore, the German pharmaceutical sector succeeded in developing an innovative vaccine against the coronavirus. Notwithstanding, testing capacity initially lagged behind other EU and OECD



countries; sufficient testing facilities were established only late in the second wave.

In comparison to many peers, digital transformation has lagged in Germany, hampering the country's ability to manage the crisis. In public administration, the education system and the otherwise successful healthcare system, digital transformation had been progressing anemically. The government struggled to introduce a digital solution for contact-tracing. In addition, the closure of schools and universities in response to the pandemic exposed the severe lack of digitalization. Significant rapid investments somewhat improved remote teaching capabilities when schools closed for a second time in December 2020.

The government's crisis response noticeably drew heavily on expert advice, in particular from epidemiologists. The country's lockdown measures were moderately strict, with a seven-week partial lockdown first imposed in March 2020. Government interventions largely absorbed the initial shocks of the crisis. As of mid-March 2021, the cumulative infection rate was 3,074 per 100,000 (rank: eighth) and excess mortality averaged 5.46% in 2020 (rank: seventh). Public support, initially broad and stable, increasingly faltered during the second and third waves. The second partial lockdown imposed in November 2020 was extended and expanded in 2021 with the third wave. Furthermore, government messaging on lockdown and, later, relaxation measures became increasingly incongruous, with the federal and state governments sending conflicting signals.

The complete qualitative assessment by country experts Friedbert Rüb and Friedrich Heinemann, and regional coordinator Reimut Zohlnhöfer is available at: sgi-network.org

Greece

Greece was unprepared to face a crisis on the scale of the COVID-19 pandemic, but ultimately responded effectively. It ranks 19th among the 29 countries on policy performance in preparedness and response to the pandemic, scoring 5.91 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Greece ranking eighth (score: 8.50). The July 2019 election had delivered a single-party majority to the parliament under the leadership of Prime Minister Kyriakos Mitsotakis. His administration's crisis governance places Greece ninth (score: 7.56).

The Mitsotakis administration effectively implemented a strict lockdown in spring 2020 in response to the first wave. Businesses, schools and universities were closed across the country, and public sector employees worked on rotation or from home. Whenever the incidence rate spiked, the government responded swiftly by "closing down" whole neighborhoods or villages. A second

Source: Sustainable Governance Indicators

BertelsmannStiftung

lockdown was introduced the following winter with less success, as the government weakened restrictions designed to prevent transmission in favor of gradually reviving the economy. At the same time, the government succeeded in hiring additional doctors and nurses, and doubling the number of intensive-care unit beds. These interventions enabled public hospitals to meet the increasing demand for medical care. As of mid-March 2021, the cumulative infection rate was 2,122 per 100,000 (rank: sixth) and excess mortality averaged 6.99% in 2020 (rank: ninth). Compared to other countries of similar population size, Greece avoided the worst potential outcomes of the pandemic.

Economic activity had just begun to revive from the nearly 10-year Greek government debt crisis when the coronavirus pandemic struck. As in other EU and OECD countries, coronavirus infections and mitigation measures have sharply depressed GDP growth (8.13% decline in 2020). Greece depends heavily on tourism, which effectively ceased in 2020. In 2019, the tourism sector accounted for half of the country's economic growth, more than 10% of GDP and one-sixth of jobs. Within the labor market, employment shifted less in 2020 than in many countries, decreasing by 0.2 percentage points compared to 2019 (rank: third). This is a consequence of a series of economic policy measures, including subsidies for businesses, and the suspension of tax payments and social insurance contributions. The government also implemented welfare allowances for low-income households and the unemployed.

The extent to which the lockdowns will ultimately bankrupt Greece's small businesses, the backbone of the Greek economy, remains unclear. These businesses are particularly vulnerable, as they are frequently unable to secure loans from banks that are still risk-averse due to the high volume of nonperforming loans on their balance sheets (the highest among EU and OECD countries).

The Mitsotakis administration's performance in terms of the resilience of governance relied on continuous expert consultation. These experts, including epidemiologists, have essentially guided all crisis policy formation. Regional and local authorities have generally followed the central government's lead. The government's measures were also comprehensively communicated to the public and openly debated in the parliament.

The complete qualitative assessment by country experts Dimitros Sotiropoulos and Asteris Huliaras, and regional coordinator Roy Karadag is available at: sgi-network.org

Hungary

Hungary's healthcare, education and crisis management systems were already weak, leaving it particularly vulnerable to the COVID-19 pandemic. It ranks 27th among the 29 countries on policy performance in preparedness and response to the pandemic, scoring 4.75 out of 10. This historic crisis further undermined the country's already

broken democratic norms and institutions, with Hungary ranking 28th (score: 2.75). The Viktor Orbán administration's performance in terms of the resilience of governance places Hungary 28th (score: 3.00).

Though the Orbán administration showed some initial hesitation, once the pandemic approached Hungary's borders and neighboring countries began responding, a strict lockdown was imposed. These lockdown measures helped contain transmission during the first wave. In contrast, the second wave saw the government respond more slowly to rising infections. After a week of record-breaking hospitalizations and deaths in early November, the government reimposed more stringent lockdown measures. As of mid-March 2021, the cumulative infection rate was 5,426 per 100,000 (rank: 15th) and excess mortality averaged 8.05% in 2020 (rank: 12th).

Hungary's economy proved vulnerable to the pandemic, as it depends heavily on manufacturing cars for foreign brands and on tourism. Already in the first wave, the Orbán administration struggled to limit the economic and labor market impacts of the pandemic. Despite a substantial rise in unemployment, the government failed to raise unemployment benefits or, at least, extend the maximum period that people can receive benefits, which was already the shortest in the European Union. In September 2020, for example, half of the 323,000 unemployed received no government support.

Prime Minister Orbán and his Fidesz political party have exploited the crisis to redistribute resources to oligarchs close to the government and to further consolidate power. The Fidesz-controlled parliament approved emergency powers beyond those foreseen in the Hungarian constitution. The government has made heavy use of these powers to reduce the competencies and resources of municipalities, a stronghold of the political opposition. It has also reduced public financing for political parties to further weaken the opposition parties. The pandemic has likewise been exploited to limit access to government information and further restrict media freedoms. This confrontational approach and lack of transparency have increased public mistrust in government and its pandemic measures. As Hungary looks to recover from this crisis, there is grave risk that the current government will engage in electioneering via recovery spending. The post-pandemic recovery, bolstered by EU funds, is likely to further enrich Fidesz cronies. Such a short-term spending spree will, predictably, severely constrain future governments.

The complete qualitative assessment by country experts Attila Ágh and Jürgen Dieringer, and regional coordinator Frank Bönker is available at: sgi-network.org

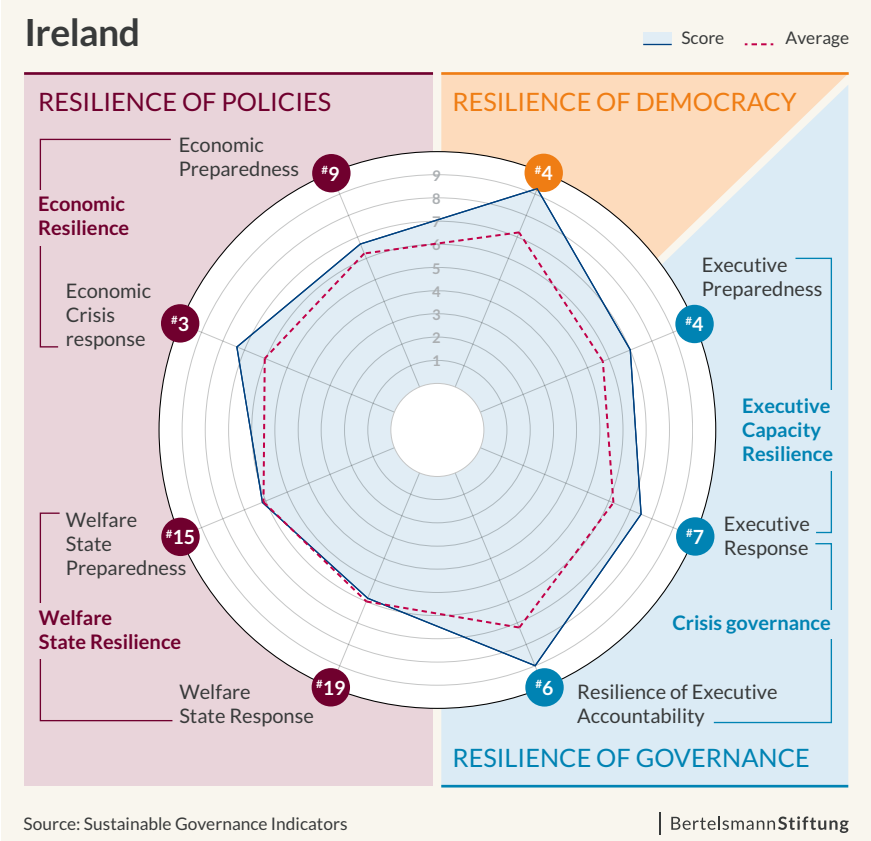
Ireland

Ireland ranks 10th among the 29 countries on resilience of policies scoring 6.51 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Ireland ranking fourth (score: 9.25). Following inconclusive parliamentary elections in February 2020, a coalition government was ultimately formed in June 2020 by the Green Party, and former rivals Fianna Fáil and Fine Gael. This governing coalition, led by Micheál Martin, and his predecessor Leo Varadkar's administration place Ireland sixth (score: 7.83) with regard to the resilience of governance.

Early interventions to contain the coronavirus succeeded in keeping the infection rate relatively low throughout 2020. Regrettably, the Martin administration's decision, against the advice of its health experts, to lift restrictions for Christmas combined with the arrival of more virulent strains have starkly altered Ireland's trajectory. Ireland began 2021 with one of the highest and fastest-growing infection rates. More people died with COVID-19 in the first months of 2021 than in all of 2020. As of mid-March 2021, the cumulative infection rate was 4,592 per 100,000 (rank: 11th) and excess mortality averaged 3.16% in 2020 (rank: fourth). More than half of all COVID-19-related deaths in 2020 occurred in care homes.

The Varadkar administration first introduced measures to contain the spread of the coronavirus on 12 March 2020, one day after the WHO declared a global pandemic; schools were closed until June 2020 and large gatherings were prohibited. The second lockdown was more protracted, beginning in December 2020 and extending into April 2021. Throughout the crisis, Ireland has aligned itself to policy advice from the European Center for Disease Prevention and Control as well as the WHO. Members of the government's National Public Health Emergency Team (NPHET) have played a vital, high-profile role in communicating public health messages and justifying restrictions. A 2021 Eurofound survey found the Irish to be the most willing to be vaccinated in the European Union, with 86.5% of respondents indicating that they would get vaccinated. The crisis has, however, highlighted shortcomings, including the country's two-tier healthcare system. The government ultimately struck a deal with private hospitals to temporarily accept public patients. The education system has also been challenged by the pandemic, with particularly higher education suffering from chronic underfunding even before the pandemic hit. Furthermore, the pandemic has highlighted major inequalities in Irish society. Workers in low-paid and often precarious jobs – including retail, healthcare and meat production – have been at far greater risk of infection and have disproportionately suffered losses in income.

The experience of the post-2008 crisis somewhat prepared the state and its institutions for another crisis. The Irish government swiftly implemented measures to provide income support to workers, including the self-employed. These contributed to a budget deficit



Source: Sustainable Governance Indicators

BertelsmannStiftung

for 2020 of approximately €19 billion. The government's COVID-19 interventions have extended into almost all aspects of daily life, marking a substantial resurgence in state intervention in one of Europe's traditionally most liberal economies. The Martin administration's strategy to rebuild from this crisis should receive systematic input from experts, and also consider Ireland's medium- and long-term economic, social and ecological challenges.

The complete qualitative assessment by country experts Barry Colfer and John O'Brennan, and regional coordinator Nils C. Bandelow is available at: sgi-network.org

Israel

Israel ranks 17th among the 29 countries on resilience of policies scoring 6.14 out of 10. This historic crisis further challenged democratic norms and institutions in the country, with Israel ranking 23rd along with the United States (score: 6.50). Israelis were called to the polls three times between April 2019 and March 2020. The Benjamin Netanyahu administration's performance in terms of the resilience of governance places Israel 24th (score: 4.94). In March 2021, the fourth election in two years ousted Netanyahu (Lukud party) and his coalition in favor of a rotation government led by Yair Lapid (centrist Yesh Atid party) and Naftali Bennett (right-wing New Right party); Bennett began serving as prime minister in June 2021.

The Israeli healthcare system proved unable to manage a pandemic of this magnitude. With just 4.62 intensive-care unit beds per 100,000 inhabitants in 2020, Israel would be among the countries most challenged by rapidly rising hospitalizations (rank: 27th). The Israeli military was mobilized to support epidemiological investigations, and conduct risk assessments as well as testing. In addition, the country entered the pandemic without up-to-date disease control legislation; existing British ordinances relating to public health emergencies were last updated before 1948. This legal vacuum led to the use of hasty, ad hoc policies, which sometimes lacked a sound public health rationale. In addition, the Netanyahu administration was unable to implement contact restrictions and social distancing in municipalities with ultra-Orthodox and Arab majorities, which became major hot spots for transmission. In part due to these limitations and generally poor crisis management, Israel entered a third lockdown in January 2021, as the rate of transmission soared. As of mid-March 2021, the cumulative infection rate among the general population was the second highest in our 29-country sample, with 9,315 per 100,000 (rank: 28th), and excess mortality averaged 8.93% in 2020 (rank: 13th).

The Israeli economy was in a relatively favorable state at the onset of the pandemic. In 2019, real GDP growth was among the highest in our sample, at 3.76% (rank: third). At the same time, however, the government was operating without a budget, as the parliament last succeeded in passing a bud-

get in April 2018. This lack of a budget weakened crisis management capacities, as medium- and long-term policy responses could not be properly planned.

Over the past decade, the education ministry has conducted annual emergency drills with the military, including those involving the remote-learning protocol. As such, teachers and students had opportunities to test procedures and software systems before the pandemic struck. Nonetheless, the transition to remote learning was bumpy as the protocol was designed for military conflicts rather than pandemics. The economic impacts of this pandemic have hit the self-employed and single parents severely. The Arab and ultra-Orthodox communities have also suffered disproportionally in this regard. In August 2020, the government intervened with a one-time direct payment of ILS 750 for every adult; families received up to ILS 3,000.

The Netanyahu administration showed mediocre crisis management capabilities throughout the pandemic. In particular, government actions appeared to show no policy learning from wave to wave. The fragility of successive coalition governments yielded a political crisis that persisted throughout the pandemic. This political crisis manifested itself in intergovernmental hostility, poor interministerial coordination, and inadequate cooperation with the business sector, external experts and civil society. Another consequence was exceptionally low public trust in government, which was reflected in poor compliance with social distancing measures.

The complete qualitative assessment by country experts David Levi-Faur and Sabine Hofmann, and regional coordinator Roy Karadag is available at: sgi-network.org

Italy

Italy ranks 26th among the 29 countries on resilience of policies scoring 4.96 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Italy ranking 18th along with Denmark and Japan (score: 7.25). In September 2019, Giuseppe Conte formed a coalition government of political parties intent on preventing a populist-right majority. The Conte administration's performance in terms of the resilience of governance places Italy 26th (score: 4.67). In January 2021, the centrist party Italia Viva withdrew from the governing coalition; lacking an absolute majority in the Senate, Conte resigned. In February 2021, Mario Draghi, former European Central Bank president, successfully formed a new coalition government.

Prior to the pandemic, the Italian healthcare system was regarded as providing high-quality care in general, particularly in the northern regions. It had, however, witnessed underinvestment since the 2008 global financial crisis, and had only partially replaced doctors and other medical personnel.

In February 2020, clusters of transmission were detected in the northern regions Lombardy and Veneto. With the coronavirus rapidly spreading, high hospitalization rates soon followed, overwhelming the healthcare system. A strict lockdown was implemented in March 2020 and maintained for nearly two months. As of mid-March 2021, the cumulative infection rate was 5,331 per 100,000 (rank: 14th) and excess mortality averaged 15.08% in 2020 (rank: 21st). For future public health crises, a nationwide mechanism must be established to rapidly shift critical resources between the country's regional healthcare systems.

When the coronavirus arrived in Italy, the country had not yet fully recovered from the 2008 global financial crisis. In 2019, real GDP growth was the second lowest in our 29-country sample, at 0.26%. The first, nearly two-month, lockdown saw almost all economic activity stop. In response, the government implemented a broad series of compensatory programs for businesses, workers and the self-employed. Most sectors of the economy were sustained by government-backed loans, subsidies and income support for workers. As restrictions were relaxed, the advanced and export-oriented manufacturing industry rebounded, but other industrial sectors and much of the service sector struggled. As the Draghi administration looks toward recovery from this crisis, public investments in infrastructure, but also reforms to active labor market policies, will be crucial.

The expansion of social welfare policies in response to the economically painful first and second lockdowns largely benefited already better protected workers. The impact of these measures on marginalized population segments already at greater risk of poverty have been more limited. Support measures were also expanded for families, which have traditionally received little attention from policymakers. Decree-laws in March, May and August 2020 and increased compensation for parental leave provided working families with children a "babysitter bonus" during school closures. In addition, the government provided low-income families funding for information and communication technology (ICT) devices, enhanced bankruptcy protections and introduced emergency income support for families without other protections.

After several initial missteps and scuffles with regional authorities, the Prime Minister's Office acquired an increasingly central role in managing the crisis. Through a series of decree-laws and 22 decrees (between February and December 2020), Prime Minister Conte centralized Italy's pandemic response. Opposition parties, but also some members of the governing coalition, bemoaned the lack of parliamentary consultation and oversight. Looking forward, future resilience in governance would benefit from predefining the competencies and responsibilities of the various levels of government (i.e., central, regional and municipal), particularly for public health emergencies as well as mechanisms for legislative oversight.

The complete qualitative assessment by country experts Maruizio Cotta and Roman Maruhn, and regional coordinator César Colino is available at: sgi-network.org

Japan

Japan ranks 15th among the 29 countries on resilience of policies scoring 6.27 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Japan ranking 18th along with Denmark and Italy (score: 7.25). The Shinzo Abe and, since September 2020, Yoshihide Suga administrations' crisis governance place Japan 12th (score: 6.94).

The first and second waves (March to early May 2020 and July to August 2020) of COVID-19 infections were comparatively mild. The third wave (from early November 2020) was more serious. As of mid-March 2021, however, the cumulative infection rate was among the lowest in our sample, 355 per 100,000 (rank: third), and excess mortality averaged 3.35% in 2020 (rank: sixth).

During the first wave, the government adjusted the law governing the handling of infectious diseases, created a high-level response center, initiated consultations with experts, declared a first state of emergency and passed two supplementary budgets. Notwithstanding, the COVID-19 response was hampered by hesitant decision-making and a lack of leadership from the central government.

Inadequate coordination between ministries, government and experts as well as central and regional authorities became a bottleneck. Within Japan's healthcare system, critical deficiencies included insufficient testing kits, intensive-care units and specialized medical professionals. With the third wave, a second state of emergency and another supplementary budget became necessary.

The success of the first state of emergency can be attributed more to the prevalence of prosocial behavior, high hygienic standards and the established use of face masks, than the government's nonbinding interventions. In addition, government interventions proved insufficient for vulnerable groups, including the poor, irregular workers and small businesses. The universal cash handout was not well targeted, nor were subsidies or loans for businesses. The crisis now threatens to exacerbate wealth and income inequalities, as welfare supports in Japan are rather meager and accepting public assistance is stigmatized.

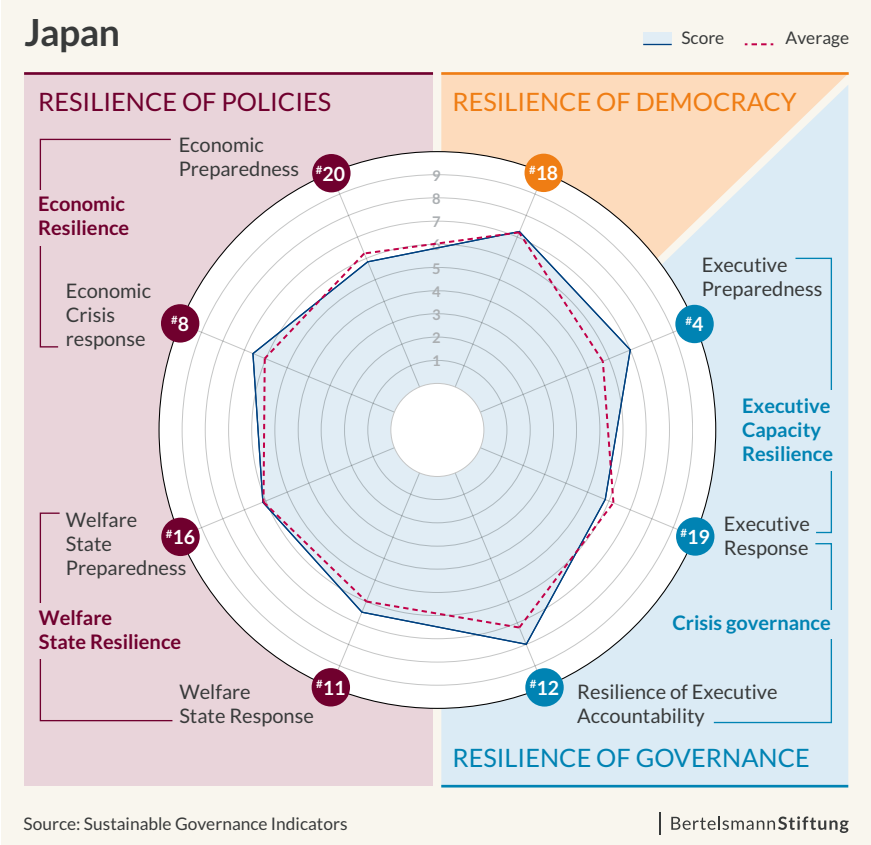
Fiscal and monetary interventions focused solely on short-term relief, rather than on propelling the desired economic transformations. The government's crisis measures generally failed to align with medium- and long-term strategic aims, including digitalization, decarbonization and smart globalization. Moreover, Japan entered the crisis with the highest government debt in our sample, 235% of GDP (2019). Given the added fiscal burdens brought on by the pandemic, the government's goal of balancing the primary budget by 2025 now appears unrealistic. Finally, with respect to the healthcare system, challenges to coordination between the various levels of government have handicapped the pandemic response.

The complete qualitative assessment by country experts Werner Pascha and Patrick Köllner, and regional coordinator Aurel Croissant is available at: sgi-network.org

Mexico

Mexico ranks last among the 29 countries on resilience of policies scoring 3.64 out of 10. This historic crisis further undermined the country's already weakened democratic norms and institutions, with Mexico ranking 26th (score: 3.75). The Andrés Manuel López Obrador (AMLO) administration's crisis governance places Mexico 29th (score: 2.94).

Among the EU and OECD countries, Mexico has been one of the hardest hit by the COVID-19 crisis. As of mid-March 2021, the cumulative infection rate recorded by the WHO was 1,680 per 100,000 (rank: fifth), but excess mortality averaged 50.04% in 2020 (rank: 29th). These official figures, however, differ enormously from those independently reported. For example, Reuters estimated that there were nearly 79 million infections and at least 1.7 million COVID-19-related deaths in Mexico by December 2020.



The Mexican healthcare system was insufficiently prepared for the pandemic and suffered from chronic underfunding. Government funding for epidemiological vigilance was reduced by 71% over the last decade. Three weeks after the first documented infection, staff of the Mexican Social Security Institute protested against the lack of personal protective equipment and other medical supplies; numerous other protests have occurred since. Between February 28, and August 23, 2020, 97,632 medical workers were infected by COVID-19 and in September 2020 more medical workers died in Mexico due to the pandemic than in any other country. The AMLO administration has announced plans to hire 50,000 medical workers; it also preordered vaccine doses for approximately 90% of the population. Mexico was among the first Latin American countries to begin its vaccination campaign and it had administered more than 12 million doses as of April 2021. Yet, the vaccination campaign was instrumentalized by the AMLO administration, which delegated coordination to regional delegates of the president's political party rather than to the health ministry.

The education system has also failed to adequately confront this historic crisis. Schools and universities were closed to curb the spread of the coronavirus, but the poor and those living in rural areas with little access to electricity or the internet have been excluded from online learning.

ALMO's populist governing style and autocratic tendencies have prevented expert-guided interventions. The country's leadership underestimated the threat posed by the pandemic. As the coronavirus spread, a lack of testing hindered tracking and contact-tracing. Government communications were inconsistent, and a lack of coordination between the national and state governments resulted in a patchwork of interventions. Leadership within the central government appeared unable or unwilling to draw on technocratic and scientific expertise. Meanwhile, state institutions too often lacked the political consent to act within their competencies.

The complete qualitative assessment by country experts Wolfgang Muno and Jörg Faust, and regional coordinator Martin Thunert is available at: sgi-network.org

Netherlands

The Netherlands ranks seventh among the 29 countries on resilience of policies scoring 6.63 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with the Netherlands ranking 12th along with Austria and Estonia (score: 7.75). The Mark Rutte administration's crisis governance places the Netherlands 14th (score: 6.72).

In response to the first wave, the Rutte administration implemented a successful "intelligent lockdown," in which the government recommended rather than mandated measures to contain transmission. The political leadership was guided by sound scientific expertise, which com-

municated openly with citizens, including about uncertainties. The Rutte administration's crisis governance relied heavily on scientific expertise from medical advisers (e.g., the Outbreak Management Team) as well as knowledge institutes and advisory agencies. Societal consultation with trade unions, business associations, teachers' associations and others was also intensified. Lamentably, the government's response to the second wave – which emerged more gradually – has been more disconcerted and underestimated the scale of the looming crisis. Furthermore, in contrast to the first wave, the Dutch parliament took a far more active role during the second wave. A special law was enacted in the fall of 2020 to restore democratic accountability to the government's emergency decrees; the law must be renewed every three months by the parliament.

The advanced state of the country's digital transformation along with its flexible education system helped it to better weather the crisis. Even so, existing inequalities among pupils and families deepened, with single-parent families particularly hard hit. The country's otherwise excellent healthcare system failed to adequately protect vulnerable elderly populations in care homes. Due to their relatively large size and poor crisis management, many care homes became epicenters for transmission, resulting in a high death toll among people over 75 years old. Persistent implementation problems frustrated attempts to increase the number of available intensive-care unit beds and trained nurses as well as supplies of personal protective equipment. Scaling up the test-and-trace capacities of municipal healthcare services likewise proved challenging. As of mid-March 2021, the cumulative infection rate was 6,753 per 100,000 (rank: 22nd). Excess mortality averaged 11.93% in 2020 (rank: 18th) – not since WWII have so many Dutch citizens died in one year. To secure sufficient access to vaccines, the Rutte government participated in negotiations coordinated by the European Union.

Prudential budgeting has provided the state with ample fiscal resources to counter the economic fallout from the crisis. The Dutch government implemented historic financial support schemes to maintain jobs and prevent corporate bankruptcies. The latter have included measures to protect the national airport and airline, the shipping and steel industries, and the agricultural and construction sectors. These schemes have already been extended three times, most recently to June 2021. Notwithstanding, not all workers have been successfully shielded from job losses. Many younger flexible workers were made redundant and have struggled to secure employment or transitioned into lower paid retail or home delivery jobs. Existing inequalities likewise deepened for immigrant workers. Furthermore, the government's crisis management remained preoccupied with short-term objectives, with no signs of future-oriented learning or adaptation. For example, the Rutte administration has yet to publicly debate the country's future economic structure considering the unsustainability of the status quo. Climate change remains a looming existential threat for the

Source: Sustainable Governance Indicators

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Netherlands and economic inequalities have only worsened as a consequence of the pandemic.

The complete qualitative assessment by country experts Robert Hoppe, Margarita Jeliazkova and André Krouwel, and regional coordinator Nils C. Bandelow is available at: sgi-network.org

New Zealand

New Zealand ranks fifth among the 29 countries on resilience of policies scoring 7.02 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with New Zealand ranking first along with Sweden and Switzerland (score: 9.50). In office since October 2017, the Jacinda Ardern administration's crisis governance also places New Zealand first (score: 8.89).

In terms of public health, New Zealand has been a success story, with community transmission of COVID-19 effectively eliminated during 2020. As of mid-March 2021, the cumulative infection rate was the lowest in our sample, 43 per 100,000 (rank: first), as was excess mortality, which averaged -0.27% in 2020 (rank: first).

The government's aggressive response has rested on a three-pillar strategy: free testing, contact-tracing and mandatory quarantine in centralized isolation facilities. The Ardern government announced a four-level COVID-19 alert system just three weeks after the first diagnosed case and, four days later, a strict five-week nationwide lockdown. The government was also able to rely on a highly centralized administration, while clear and consistent public communication gained public trust and mobilized collective action. Rapid intervention was critical as New Zealand was poorly equipped for a pandemic, with few intensive-care unit beds and ventilators. The island nation also benefited from its geographical isolation and the relatively late arrival of the coronavirus.

When New Zealand entered the crisis, it featured one of the most unequal education systems among high-income countries. Pākehā (European ancestry) and Asian students were already far more likely to graduate from a secondary education program than Māori and Pasifika (Pacific Islander) students. Child poverty was also more prevalent among the Māori minority, with nearly a fourth living with material hardships. These same minority communities were more severely impacted by the pandemic. While the Ardern administration has taken measures aimed specifically at supporting these communities, initial research has shown that particularly Māori and Pasifika women have remained at higher risk of infection and are disproportionally threatened by job loss.

To mitigate the socioeconomic shocks of the crisis, the government announced a NZD 50 billion (roughly $35 billion) recovery budget in May 2020. This intervention, however, failed to address existing structural inequalities, which have become even more pronounced during the crisis. For example, women – particularly those of Māori

and Pacific Islander descent – were at higher risk of exposure as well as job losses. The increase in unemployment coupled with pay cuts will further exacerbate an income gap where the top 20% of households have witnessed a median net worth increase of about NZD 131,000 (roughly $90,000) per year since 2015, while the bottom 40% have seen no growth. The recovery budget also represents a missed opportunity to address New Zealand's economic dependence on agricultural exports to China, which became the country's largest trading partner in 2017. A mere NZD 401 million (roughly $300 million) of the recovery budget was pledged toward the long-neglected technology sector. The country's continued heavy reliance on its agricultural sector, where methane accounts for about half of total greenhouse gas emissions, also effectively ensures that New Zealand will fail to meet it Paris Agreement obligations.

The complete qualitative assessment by country experts Oliver Hellmann and Jennifer Curtin, and regional coordinator Aurel Croissant is available at: sgi-network.org

Source: Sustainable Governance Indicators

BertelsmannStiftung

Poland

Poland ranks 24th among the 29 countries on resilience of policies scoring 5.24 out of 10. This crisis further challenged the country's already weakened democratic norms and institutions, with Poland ranking 27th (score: 3.50). In a historic twist, the October 2019 parliamentary elections saw the right-wing Law and Justice (PiS) party retain its majority coalition in the lower house of parliament but lose the Senate to the opposition. The Mateusz Morawiecki administration's crisis governance places Poland 27th (score: 3.61). A presidential election, postponed from May to June 2020 due to the pandemic, was won by the PiS-supported incumbent Andrzej Duda.

Poland responded rapidly to the first wave of the pandemic. The parliament approved COVID-19 legislation, expanding the government's decree powers, two days before the first confirmed domestic case of infection. On March 24, 2020, the Morawiecki administration instituted a strict lockdown. It also banned large public events, closed schools and universities, and progressively closed large public venues. The government, however, lost control of the pandemic with the arrival of the second wave. Between September and November 2020, both COVID-19 infections and deaths sharply rose. The second wave overwhelmed the healthcare system, which lacked sufficient intensive-care unit beds and medical personnel. As of mid-March 2021, the cumulative infection rate was 5,067 per 100,000 (rank: 13th) and excess mortality averaged 18.80% in 2020 (rank: 26th). While the government heavily invested in the healthcare system in 2020 to combat this pandemic, further resources will be needed to increase personnel, and improve quality and access.

Prior to the pandemic, the Polish economy had for years shown high and stable GDP growth, exceeding the EU average. Compared to other countries in the region, the economy was less dependent on tourism and automobile

manufacturing, which were hard hit by the crisis. This positive economic performance decreased social exclusion and poverty largely by reducing unemployment. The PiS-led government had also increased the child support benefit for families as well as the minimum wage. When the virus arrived, the containment measures implemented in late March 2020 were quickly complemented by economic and social supports, which helped limit the decline in GDP growth (6.37% decline in 2020) and rise in unemployment. The Morawiecki administration also increased benefits for the unemployed.

Poland's prospects for a rapid economic recovery are favorable. The economy is diversified and there is strong domestic consumption. In addition, the market's size, generally well-educated labor force and comparatively low wages will ensure that Poland remains attractive to foreign investors. Notwithstanding, the country risks increasingly losing young and highly educated workers and creatives, essential for boosting its healthcare, education, and research and innovation sectors, if the assault on democratic norms continues.

Poland's response to this historic crisis was to limit the capacities of regions and municipalities, many of which are governed by the opposition, and centralize management in the national executive. This complicated traditionally strong cooperation between Polish and German regions and municipalities regarding cross-border commuters. The Morawiecki administration's failures during the second wave were, in part, the result of hubris arising from its success in managing the first wave. Furthermore, fighting between the PiS and its two small coalition partners, and internal PiS struggles over the succession of party leader Jarosław Kaczyński were also to blame. Crisis governance has likewise suffered from the Morawiecki administration's notorious unwillingness to consult experts and interest groups or to cooperate with the opposition parties.

The complete qualitative assessment by country experts Claudia Matthes and Radoslaw Markowski, and regional coordinator Frank Bönker is available at: sgi-network.org

Portugal

Portugal ranks 18th among the 29 countries on resilience of policies scoring 6.08 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Portugal ranking sixth along with Germany (score: 8.75). The António Costa administration's crisis governance places Portugal 15th (score: 6.56).

Multiple vulnerabilities left Portugal's healthcare system exposed at the onset of the pandemic. The country entered the crisis with comparatively few ventilators (just over 1,000) and, as of June 2020, among the fewest intensive-care unit beds in our sample, just 5.03 per 100,000 inhabitants. As of mid-March 2021, the cumulative infection

rate was among the highest in our sample, 7,985 per 100,000 (rank: 26th). In 2020, the healthcare system somewhat belied these vulnerabilities, with excess mortality averaging 11.34% (rank: 16th, with Canada). The Costa administration also harnessed the country's burgeoning R&I infrastructure for testing and contact-tracing.

Portugal's education system entered the crisis likewise ill-prepared, with an aging teaching staff, low IT capabilities in schools and little or no prior experience with remote learning. Here also the country performed beyond expectations, with the highly centralized primary and secondary education system rapidly adjusting to alternative forms of teaching. These included not only online instruction, but also creative interventions such as launching a program of school instruction via television in April 2020 to serve households without internet access.

Similarly vulnerable prior to the crisis, the economic system was characterized by low productivity growth, diminishing potential output, an unbalanced labor market, an aging workforce and high public debt. These deficiencies have handicapped the Costa administration's fiscal response to the crisis. The challenge of balancing the economy and public health increased with the arrival of the second wave, with the government's tentative response yielding higher infection rates. The Costa administration's fiscal interventions included a small direct support to families and businesses, tax deferrals and loan guarantees. On the whole, the government's interventions have provided some cushion against the economic impacts of the pandemic, without jeopardizing long-term fiscal sustainability.

The Costa administration's crisis governance benefited from a high degree of dialogue and consensus both within the political system (i.e., between the government, opposition parties and president) as well as between the government and trade unions, business associations and the scientific community. Portugal's centralized governance structure proved responsive and adaptive to the crisis, and the broad public sector workforce was successfully mobilized in mitigation measures. The government's response also benefited from generally high public compliance with restrictions. Where the current government, as previous governments, has struggled is with interventions that address Portugal's long-term challenges. The post-pandemic recovery, bolstered by considerable EU funds, presents a generational opportunity to address structural imbalances – including in labor market, family and social inclusion policies – as well as global challenges, including climate change.

The complete qualitative assessment by country experts Carlos Jalali, Thomas Bruneau and Marió Ferreira Bacalhau, and regional coordinator César Colino is available at: sgi-network.org

South Korea

South Korea ranks ninth among the 29 countries on resilience of policies scoring 6.55 out of 10. This historic crisis challenged democratic norms and institutions in the country, with South Korea ranking 22nd (score: 6.75). In office since May 2017, the Moon Jae-in administration's crisis governance places South Korea second (score: 8.78).

The Moon administration has been quite successful in limiting the spread of COVID-19. As of mid-March 2021, the cumulative infection rate was the second lowest in our sample, 188 per 100,000 (rank: second), and excess mortality averaged 5.88% in 2020 (rank: eighth). This success, however, is due both to government interventions and circumstance. One factor that aided in containing the coronavirus early on was the country's geographic isolation, with a sealed land border in the north and relatively few ports of entry. A second factor was that most cases between February and November 2020 were clustered, often confined to a few high-transmission locations or events, which aided contact-tracing. The government mobilized public sector workers for overtime work to assist in contact-tracing. The prevalence of prosocial behaviors has also been a positive factor, as Koreans are generally willing to follow government guidelines, even when they are nonbinding. Furthermore, the wearing of face masks was widespread already before the crisis due to fine dust pollution and the 2015 MERS-CoV outbreak. Importantly, South Korea benefited from substantial domestic production capacity for face masks and other

medical equipment. Notwithstanding, even though the infection rate remained comparatively low, South Korea's healthcare system was stretched due to too few doctors, nurses and intensive-care unit beds.

The economic fallout from the crisis has been comparatively minor, with GDP growth projected to have shrunk by only 4.27% in 2020. This is due, in part, to the comparatively few COVID-19 infections, avoiding the need for a formal shutdown. The South Korean economy even benefited from the increased global demand for face masks and other medical equipment as well as IT hardware and logistics services. A large fiscal stimulus package has also helped stabilize the economy. Nevertheless, the pandemic has highlighted apparent weaknesses in South Korea. The existing unemployment-insurance system fails to cover about half of the country's workforce, forcing the government to implement emergency unemployment allowances to the uninsured. In its recovery package, the government has committed to expanding access to unemployment.

A political challenge will be exiting crisis mode later in 2021. The government should commit to return to a pluralistic discourse on the country's future prior to the March 2022 presidential election. Despite its majority in parliament, the Moon administration has failed to deliver on needed reforms, including political decentralization, the abolishment of precarious working conditions, the provision of affordable housing, corporate governance reform and the expansion of political freedoms. In addition, several key challenges remain unaddressed, including decarbonizing the economy and reducing South Korea's dependance on exports.

The complete qualitative assessment by country experts Thomas Kalinowski and Sang-young Rhyu, and regional coordinator Aurel Croissant is available at: sgi-network.org

Spain

Spain ranks 21st among the 29 countries on resilience of policies scoring 5.65 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated some resilience, with Spain ranking 21st (score: 7.00). Elections in November 2019 yielded a minority coalition government, consisting of the PSOE and Unidas Podemos, led by Pedro Sánchez. In office since January 2020, the Sánchez administration's crisis governance places Spain 19th (score: 5.89).

The coronavirus pandemic impacted Spain more severely than many other EU and OECD countries. As of mid-March 2021, the cumulative infection rate was 6,809 per 100,000 (rank: 23rd) and excess mortality averaged 17.61% in 2020 (rank: 24th). The severity of the impact can in part be attributed to weaknesses in the Spanish healthcare system that predated COVID-19. Funding cuts following the global financial crisis had increased disparities in the quality of healthcare provision across Spain's autonomous communities. Ultimately, the

country's healthcare system as a whole has not collapsed under the historic strain of COVID-19, though some hospitals in Barcelona and Madrid were overwhelmed.

Spain began 2020 with an exposed labor market. Prior to the COVID-19 crisis, tourism accounted for roughly 14% of GDP and employed three million workers. 2019 saw a record 83.7 million international visitors. The arrival of the coronavirus increased the country's already-high unemployment rate from 14.2% in 2019 (rank: 28th) to 15.7% in 2020. The government's Temporary Lay-Off Plan (ERTE) measure for companies has somewhat cushioned the crisis's impact on the labor market. As in other countries, the pandemic has disproportionately impacted on the poorest and most vulnerable in Spanish society.

In December 2020, the minority coalition government ended years of budgetary gridlock when it secured parliamentary support for an expansive spending plan for 2021. This new budget also includes new taxes and increases to tax rates, which are projected to increase government revenue by up to €5.5 billion in 2021. The Sánchez administration's recovery plans channel funding toward not only reconstructing but also transforming the Spanish economy. If successful, this will help create more future-oriented jobs.

Since the global financial crisis, Spain has witnessed a protracted crisis with its representative institutions, with public confidence in democratic institutions sharply declining and party polarization increasing. No political party has been able to form a stable government since 2015. The November 2019 elections further fragmented the party system as 22 political parties secured seats in the lower house of the parliament. In addition, in the autonomous community Catalonia, the conflict over secession has intensified since 2012. In the context of the pandemic, party polarization has increasingly become an obstacle to crisis management. While the first extension of the state of emergency (from March 25, to April 11, 2020) was passed by the Spanish parliament with the support of nearly all political parties, subsequent extensions were passed with successively decreasing support. The restrictions were ultimately lifted when the government could no longer secure sufficient support in the parliament, too early to prevent a second wave.

The COVID-19 crisis has starkly revealed structural weaknesses in Spain's governance model. Intergovernmental coordination instruments and joint decision-making bodies initially struggled to respond to the rapidly evolving crisis. As the first wave unfolded, intergovernmental coordination improved, with representatives of the national and heterogenous regional health authorities meeting frequently to reach a common strategy. Unfortunately, the second wave saw intergovernmental coordination regress again.

The complete qualitative assessment by country experts Mario Kölling and Ignacio Molina, and regional coordinator César Colino is available at: sgi-network.org

Sweden

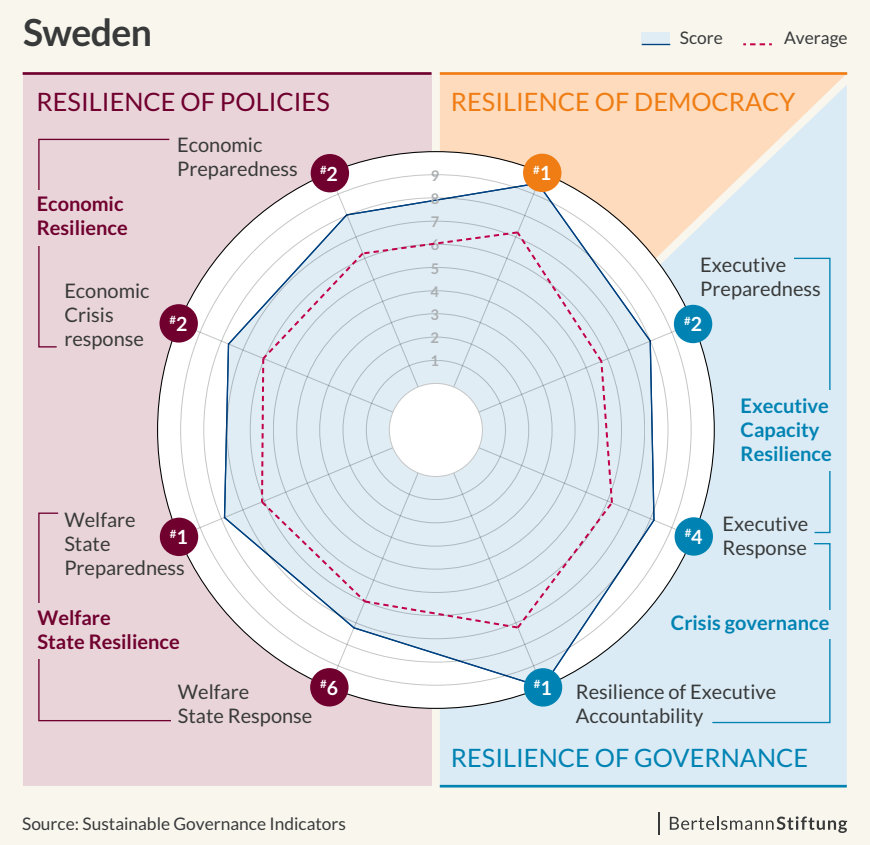
Sweden ranks first among the 29 countries on resilience of policies scoring 7.70 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Sweden ranking first along with New Zealand and Switzerland (score: 9.50). The Stefan Löfven administration's crisis governance places Sweden third (score: 8.72).

Sweden's approach to contagion mitigation departed from that of most other national governments in our sample. It was dominated by a series of nonbinding guidelines and recommendations. Containment measures remained voluntary throughout 2020. During the first wave, the majority of COVID-19-related deaths were among elder populations living in nursing homes. Unlike many peers, Sweden did not employ a digital solution for contact-tracing due in part to concerns that it could conflict with data protection regulations. As of mid-March 2021, the cumulative infection rate among the general population was among the highest in our sample, 7,055 per 100,000 (rank: 25th), and excess mortality averaged 7.22% in 2020 (rank: 10th). In 2021, the Swedish parliament approved legislation to temporarily allow the government to impose legally binding measures.

While overall high quality, Sweden's healthcare system failed to adequately protect vulnerable populations in nursing homes. The country's institutionalized elder-care system has suffered from years of underfunding and privatization. High employee turnover and inadequate staffing resulted in deficient hygiene regimes within public nursing homes, fueling transmission. Within the education system, the Löfven administration chose not to pursue school closures for children and young people in ninth grade and below.

For decades, unemployment and other economic support programs have not kept pace with rising wages. The government's economic policies in response to the crisis sought to protect household incomes and businesses. Public funds were also allocated to education and research, with a focus on creating a greener economy after the crisis. Additional public funding was allocated to cultural, sports and civil society organizations to help cover lost income. Notwithstanding, the overall unemployment rate among 15 to 64 year olds increased 1.5 percentage points from 2019 to 2020, among the highest in our sample. Unemployment has been disproportionately high among low-skilled workers and recent immigrants, exacerbating social cleavages.

The Swedish constitution limits the use of states of emergency to wartime and the crisis management system is premised on maintaining normalcy across government processes and public services. Government agencies with the requisite scientific expertise are able to act autonomously. Throughout 2020, Sweden's crisis governance was depoliticized, with government measures guided by experts. An ad hoc COVID-19 commission was convened to evaluate the government's measures



Source: Sustainable Governance Indicators

BertelsmannStiftung

to limit transmission. In its first interim report in December 2020, the commission concluded that Sweden failed to sufficiently protect older people as community transmission was a significant factor in the elder-care system.

The complete qualitative assessment by country experts Evangelia Petridou, Jörgen Sparf and Sven Jochem, and regional coordinator Thurid Hustedt is available at: sgi-network.org

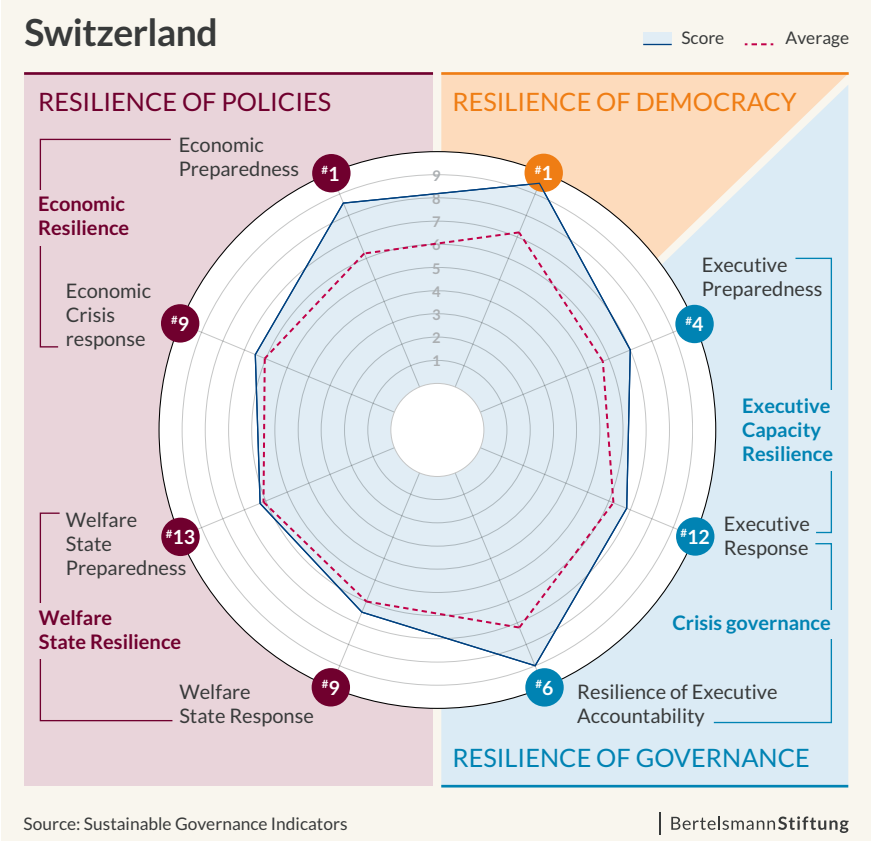
Switzerland

Switzerland ranks sixth among the 29 countries on resilience of policies scoring 6.96 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with Switzerland ranking first along with New Zealand and Sweden (score: 9.50). With the last federal elections in 2019, the Simonetta Sommaruga (Social Democratic Party) and, since January 2021, Guy Parmelin (Swiss People's Party) administrations' crisis governance place Switzerland eighth (score: 7.61).

Switzerland was among the first European countries to be affected by the COVID-19 pandemic. Though kept low during the first wave (March to April 2020), the infection rate rose sharply with the second wave (beginning late August and peaking in November 2020) and exceeded that of the country's direct neighbors. Furthermore, as of mid-March 2021, the cumulative infection rate exceeded the sample average, with 6,563 per 100,000 (rank: 21st), and excess mortality averaged 13.47% in 2020 (rank: 19th).

In the first wave, the government pursued a decisive and, ultimately successful, policy of strict lockdown. The second wave saw a far more hesitant government response, with only partial lockdowns, yielding far poorer results. With sovereignty residing mainly in the cantons, responding to the crisis involved often contentious and protracted policy coordination between the federal government and cantons. This sluggish policy process ultimately yielded rather inconsistent outcomes. The crisis has exposed deficits in preparedness, including insufficient stockpiles of protective medical supplies, outdated technology and inadequate digitalization. The crisis has also exposed tensions between policymakers and scientific experts, with particularly the president's populist Swiss People's Party openly hostile to expert input.

Overall economic growth, the government deficit and unemployment have been comparatively unaffected due to favorable economic conditions leading up to the crisis, including Switzerland's highly competitive economy, booming and flexible labor market, reliable public administration and strong public finances. Liberal-corporatist coordination between the state and economic actors remained highly effective in response to the crisis. During the first wave, for example, cooperation between the state and private banks yielded a government guaranteed lending program for struggling firms. This program was designed and implement-



ed within a matter of days. In contrast, increases to short-term work compensation for low-wage earners were only implemented in December 2020. In general, trade unions and their employees – including nurses – fared worse than the politically more powerful employers.

The complete qualitative assessment by country experts Klaus Armingeon and Fritz Sager, and regional coordinator Reimut Zohlnhöfer is available at: sgi-network.org

Turkey

Turkey ranks 25th among the 29 countries on resilience of policies scoring 5.00 out of 10. This historic crisis undermined the country's already broken democratic norms and institutions, with Turkey ranking 29th (score: 2.50). The authoritarian tendencies of the government under Recep Tayyip Erdoğan reached a zenith following the failed coup in 2016, culminating in the transition to a presidential system in 2018. The Erdoğan administration's crisis governance places Turkey 21st (score: 5.67).

The Turkish healthcare system mounted a swift response to the first wave of the pandemic, largely containing transmission. The country's healthcare infrastructure and intensive-care personnel enabled the government to manage the first months of the pandemic. With the relaxation of restrictions in June 2020, however, Turkey entered a more severe second wave, which challenged the healthcare system. As of mid-March 2021, the cumulative infection rate was 3,414 per 100,000 (rank: ninth), but excess mortality averaged 20.96% in 2020 (rank: 28th). With regards to vaccine development, Turkey has lagged behind similar-sized economies. The government's agreements with vaccine manufacturers have also been insufficient to rapidly immunize the Turkish population.

Even before the pandemic, Turkey's labor market was characterized by high unemployment, low wages and a large informal sector. The government responded to the COVID-19 crisis on March 18, 2020 with a package of economic interventions, including a one-time cash transfer to millions of households and reinforcement of the short-term work allowance. These interventions, however, were smaller in scope than needed. Unsurprisingly, the pandemic further undermined Turkey's already fragile labor market. Overall, social welfare interventions largely failed to protect socially disadvantaged groups, including refugees.

The country's recent transition to a presidential system has centralized power, which during the pandemic enabled the Erdoğan administration to regulate by presidential decree rather than through legislation. Government ministries rapidly implemented policy measures, though coordination problems emerged with the distribution of face masks. A board of scientific experts was formed to advise the government two months before the first diagnosed case of COVID-19 in the country. Beyond this advisory board, public

Source: Sustainable Governance Indicators

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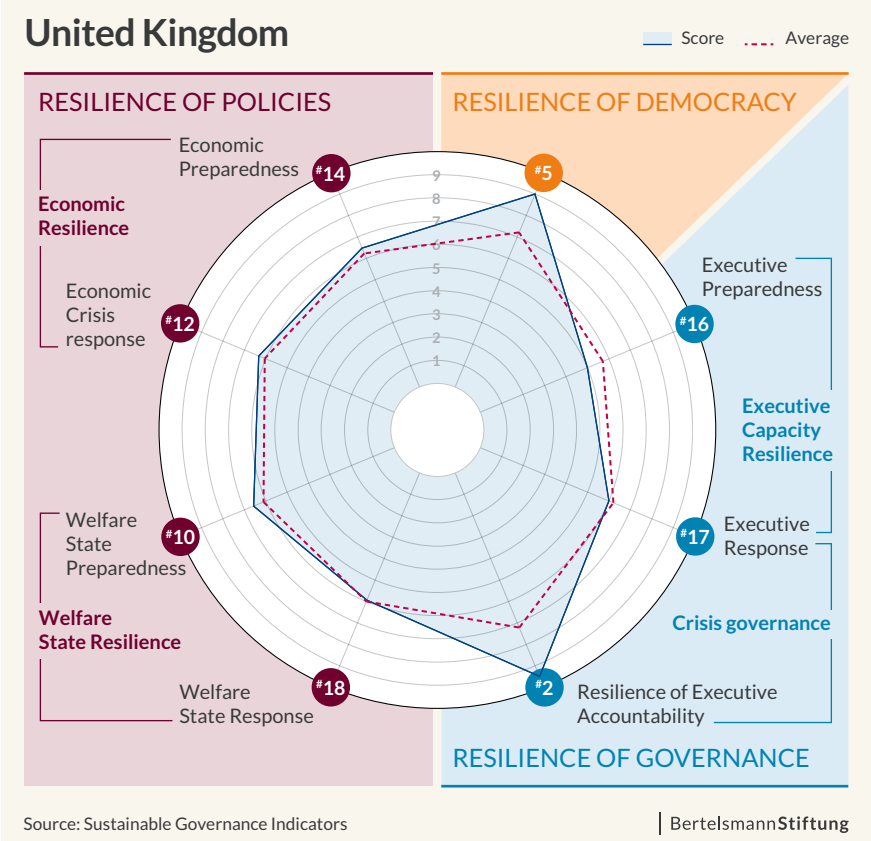
consultation has largely been limited to pro-government actors. The Erdoğan administration counterproductively attempted to exclude mayors of the country's largest cities, including Ankara and Istanbul, which had been won by opposition parties in the 2019 local elections, from pandemic coordination meetings between national and local governments. In addition, government authorities are suspected of manipulating official statistics on COVID-19 infections and related deaths to serve the ruling political party's interests.

The complete qualitative assessment by country experts Düzgün Arslantaş and Ludwig Schulz, and regional coordinator Roy Karadag is available at: sgi-network.org

United Kingdom

The United Kingdom ranks 14th among the 29 countries on resilience of policies scoring 6.33 out of 10. This historic crisis challenged democratic norms and institutions in the country, but they have demonstrated resilience, with the United Kingdom ranking fifth (score: 9.00). The pandemic struck the United Kingdom during a particularly vulnerable year, as the country exited the European Union after more than 45 years. The Boris Johnson administration's crisis governance places the United Kingdom 13th (score: 6.83).

The Johnson government was slow to recognize the magnitude of the threat and dithered when taking action. It failed to promptly suspend likely super-spreader events, such as the March 10–13, 2020 Cheltenham Festival horse racing meeting. In addition, the government hesitated in imposing all three lockdowns and only belatedly introduced face mask mandates. In a botched effort to free hospital beds for COVID-19 patients, the government transferred elderly patients to care homes without adequate testing. In Scotland, only one in six elderly patients were tested for COVID-19 before being transferred. As of mid-March 2021, the cumulative infection rate exceeded the sample average, with 6,273 per 100,000 (rank: 19th), and excess mortality averaged 13.57% in 2020 (rank: 20th). The UK pharmaceutical sector was, however, successful in the race to develop a vaccine thanks at least in part to a government-established vaccine task force which rapidly funded vaccine development.



Source: Sustainable Governance Indicators

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With the first lockdown, the government extensively intervened to buttress the economy. A furlough scheme kept millions in the workforce and financial supports prevented businesses from going bankrupt. These enabled a quick economic rebound from the first lockdown. Notwithstanding, the crisis provoked a deep economic contraction in the United Kingdom, with GDP growth plummeting 11.75% in 2020 (rank: 28th). Given the economy's high dependence on the hospitality and service sectors, economic recovery will be particularly challenging.

Underlying governance weaknesses resulted in both poorer health outcomes and a sharper economic downturn than in many EU and OECD countries.

Whitehall had in previous years engaged in pandemic exercises, which identified clear deficiencies in preparedness, but previous governments had done too little to remedy these vulnerabilities. A decade of austerity policies had also left the United Kingdom with insufficient personal protective equipment. The Johnson administration's series of policy U-turns contributed to a sense of disarray in government. In addition, the current distribution of competencies and responsibilities between the various levels of government hampered the coordination and implementation of critical pandemic-response measures. For example, while local governments were tasked with rapidly implementing regional lockdown measures to protect public health, they remained reliant on individually negotiated financial supports from the central government.

The complete qualitative assessment by country experts Andreas Busch and Iain Begg, and regional coordinator Nils C. Bandelow is available at: sgi-network.org

United States

The United States ranks 23rd among the 29 countries on resilience of policies scoring 5.27 out of 10. This historic crisis further challenged democratic norms and institutions in the country, which were already under assault prior to the pandemic, with the United States ranking 23rd along with Israel (score: 6.50). In the November 2020 elections, incumbent President Donald Trump was defeated by Joe Biden and the Democratic Party seized full control of the bicameral parliament, the Congress. The Donald Trump administration's crisis governance places the United States 22nd along with Czechia (score: 5.39). On January 20, 2021, Biden and his administration assumed office.

The pandemic again exposed the deep inequalities present in the U.S. healthcare system. Though the Obama era's Affordable Care Act (Obamacare) expanded access, many Americans continue to lack health insurance. As of mid-March 2021, the cumulative infection rate among the general population was the third highest in our sample, with 8,808 per 100,000 (rank: 27th), and excess mortality averaged 20.84% in 2020 (rank: 27th).

The United States entered this global health crisis with a strong economy and low unemployment. In 2019, GDP per capita in the United States ranked third highest in our sample ($62,605, PPP, 2017 international dollars), unemployment averaged 3.72% (rank: eighth) and long-term unemployment averaged 0.47% (rank: fourth). Yet, these select positive economic indicators coincided with a comparatively limited social welfare system. Insufficient access to affordable childcare, for example, disadvantaged particularly low-income female workers. At the same time, large federal government budget deficits and fiscal constraints in the states had weakened crisis preparedness. In responding to the pandemic's impacts on the labor market, support for the unemployed varied greatly between the states. In addition, gaps in the CARES

Act, the government's $2.2 trillion economic stimulus measure passed in March 2020, failed to address existing vulnerabilities that disadvantaged already marginalized segments of the population.

Trump, and his sycophants, regularly misled the public about the severity of the threat posed by the pandemic and sowed public skepticism of wearing face masks, among other containment measures. He also openly attacked states governed by Democrats as well as some governed by Republicans, which complicated coordination between the federal government and states. Trump's relentless attacks on the media and baseless claims of electoral fraud further undermined trust in institutions and undercut the incoming Biden administration's crisis response. These attacks created much confusion as they sabotaged crisis communication, ultimately costing American lives. Internationally, the Trump administration's nationalist response and decision to withdraw from the WHO seriously weakened diplomatic ties.

The complete qualitative assessment by country experts Daniel Béland and Christian Lammert, and regional coordinator Martin Thunert is available at: sgi-network.org

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Appendix

TABLE X **Dimension: Resilience of Democracy**

INDICATOR	DEFINITION	YEAR	SOURCE
Media Freedom	Expert assessment: "To what extent are the media independent from government and free in their coverage?"	2021	Sustainable Governance Indicators
Civil Rights and Political Liberties	Expert assessment: "To what extent is the government committed to granting and protecting political and civil rights – also in times of crisis?"	2021	Sustainable Governance Indicators
Judicial Review	Expert assessment: "To what extent have independent courts controlled whether the government and administration act in conformity with the law throughout the COVID-19 pandemic?"	2021	Sustainable Governance Indicators
Informal Democratic Rules	Expert assessment: "To what extent does party polarization undermine the ability to enable cross-party cooperation in crisis management?"	2021	Sustainable Governance Indicators

Qualitative Indicator

Source: Sustainable Governance Indicators

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TABLE X **Dimension: Resilience of Governance**

INDICATOR	DEFINITION	YEAR	SOURCE
Group: **Executive Capacity Resilience**			
Category: **Executive Preparedness**			
Crisis Management System	Expert assessment: "What was the quality and capacity of crisis management systems in the country at the outbreak of the crisis?"	2021	Sustainable Governance Indicators
Group: **Executive Capacity Resilience** and **Crisis Governance**			
Category: **Executive Response**			
Effective Policy Formulation	Expert assessment: "Did the government respond immediately, with credible and effective policies, to mitigate the crisis?"	2021	Sustainable Governance Indicators
Policy Feedback and Adaptation	Expert assessment: "To what extent does the government assess the effectiveness and efficiency of its crisis response measures?"	2021	Sustainable Governance Indicators
Public Consultation	Expert assessment: "To what extent does the government consult with societal actors in preparing its policy response?"	2021	Sustainable Governance Indicators
Crisis Communication	Expert assessment: "Does the government actively communicate to the public and account for the rationale behind its response to the COVID-19 pandemic?"	2021	Sustainable Governance Indicators
Implementation of Response Measures	Expert assessment: "Has the implementation of COVID-19 pandemic measures been swift, effective and impartial?"	2021	Sustainable Governance Indicators
National Coordination	Expert assessment: "To what extent does the central/federal government cooperate with regional and local government in order to ensure solidarity among subnational units, while empowering subnational government to act effectively and to develop varying, locally adapted policies?"	2021	Sustainable Governance Indicators
Group: **Crisis Governance**			
Group: **Resilience of Executive Accountability**			
Open Government	Expert assessment: "Does the government publish information on the COVID-19 pandemic in a way that strengthens citizens' capacity to hold the government accountable during the crisis?"	2021	Sustainable Governance Indicators
Legislative Oversight	Expert assessment: "Are members of legislature able to monitor government activity effectively during the crisis?"	2021	Sustainable Governance Indicators

Qualitative Indicator

Source: Sustainable Governance Indicators

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TABLE X **Dimension: Resilience of Policies**

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Group: **Economic Resilience**				
Category: **Economic Preparedness**				
Criterion: **Economic Preparedness**				
Economic Policy Preparedness	Expert assessment: "To what extent is economic policy in your country prepared to address growth and sustainability challenges?"	2021	Sustainable Governance Indicators	
GDP per Capita	Gross domestic product per capita, purchasing power parity, constant 2017 international dollar.	2019	IMF World Economic Outlook	
Gross Fixed Capital Formation	Gross fixed capital formation, total economy, percent of GDP, mean of 2010 to 2019.	2019	IMF World Economic Outlook	
Real GDP Growth Rate	Real GDP growth rate, mean of 2010 to 2019.	2019	IMF World Economic Outlook	
Energy Productivity	Energy productivity level of primary energy (constant 2017 purchasing power parity GDP per megajoule).	2018	UN SDG Indicators Database	
Greenhouse Gas Emissions	Greenhouse gas emissions, tonnes in CO2 equivalents per capita, excluding land use, land-use change and forestry.	2019	UNFCCC, Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Material Footprint	Material footprint per capita. The material footprint refers to the global allocation of used raw material extracted to meet the final demand of an economy.	2017	OECD Online Database	
Renewable Energy	Renewable energy share in total final energy consumption.	2018	UN SDG Indicators Database	
Criterion: **Labor Market Preparedness**				
Labor Market Policy Preparedness	Expert assessment: "To what extent are labor market policies and institutions prepared to reduce unemployment, ensure employment security, and balance supply and demand on the labor market?"	2021	Sustainable Governance Indicators	
Unemployment Rate	Unemployment rate, age group 15-64 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Long-Term Unemployment Rate	Long-term unemployment rate, persons unemployed more than one year, total population.	2019	OECD Online Database	AUT, BEL, CAN, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Youth Unemployment Rate	Unemployment rate, age group 15-24 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Employment Rate	Employment to population ratio, age group 15-64 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Low Pay Incidence	Share of workers earning less than 2/3 of median earnings.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, TUR, GBR
Employment Rates by Gender	Ratio of employment rates women/men, age group 15-64.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Group: **Economic Resilience**						
Category: **Economic Preparedness**						
Criterion: **Economic Preparedness**						
	UNFCCC, World Bank World Development Indicators	CAN, JPN, NZL, USA		OECD Online Database, World Bank, World Development Indicators	CHL, ISR, KOR, MEX	CHL (2018), KOR (2018), MEX (2015)
Criterion: **Labor Market Preparedness**						
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA				
	ILOSTAT Online Database	CHL				
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA				
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA				
AUT (2018), BEL (2018), HRV (2018), CZE (2018), DNK (2018), EST (2018), FIN (2018), FRA (2018), DEU (2018), GRC (2018), HUN (2018), IRL (2018), ITA (2018), NLD (2018), POL (2018), PRT (2018), ESP (2018), SWE (2018), TUR (2014), GBR (2018)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, CHE, USA	CHL (2017), ISR (2018), CHE (2016)			
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA				

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Involuntary Part-time Employment	Share of involuntary part-timers as percent of total part-time employment.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Net Unemployment Replacement Rate	Net replacement rates for unemployment, first year, single persons, including social assistance and housing benefits, previous in-work earnings 100 percent of average wage.	2018	OECD Online Database	
Older Employment Rate	Employment to population ratio, age group 55-64 years.	2019	Eurostat Online Databse	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR
Criterion: **Fiscal Preparedness**				
Fiscal Policy Preparedness	Expert assessment: "How successful was budgetary policy – in the period immediately before the crisis began – in creating a sustainable situation for public finances?"	2021	Sustainable Governance Indicators	
Debt to GDP	General government gross liabilities, percent of GDP.	2019	IMF World Economic Outlook	
Primary Balance	General government primary net lending/borrowing, percent of GDP, mean of 2010 to 2019.	2019	IMF World Economic Outlook	
Gross General Government Interest Payments	Gross general government interest payments, percent of GDP.	2019	OECD Online Database, IMF World Economic Outlook	AUT, BEL, CAN, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, JPN, KOR, NLD, NZL, POL, PRT, ESP, SWE, CHE, GBR, USA
Budget Consolidation	Budget consolidation, standarized 1-10.	2019	Uwe Wagschal, University of Freiburg	
Criterion: **Research and Innovation**				
Research and Innovation Policy Preparedness	Expert assessment: "To what extent does research and innovation policy support technological innovations that foster productivity and social innovations?"	2021	Sustainable Governance Indicators	
Public R&D Spending	Government-financed gross expenditure on R&D, percent of GDP.	2019	OECD Online Database	AUT, BEL, CAN, CHL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Private R&D Spending	Non-government-financed gross domestic expenditure on R&D, percent of GDP.	2019	OECD Online Database	AUT, BEL, CAN, CHL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Total Researchers	Total researchers per 1,000 employment (fulltime equivalents).	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Intellectual Property Licenses	Ratio of license receipts to payments for intellectual property.	2019	World Bank, World Development Indicators	
PCT Patent Applications	Number of applications filed under the patent cooperation treaty, per million population.	2018	OECD Online Database, Eurostat Online Database	AUT, BEL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
	OECD Online Database	CAN, CHL, ISR, JPN, NZL, USA		Sustainable Governance Indicators	KOR, MEX	
CAN (2017), CHL (2016), KOR (2017), TUR (2017)						
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				
Criterion: **Fiscal Preparedness**						
	World Bank World Development Indicators, IMF World Economic Outlook	ISR, MEX, TUR				
Criterion: **Research and Innovation**						
CHL (2018), IRL (2018), ISR (2018), POL (2018), SWE (2017), CHE (2017), GBR (2018)	Eurostat Online Database	HRV	HRV (2018)			
CHL (2018), IRL (2018), ISR (2018), POL (2018), SWE (2017), CHE (2017), GBR (2018)	Eurostat Online Database	HRV	HRV (2018)			
CHE (2017)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA	CAN (2018), CHL (2018), ISR (2012), USA (2018)			
	OECD Online Database, World Bank World Development Indicators	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA		OECD Online Database	HRV	HRV (2015)

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Quality of Overall Infrastructure	Mean score of the expert survey assessments on "quality of roads", "efficiency of train services", "efficiency of air transport services", and "efficiency of seaport services". Executive opinion survey; years 2018 and 2019: response to the survey questions: "In your country, what is the quality (extensiveness and condition) of road infrastructure?" [1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world] "In your country, how efficient (i.e. frequency, punctuality, speed, price) are train transport services?" [1 = extremely inefficient, among the worst in the world; 7 = extremely efficient, among the best in the world] "In your country, how efficient (i.e. frequency, punctuality, speed, price) are air transport services?" [1 = extremely inefficient, among the worst in the world; 7 = extremely efficient, among the best in the world] "In your country, how efficient (i.e. frequency, punctuality, speed, price) are seaport services (ferries, boats)?" [1 = extremely inefficient, among the worst in the world; 7 = extremely efficient, among the best in the world]. Does not apply to land-locked countries.	2019	World Economic Forum Global Competitiveness Report	
International Internet Bandwidth	International bandwidth per Internet user (kbit/s).	2017	International Telecommunication Union ICT Indicators Database	
Category: **Economic Crisis Response**				
Criterion: **Economic Response**				
Economic Recovery Package	Expert assessment: "How timely, comprehensive and targeted were the measures of the economic recovery package?"	2021	Sustainable Governance Indicators	
Workplace Closing	Records closings of workplaces. Sum of points from 1 January 2020 to 15 Jan 2021. Countries are assigned values of 0 to 3 for each day according to which of the following applies: 0 - no measures 1 - recommend closing (or recommend work from home) 2 - require closing (or work from home) for some sectors or categories of workers 3 - require closing (or work from home) all-but-essential workplaces (e.g., grocery stores, doctors).	2021	Oxford COVID-19 Government Response Tracker	
Change in GDP Growth Rate	Change in GDP growth rate (percent) compared to mean of GDP growth rate (percent) from 2010 to 2019.	2020	IMF World Economic Outlook	
Change in Gross Fixed Capital Formation	Change in gross fixed capital formation as percent of GDP compared to mean of gross fixed capital formation as percent of GDP from 2010 to 2019.	2020	IMF World Economic Outlook	
Fiscal Measures in Response to COVID-19 Pandemic	Fiscal measures in response to the COVID-19 pandemic since January 2020, as of 31 December 2020. Additional spending or foregone revenues for non-health sectors as percentage of 2020 GDP. Does not include spending for health sectors, below-the-line measures such as equity injections, loans, asset purchase or debt assumptions, nor contingent liabilities such as loans or grants.	2020	IMF Fiscal Monitor	
Criterion: **Sustainability of Economic Policy Response**				
Recovery Package Sustainability	Expert assessment: "To what extent were recovery packages used to leverage transformative opportunities in the transition toward a sustainable economy?"	2021	Sustainable Governance Indicators	

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Category: **Economic Crisis Response**						
Criterion: **Economic Response**						
Criterion: **Sustainability of Economic Policy Response**						

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Criterion: **Labor Market Response**				
Labor Market Policy Response	Expert assessment: "To what extent do the labor market policy measures taken effectively contribute to reducing the negative effects of the crisis on the labor market?"	2021	Sustainable Governance Indicators	
Change in Unemployment Rate	Change in unemployment rate, age group 15 to 64, from 2019 to 2020, percentage points.	2020	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR
Change in Employment Rate	Change in employment rate, age group 15 to 64, from 2019 to 2020, percentage points.	2020	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR
Change in Youth Unemployment Rate	Change in youth unemployment rate, age group 15 to 24, from 2019 to 2020, percentage points.	2020	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR
Change in Older Employment Rate	Change in employment rate, age group 55 to 64, from 2019 to 2020, percentage points.	2020	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR
Criterion: **Fiscal Response**				
Fiscal Policy Response	Expert assessment: "To what extent have budgetary policy measures, such as increasing spending and public debt, been guided by considerations of fiscal sustainability and future economic viability?"	2021	Sustainable Governance Indicators	
Change in Public Debt	Change in general government gross liabilities as percent of GDP from 2019 to 2020, percentage points.	2020	IMF World Economic Outlook	
Change in Primary Balance	Change in general government primary balance as percent of GDP compared to compared to mean of primary balance as percent of GDP from 2010 to 2019.	2020	IMF World Economic Outlook	
Criterion: **Research and Innovation Response**				
Research and Innovation Policy Response	Expert assessment: "To what extent does research and innovation policy support the government's objectives of managing the COVID-19 pandemic and fostering social innovations?"	2021	Sustainable Governance Indicators	
Group: **Welfare State Resilience**				
Category: **Welfare State Preparedness**				
Criterion: **Education System Preparedness**				
Education Policy Preparedness	Expert assessment: "To what extent is education policy in the country prepared to provide high-quality, equitable education that benefits from efficiency in resource allocation – also in times of crisis?"	2021	Sustainable Governance Indicators	
Upper Secondary Attainment	Population with at least upper secondary attainment (ISCED 3 and above), age group 25-64 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
PISA Results, Socioeconomic Background	PISA results, product of slope of ESCS for reading and strength of relationship between reading and ESCS.	2018	OECD PISA	
Pre-primary Expenditure	Public expenditure on pre-primary education, percent of GDP.	2018	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Low Achievers in all PISA Subjects	Students scoring below the baseline level of proficiency (level 2) on each of the PISA scales (reading, mathematics and science).	2018	OECD PISA	

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Criterion: **Labor Market Response**						
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				
Criterion: **Fiscal Response**						
Criterion: **Research and Innovation Response**						
Group: **Welfare State Resilience**						
Category: **Welfare State Preparedness**						
Criterion: **Education System Preparedness**						
	OECD Online Database	CAN, CHL, ISR, KOR, MEX, NZL, USA	CHL (2018)	UNESCO Online Database	JPN	JPN (2010)
ESP (2015)						
EST (2013), IRL (2015)	UNESCO Online Database	CHL, ISR, JPN, KOR, MEX, NZL, USA	CHL (2017), ISR (2017), JPN (2017), KOR (2017), MEX (2011), NZL (2017), USA (2017)	ECE Early Childhood Education Report, IMF World Economic Outlook	CAN	CAN (2017)
ESP (2015)						

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
PISA Availability of Effective Online Learning Platforms	Percentage of students in schools whose principal agreed or strongly agreed that an effective online learning support platform is available.	2018	OECD PISA	
PISA Availability of Digital Learning Resources for Teachers	Percentage of students in schools whose principal agreed or strongly agreed that an effective professional resources for teachers to learn how to use digital devices are available.	2018	OECD PISA	
PISA Quality of Schools' Internet Connection	Percentage of schools with sufficient internet bandwidth or speed.	2018	OECD PISA	
PISA Availability of Portable School Computers	Ratio of portable school computers (e.g., laptops, tablets) available to 15-year-olds for educational purposes to the total number of students in the modal grade for 15-year-olds.	2018	OECD PISA	
Criterion: **Healthcare System Preparedness**				
Health Policy Preparedness	Expert assessment: "To what extent is the healthcare system prepared to provide equal access to high-quality healthcare and disease protection – also in times of crisis?"	2021	Sustainable Governance Indicators	
Spending on Preventive Health Programs	Spending on preventive and health programs, percent of current health care expenditure.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, POL, PRT, ESP, SWE, CHE, GBR
Healthy Life Expectancy	Healthy life expectancy at birth.	2019	WHO	
Perceived Health Status	Percentage of population with self perceived health status “good” and “very good”, ratio lowest to hightest quintile of equivalised disposable income.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Out of Pocket Expenses	Household out-of-pocket expenses as percentage of current health care expenditure.	2019	OECD Online Database	AUT, BEL, CAN, CHL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Physicians	Practising physicians per 1,000 inhabitants.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Influenza Vaccination	Percent of population aged 65 and over vaccinated for influenza.	2018	Eurostat Online Database	AUT, BEL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, MEX, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Daily Smokers	Percentage of population aged 15+ who are daily smokers.	2018	OECD Online Database	AUT, BEL, CAN, CHL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Prevalence of Diabetes	Type I and II diabetes prevalence among adults.	2017	OECD Health At A Glance	AUT, BEL, CAN, CHL, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, TUR, GBR, USA
Nurses	Practising nurses per 1,000 inhabitants.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, DEU, GRC, HUN, ITA, NLD, POL, ESP, SWE, CHE
Intensive Care Beds	ICU beds per 100,000 inhabitants, as of 23 June 2020.	2020	Institute for Health Metrics and Evaluation, Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Criterion: **Healthcare System Preparedness**						
AUT (2018), BEL (2018), HRV (2018), CZE (2018), DNK (2018), EST (2018), FIN (2018), FRA (2018), DEU (2018), GRC (2018), HUN (2018), POL (2018), PRT (2018), ESP (2018), SWE (2018), CHE (2018), GBR (2018)	OECD Online Database	CAN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, TUR, USA	ISR (2016), JPN (2017), MEX (2018), NZL (2007), TUR (2000), USA (2018)	Sustainable Governance Indicators	CHL	
CHE (2018), GBR (2018)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, NZL, USA	CAN (2018), CHL (2017), ISR (2018), JPN (2016), KOR (2018), USA (2018)	Sustainable Governance Indicators	MEX	
AUT (2018), BEL (2018), CZE (2018), DNK (2018), FIN (2018), FRA (2018), GRC (2018), HUN (2018), ISR (2018), JPN (2018), MEX (2018), NZL (2018), ESP (2018), TUR (2018), GBR (2018), USA (2018)	Eurostat Online Database	HRV	HRV (2018)			
AUT (2018), BEL (2018), HRV (2018), CZE (2018), DNK (2018), EST (2018), FIN (2015), FRA (2018), DEU (2018), GRC (2018), HUN (2018), NLD (2018), POL (2017), PRT (2018), ESP (2018), SWE (2017), CHE (2018), TUR (2018)	OECD Online Database	CAN, ISR, JPN, KOR, MEX, NZL, USA	ISR (2018), JPN (2018), KOR (2018), MEX (2018), NZL (2018), USA (2018)			
AUT (2014), DEU (2017), ITA (2019), MEX (2007), POL (2014), PRT (2017), ESP (2019), CHE (2010), TUR (2016)	OECD Health At A Glance	CAN, CHL, HRV, ISR, JPN, KOR, NZL, USA	CAN (2017), CHL (2017), HRV (2019), ISR (2017), NZL (2017), USA (2007)			
AUT (2014), CHL (2016), DNK (2017), FIN (2019), DEU (2017), GRC (2017), HUN (2014), IRL (2019), ISR (2017), MEX (2017), NZL (2019), POL (2014), PRT (2014), ESP (2017), CHE (2017), TUR (2016)	Eurostat Online Database	HRV	HRV (2014)			
	Eurostat Online Database	HRV	HRV (2014)			
BEL (2018), DNK (2018), POL (2017), SWE (2018)	OECD Online Database	CAN, ISR, JPN, KOR, MEX, NZL, GBR	JPN (2018)	OECD Health At A Glance	CHL, FIN, FRA, IRL, PRT, TUR, USA	CHL (2017), FIN (2017), FRA (2017), IRL (2017), PRT (2017), TUR (2017), USA (2017)
	Institute for Health Metrics and Evaluation, World Bank World Development Indicators	CAN, CHL, ISR, JPN, KOR, MEX, NZL		OECD Beyond Containment	USA	USA (2018)

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Criterion: **Families**				
Family Policy Preparedness	Expert assessment: "To what extent is family policy in the country prepared to enable the combination of parenting with participation in the labor market – also in times of crisis?"	2021	Sustainable Governance Indicators	
Childcare Enrollment, 0-2 Year Olds	Enrollment in formal childcare, age group 0-2 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, GBR
Childcare Enrollment, 3-5 Year Olds	Enrollment in formal childcare, age group 3-5 years.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, GBR
Fertility	Fertility rate, total (births per 1,000 women).	2019	World Bank World Development Indicators	
Child Poverty	Child poverty rate, children less than 18 years old, cut-off point 50 percent of median equivalised disposable income.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Female Labor Force Participation	Proportion of the female population aged 15 years and older that is economically active, divided by the same proportion for men.	2019	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR, GBR
Category: **Welfare State Response**				
Criterion: **Education System Response**				
Education Response	Expert assessment: "To what extent have education policy interventions in the country ensured a high-quality and equitable education system that benefits from efficient resource allocation – also throughout the COVID-19 pandemic?"	2021	Sustainable Governance Indicators	
School Closures	Records closings of schools and universities. Sum of points from 1 January 2020 to 15 January 2021. Countries are assigned values of 0 to 3 for each day according to which of the following applies: 0 - No measures 1 - recommend closing 2 - Require closing (only some levels or categories, eg just high school, or just public schools) 3 - Require closing all levels.	2021	Oxford COVID-19 Government Response Tracker	
Criterion: **Healthcare System Response**				
Health Policy Response	Expert assessment: "To what extent could the healthcare system respond quickly and implement suitable measures to fight the effects of the COVID-19 pandemic?"	2021	Sustainable Governance Indicators	
Excess Mortality	Excess mortality, p-score, as of 31 December 2020. Excess deaths are calculated as the difference between cumulative deaths in 2020 and average cumulative deaths from 2015 to 2019. The p-score is calculated as excess deaths as a percentage of average cumulative deaths from 2015 to 2019 (TUR: 2018-2019).	2020	Our World in Data	AUT, BEL, CAN, CHL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ISR, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, ESP, SWE, CHE, GBR, USA

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Criterion: **Families**						
GBR (2018)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, TUR, USA	CAN (2008), CHL (2017), ISR (2017), JPN (2017), KOR (2017), MEX (2017), NZL (2017), TUR (2017), USA (2011)			
GBR (2018)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, TUR, USA	CAN (2012), CHL (2018), ISR (2018), JPN (2018), KOR (2018), MEX (2018), NZL (2017), TUR (2018), USA (2018)			
GBR (2018)	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA	CHL (2017), ISR (2018), JPN (2018), KOR (2018), MEX (2018), NZL (2014), USA (2017)			
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, USA				
Category: **Welfare State Response**						
Criterion: **Education System Response**						
Criterion: **Healthcare System Response**						
	New York Times	TUR				

INDICATOR	DEFINITION	YEAR	SOURCE	COUNTRIES
Testing Policy	Records government policy on who has access to testing. Sum of points from 1 January 2020 to 15 January 2021. This records policies about testing for current infection (PCR tests) not testing for immunity (antibody test). Countries are assigned values of 0 to 3 for each day according to which of the following applies: 0 - no testing policy 1 - only those who both (a) have symptoms and (b) meet specific criteria (eg key workers, admitted to hospital, came into contact with a known case, returned from overseas) 2 - testing of anyone showing Covid-19 symptoms 3 - open public testing (e.g., drive through testing available to asymptomatic people).	2021	Oxford COVID-19 Government Response Tracker	
COVID-19 Mortalities	Cumulative COVID-19 deaths per 100,000 population, as of 15 March 2021.	2021	WHO	
SARS-CoV-2 Infections	Cumulative SARS-CoV-2 infection rate per 100,000 population, as of 15 March 2021.	2021	WHO	
Criterion: **Family Policy Response**				
Family Support Policies	Expert assessment: "To what extent has it been possible to achieve and maintain a fair distribution of job-related work, household work and parenting responsibilities between the partners during the crisis?"	2021	Sustainable Governance Indicators	
Change in Ratio of Female to Male Employment	Change in the ratio of female-to-male employment rates, age group 15 to 64, multiplied by 100, from 2019 to 2020.	2020	Eurostat Online Database	AUT, BEL, HRV, CZE, DNK, EST, FIN, FRA, DEU, GRC, HUN, IRL, ITA, NLD, POL, PRT, ESP, SWE, CHE, TUR

Qualitative Indicator Quantitative Indicator

Source: Sustainable Governance Indicators

EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS	SOURCE	COUNTRIES	EXCEPTIONS
Criterion: **Family Policy Response**						
	OECD Online Database	CAN, CHL, ISR, JPN, KOR, MEX, NZL, GBR, USA				

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Figures

Key Findings

FIGURE 1	Democracy 2020 and Resilience of Democracy 2021	6
FIGURE 2	Democracy 2020 and Resilience of Policies 2021	7
FIGURE 3	Overall Preparedness and Overall Response	10
FIGURE 4	Resilience of Governance	11
FIGURE 5	Economic Resilience	12
FIGURE 6	Welfare State Preparedness and Welfare State Response	13
FIGURE 7	Family Support Policies and Family Policy Preparedness	14
FIGURE 8	Welfare State Resilience	15

Introduction

FIGURE 9	Poverty Rate	17

PART I: Resilience of Democracy

FIGURE 10	Resilience of Democracy	20
FIGURE 11	Media Freedom	20
FIGURE 12	Media Freedom, 2020 and 2021	21
FIGURE 13	Civil Rights and Political Liberties	22
FIGURE 14	Civil Rights and Political Liberties, 2020 and 2021	23
FIGURE 15	Judicial Review	24
FIGURE 16	Judicial Review, 2020 and 2021	25
FIGURE 17	Party Polarization 2020 and Informal Democratic Rules 2021	25
FIGURE 18	Informal Democratic Rules	26
FIGURE 19	Democracy 2020 and Resilience of Democracy 2021	27
FIGURE 20	Resilience of Policies and Resilience of Democracy	27
FIGURE 21	Crisis Governance and Democracy 2020	28

PART II: Resilience of Governance

FIGURE 22	Executive Preparedness	30
FIGURE 23	Healthcare System Response and Executive Preparedness	32
FIGURE 24	Executive Response 2021 and Executive Capacity 2020	33
FIGURE 25	Policy Response and Effective Policy Formulation	34
FIGURE 26	Effective Policy Formulation	35
FIGURE 27	Policy Feedback and Adaptation	35
FIGURE 28	Policy Response and Policy Feedback	36
FIGURE 29	Public Consultation	37
FIGURE 30	Societal Consultation 2020 and Public Consultation 2021	38
FIGURE 31	Crisis Communication	39
FIGURE 32	Crisis Communication and Media Freedom	40
FIGURE 33	Policy Response and Crisis Communication	40
FIGURE 34	Implementation of Response Measures	41
FIGURE 35	Policy Response and Implementation of Response Measures	42
FIGURE 36	National Coordination	43
FIGURE 37	Executive Response	43
FIGURE 38	Executive Capacity Resilience	44
FIGURE 39	Policy Response and Executive Capacity Resilience	45
FIGURE 40	Open Government	46
FIGURE 41	Legislative Oversight	46
FIGURE 42	Resilience of Executive Accountability	47
FIGURE 43	Resilience of Governance	47
FIGURE 44	Resilience of Policies and Crisis Governance	48

PART III: Resilience of Policies

FIGURE 45	Economic Preparedness	49
FIGURE 46	Real GDP Growth Rate	50
FIGURE 47	Gross Fixed Capital Formation	50
FIGURE 48	Greenhouse Gas Emissions	51
FIGURE 49	Renewable Energy	51
FIGURE 50	Energy Productivity	52
FIGURE 51	Material Footprint	52
FIGURE 52	Economic Response	53
FIGURE 53	Fiscal Measures in Response to the COVID-19 Pandemic	54
FIGURE 54	Workplace Closing	54
FIGURE 55	Economic Recovery Package	55
FIGURE 56	Change in GDP Growth Rate	55
FIGURE 57	Sustainability of Economic Response	56
FIGURE 58	Labor Market Preparedness	57

FIGURE 59	Older Employment Rate	57
FIGURE 60	Net Unemployment Replacement Rates	58
FIGURE 61	Youth Unemployment Rate	58
FIGURE 62	Long-term Unemployment Rate	59
FIGURE 63	Low Pay Incidence	59
FIGURE 64	Labor Market Response	60
FIGURE 65	Change in Unemployment Rate	60
FIGURE 66	Change in Youth Unemployment Rate	61
FIGURE 67	Change in Older Employment Rate	62
FIGURE 68	Fiscal Preparedness	63
FIGURE 69	Debt to GDP	63
FIGURE 70	Budget Consolidation	64
FIGURE 71	Fiscal Response	65
FIGURE 72	Change in Public Debt	65
FIGURE 73	Change in Public Debt 2019-2020 and Debt to GDP 2019	66
FIGURE 74	Research and Innovation	67
FIGURE 75	Private R&D Spending	67
FIGURE 76	Public R&D Spending	68
FIGURE 77	Research and Innovation Policy Preparedness	68
FIGURE 78	Quality of Overall Infrastructure	69
FIGURE 79	International Internet Bandwidth	69
FIGURE 80	Research and Innovation Response	70
FIGURE 81	R&I Response and R&I Preparedness	71
FIGURE 82	Education System Preparedness	72
FIGURE 83	Availability of Effective Online Platforms	72
FIGURE 84	Low Achievers in all PISA Subjects	73
FIGURE 85	Education Policy Response	74
FIGURE 86	Healthcare System Preparedness	74
FIGURE 87	Intensive Care Beds	75
FIGURE 88	Nurses	76
FIGURE 89	Healthcare System Response	77
FIGURE 90	Excess Mortality	78
FIGURE 91	Families	80
FIGURE 92	Childcare Enrollment, 0-2 Year Olds	81
FIGURE 93	Female Labor Force Participation Rate	82
FIGURE 94	Family Support Policies	83
FIGURE 95	Survey Process	85
FIGURE 96	Survey Structure	88
FIGURE 97	Measures of Uncertainty	91

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