



Germany Report

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Sustainable Governance in the Context of the COVID-19 Crisis

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Executive Summary

The COVID-19 pandemic has delivered Germany's political, economic and social systems a severe and comprehensive stress test. Judging on the basis of the first year of the pandemic, the country and its institutions have demonstrated, overall, considerable resilience. So far, the Merkel government's crisis policies, which draw heavily and noticeably on advice from the scientific community in general and epidemiologists in particular has enjoyed broad and stable voter support. The social and economic impact of the lockdowns has been successfully mitigated by an unprecedented expansion of fiscal and social emergency measures. Importantly, the health system has also proved able to cope with the pandemic, providing state-of-the-art treatment to all seriously ill patients, even when numbers were high during the second wave. The German bio-pharmaceutical sector, with its spectacular successes in the development of innovative vaccines against COVID-19, has demonstrated its global leadership and renown. Despite this overall favorable impression, the pandemic has at the same time exposed some serious weaknesses in the country, most notably regarding the extent to which Germany's education and health systems lag behind in terms of digitalization. Moreover, the pandemic has expedited structural changes that are increasingly challenging the country's (nonetheless still quite robust) labor market and its traditional industries.

Germany's excellent fiscal and labor market situation on the eve of the pandemic is key to understanding its success, thus far, in battling the pandemic's economic and social fallout. When the virus began spreading in Germany in early 2020, the country looked back at a successful decade of budget consolidation in which the debt-to-GDP ratio was in constant decline since 2010. At the start of 2020, this ratio had dipped below 60%, which is far below the levels observed in other large industrial countries like France, Italy or the United States. Furthermore, the country looked back at a decade of stable GDP growth, very strong employment growth, a significant increase in disposable incomes, among both the active workforce and pensioners, and a buoyant growth in public revenues.

This solid economic state of affairs, combined with widespread political consensus, enabled the government to rapidly introduce a comprehensive economic rescue package and set of stabilization measures of historic

magnitude. According to IMF calculations, Germany's discretionary fiscal measures reached almost 40% of GDP, making the country one of the most generous among industrial countries in its economic recovery efforts. The government, in designing its rescue and stimulus packages, has tried to combine short-run objectives with initiatives to promote its long-run agenda in climate policies and digitalization, emphasizing in particular the energy and electromobility transition.

In the labor market, as was the case with the financial crisis of 2009, subsidies for the short-time work scheme ("Kurzarbeit") became crucial. In April 2020, during the first lockdown, the number of those receiving such benefits reached a maximum of 6 million people, which was several times more than the largest numbers reached in past crises. So far, this instrument has been successful in stabilizing the labor market, resulting in only a moderate increase in (open) unemployment, despite the severe economic disruption.

The government has sought to protect particularly vulnerable groups from social hardship by expanding support for families, facilitating claims for basic income support and introducing various financial aid packages targeting specific groups.

Germany's healthcare system was probably better-positioned than most others to manage a pandemic at the start of the outbreak. It features one of the highest numbers of hospital beds and intensive care units per 100,000 inhabitants in Europe, and allows for very good regional accessibility due to its highly decentralized care services. Capacities are well-coordinated so that regional shortages could be addressed, and the country was able to accept intensive care patients from neighboring countries. However, test capacities clearly lagged behind the standards of other highly developed industrial countries. Only relatively late in the second wave of the pandemic and with the help of the German army, was it possible to provide sufficient test facilities for old-age and long-term care homes. Germany struggled with introducing innovative digital solutions for contact tracing. Compared to its peers, the country clearly lags behind in modernizing its healthcare sector and public administration with regard to digital transformation. Germany was relatively quick to field a coronavirus contact tracing app which, judging by the number of downloads, was well received. However, the app's effective contribution to contact tracing has been rather underwhelming.

Sudden school and university closures as a result of the pandemic exposed the extent to which the German education system and its educators skillset lag behind in terms of meeting modern digitalization standards. Schools were faced with the fact that they lack an adequate digital infrastructure and that

both educators and students are not fully digitally literate. The first wave of school closures launched a crash course in digitalization, and both the federal and state governments introduced large digital investment programs that allowed for a somewhat improved situation in terms of remote teaching capabilities when schools were shut down a second time in December 2020.

By international comparison, Germany's lockdown measures were of moderately strict, that is, milder than those levied in Italy or Spain but more restrictive than those applied in Sweden or Switzerland. The measures nonetheless involved substantial restrictions of fundamental rights. Throughout the pandemic, the judiciary has provided an effective control against risks of excessive overreach in this regard. Opinion surveys show that a stable and large majority believe the government has adequately balanced the need to protect fundamental rights as well as public health in its decision-making. In addition, the German public holds the judiciary in high regard as an institution that has effectively protected basic freedoms during the pandemic.

Key Challenges

Across various dimensions, Germany has clearly performed well in absorbing the immediate shock effects of the pandemic. This is due in large part to its strong healthcare system and the initially broad political and public consensus on the government's pandemic policies. However, things began to shift significantly at the end of 2020/beginning of 2021 as Germany was hit by waves of new infections and the public grew weary of extended lockdown measures. Opinion polls showed that support for the government's crisis management began to plummet.

Four factors have been instrumental to the growing discontent: First, messaging regarding lockdown and relaxation measures among the federal government and state-level (Länder) governments has grown increasingly contradictory as leaders at each level have begun sending conflicting signals. Increasingly marked by disagreement and a lack of unity, top-level crisis meetings held with federal government leaders and the state's individual prime ministers, have failed to deliver a convincing long-term strategy to contain the virus. Whereas the federalist approach that allows for lockdown measures to be adapted by each individual state was largely considered to be an advantage for most of 2020, a more negative view thereof has emerged in 2021 as the perception of watered-down pandemic rules has grown. Second, the initially disappointingly sluggish launch of the vaccination campaign has alienated voters, despite the fact that joint EU vaccine procurement decision-making is

to blame here. Third, and having less to do with EU constraints, the government and healthcare authorities failed to act quickly and effectively in developing a comprehensive testing and contact-tracing strategy, leaving Germany to trail behind other EU countries. Fourth, the severe setbacks faced in containing the pandemic have painfully exposed the extent to which Germany lags behind in digital transformation. It remains to be seen whether the frustration observed during the first few months of 2021 will give way to greater optimism as the vaccination rollout gains traction. The pandemic has triggered several important dynamics that are bound to have a profound economic impact and could threaten the country's social and economic achievements.

Critics point out that even before the pandemic, Germany's attractiveness as an industrial location had been eroding as a result of its lagging competitiveness with regard to its infrastructure, an increasing shortage of highly qualified staff, high and intensifying regulatory burdens, and high corporate tax rates. Important German industries such as automobile manufacturers must grapple at once with digital transformation and the transition toward electric drives, where powerful new competitors have emerged within a short time-span. Some measures taken introduced during the pandemic, such as investment in digital infrastructure, suggest a new awareness in policymaking for at least some of these challenges. But it remains to be seen whether the next federal government has the courage to take honest stock of locational weaknesses, and the determination to address them.

It is widely accepted that the pandemic is expediting structural changes that include an increasingly smaller number of offline retailers, a sharp decline in business travel and thus hotel occupancy rates, and the rapid and comprehensive digitalization of all sectors. Given the challenges this structural change poses to the German labor market, some observers are doubtful that the short-time work subsidies ("Kurzarbeit") will prove successful in the long term. The extended duration of payments, with replacement rates even increasing over time, could freeze employment in older sectors and have the effect that workers are under-incentivized to shift to other emerging sectors.

The transition toward a climate-neutral society has become an overriding objective not just for Germany but for the European Union as a whole. The pandemic seems to have facilitated a rapid reduction in greenhouse gas emissions. However, the impact of the pandemic on traffic and production, which resulted in a massive reduction of emissions, can be expected to be short-lived. On the contrary, there is even the risk that the large economic and social costs of the pandemic might weaken the societal consensus that

decarbonization is worth the high efforts and costs. The pandemic has replaced climate change as the most salient media topic. So far, however, the pandemic does not seem to have weakened the consensus on climate policy. On the contrary, the stimulus packages introduced in 2020 include substantial additional investments into a greener future. Demonstrating its stable commitment to this goal, Germany introduced a new CO₂ tax that went into effect in January 2021.

Declining tax revenues and the very high costs of the fiscal emergency packages have increased the level of public debt considerably. However, it is predicted to remain well below 80% of GDP in 2021 and thus far below the levels seen in many other large industrial countries. Moreover, Germany enjoys an excellent reputation as a borrower and benefits from interest rates that hover around zero percent. There is a large consensus among economic experts that the additional public debt incurred in the pandemic does not pose a severe risk for German debt sustainability. However, there are concerns regarding sustainability in this regard that derive from the rapid growth of social spending on pensions, health and old-age care systems, as well as the country's aging demographics.

A further possible downside of the budgetary situation is that the consolidation may have come at the cost of public infrastructure. Critics point to a backlog of investment in various areas including a modernization of digital infrastructure. The current government defends itself and hints to rising investment spending over the last years. While the exit from the coronavirus debt is already predefined through the country's constitutional debt rule (the "debt brake"), a debate has intensified to which extent the debt brake is still adequate. Critics regard the debt brake as an obstacle for sufficient investment. Defendants of the policy point to its success in enforcing budgetary discipline in recent years, which was crucial to creating the ample fiscal scope available during the pandemic. Regardless of what decision is ultimately made on the debt brake, "consolidation" must be understood as a three-dimensional task that involves: keeping debt levels under control; mobilizing sufficient resources to build a modern infrastructure that supports decarbonization; supporting a stable growth rate able to cope with the fiscal burden of an aging society.

The pandemic has painfully exposed the extent to which Germany's public administration, healthcare sector and education system lag behind in terms of leveraging digital resources. The measures taken in the pandemic to better equip schools with digital infrastructure and to improve educators' skills mark a first important step, though much more is needed. The education system will need to mitigate the damage done by school closures in terms of educational

attainment, particularly among socially disadvantaged children. These children suffer the most from school closures because they often lack digital devices at home and their families often lack the skillset needed for independent learning. There is a clear risk that the last year has delivered a significant setback to Germany's attempt to foster equal opportunities for children of all backgrounds.

The educational challenge is thus closely connected to the country's social challenge. In the years preceding the pandemic, poverty rates had declined as a consequence of the employment boom and effective welfare benefits. The welfare state's toolbox has also effectively corrected the large inequality of market incomes. But Germany must demonstrate in the coming years that it can do more than successfully facilitate economic rejuvenation by ensuring that the economic recovery includes less-advantaged groups.

Resilience of Policies

I. Economic Preparedness

Economic Preparedness

Economic Policy
Preparedness
Score: 8

On the eve of the pandemic, the German economy, with various features supporting crisis resilience, was clearly in generally good shape. The country could look back at a decade of stable GDP growth, very strong employment growth, a significant increase in disposable incomes among both the active workforce and pensioners, and buoyant growth in public revenues. Private companies generally enjoyed solid capitalization. In short, the country was well-positioned to absorb a severe economic crisis.

Economic policy, featuring employment- and investment-friendly and resource mobilizing (de-)regulation, clearly contributed to this success. The German labor market has proved successful in fostering an efficient use of the workforce, which is a precondition for social inclusion and a key element of the economy's resilience during the pandemic crisis. However, the crucial reforms that have shaped labor market institutions, unemployment benefits, the pension system, and corporate taxes are more than a decade old, and date back to the structural reforms introduced in the early 2000s as part of the Agenda 2010 campaign.

Although these earlier reform packages have improved Germany's competitiveness and labor market performance, and have also boosted its appeal as a destination for foreign investment, some of these advantages are gradually eroding. In terms of corporate taxation, for instance, numerous tax reforms in important competing countries like the United States or France have left Germany as a relative high tax location in comparison (Dutt et al.

2021). What is also missing are convincing answers to the questions raised by demographic change and its consequences for the availability of qualified labor. This kind of passive economic policy over the last decade has been accompanied by concerns about major threats to the long-standing competitive advantages of key industries such as car manufacturing. This industry is confronted both with the digital revolution and the transition toward electric drives, which are strongly supported by national and European regulation.

While Germany faces substantial challenges in terms of its overall economic competitiveness, the country has recently stepped up its efforts to target climate neutrality. As is the case in many other economies, the pandemic with its severe negative impact on traffic and production has led to a significant reduction in emissions, at least in the short-run, and made it possible for Germany to achieve its climate targets for 2020. Contrary to pessimistic forecasts, Germany overshot its target in 2020, emitting only 670 million tons of CO₂, which is considerably below its maximum target of 750 million tons (Agora Energiewende 2020). It thus likely reached the federal government's target for 2020.

While the pandemic-driven reduction in emissions may be short-lived, there is reason to expect continued improvement. In response to growing public awareness and climate protest movements, the German government has become more active in targeting the transition toward a carbon-neutral economy. The Climate Package introduced in 2019 defined a more ambitious agenda that is built on the Federal Climate Protection Act (Bundes-Klimaschutzgesetz), which targets a 55% reduction in CO₂ emissions by 2030 (relative to 1990). A key element of Germany's new climate strategy is the introduction of a carbon pricing system for transport and housing, which thus involves those sectors currently not participating in the EU's Emission Trading System. The new CO₂ tax went into effect in January 2021 and resulted in a notable increase in the price of gas. Further increases have already been agreed upon. The revenues generated by this scheme are used to compensate citizens for energy price increases by inter alia reducing fees associated with the Renewable Energy Act (EEG-Umlage). Overall, these measures have brought Germany back into the group of countries that demonstrate their commitment to climate goals by imposing politically costly new taxes on car owners, home owners and tenants.

Citation:

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Labor Market Preparedness

Labor Market
Policy
Preparedness
Score: 9

Germany's success in reducing structural unemployment since the mid-2000s has been impressive. Germany's employment increased from 43.8 million in 2010 to 46.5 million in 2019. Prior to the onset of the pandemic, the unemployment rate had fallen to 5.0% (2019 average, national definition, Destatis 2021a). As noted under "Economic vulnerability," the labor market reforms of the 2000s have played a role here. However, researchers also point to rather harmonious labor-industry relations and the responsible actions taken by industrial leaders that allowed for a high degree of wage flexibility already in the 1990s as an additional and crucial success factor (Dustmann et al. 2014). Thanks to these factors, the German labor market had already proved its resilience in various crises, including the deep financial crisis of 2009 and the refugee crisis of 2015.

The extent to which the share of atypical employment contracts – such as temporary employment programs (Leiharbeit), part-time and agency work – which grew strongly in the 1990s and early 2000s, should be seen as a downside to the employment boom, remains a matter of debate. However, since the onset of the employment boom at the end of 2009, the number of atypical employment contracts fell from 7.9 million in 2010 to 7.3 million in 2019, while "normal employment" showed strong growth (Destatis 2021b). Female part-time employment makes up the largest share of atypical work, particularly in Western Germany. On the one hand, atypical employment reflects an increase in industrial flexibility and may, to a considerable extent, also be in line with workers' leisure preferences. On the other hand, atypical employment contracts may prove detrimental to the social security system as a result of revenue losses, and they can increase social risks such as old-age poverty.

Government regulation of the labor market has increased in recent years with new restrictions for temporary employment programs having been introduced. There are exemptions to the national minimum wage in effect since January 2015, particularly with regard to young employees and the long-term unemployed. The minimum wage has increased from an initial level of €8.50 per hour to €9.50 as of January 2021. The minimum wage elevated the earnings of 1.4 million employees (i.e., 11% of the employed) in 2019 (Destatis 2020). Minimum wages are higher in some sectors as a result of collective bargaining. The German Council of Economic Experts has not reported any detrimental macroeconomic effects associated with the national minimum wage, though it is difficult to assess its long-term consequences, particularly during periods in which the labor market is less dynamic.

While international organizations like the OECD recognize Germany's robust employment growth, they also point to the high marginal tax rates on labor in general and second earners in particular as barriers to an even higher labor utilization rate. Such high marginal tax rates make it difficult to integrate single parents into the labor market and create substantial employment disincentives for a household's second earner.

Germany features a comprehensive and effective toolbox of active labor market programs. These include providing financial support for vocational training programs, support for self-employed individuals, provision of workfare programs and the subsidized employment of long-term unemployed individuals. Traditional instruments, such as job creation and training programs, are now seen as combinable. Tailored to individual needs, these instruments are designed to facilitate the reintegration of long-term unemployed individuals into the labor market. Moreover, the subsidies for short-time work schemes ("Kurzarbeit") have proven to provide effective protection against dismissals in a cyclical downturn. Having applied this mechanism extensively in the wake of the financial crisis of 2009, the government could draw on its recent experience in applying this crucial instrument once again in the coronavirus crisis context.

Overall, Germany's labor market was in great shape when it was hit by the pandemic-induced recession involving massive supply and demand disruptions (see "Labor market policies"). Throughout 2020, the labor market performed well in terms of responding to the crisis. Given the severity of the economic disruptions, an increase in unemployment by 475,000 from January 2020 to January 2021 (total number of unemployed: 2.9 million) is considered to be moderate. As was the case with the financial crisis, the combined effects of responsible corporate decision-making and generous government support – primarily through short-time work schemes – have thus far successfully prevented large-scale layoffs. However, the number of workers placed on short-time work schedules hit a historic high of 6 million in April 2020, which far exceeds levels seen in the wake of the financial crisis (Bundesagentur für Arbeit 2021).

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Fiscal Preparedness

Fiscal Policy
Preparedness
Score: 8

When the pandemic hit Germany, the country could look back at a successful decade of budget consolidation. After having peaked at 81% in 2009, the debt-to-GDP ratio declined steadily from 2010 to 2019. Reaching 59.6% in 2019, the debt ratio was just below the 60% reference level stipulated in the Maastricht Treaty on the eve of the outbreak (European Commission, AMECO Database).

Several factors contributed to Germany's fiscal consolidation which put the country in a strong financial position to fight the economic and social damage wrought by the pandemic by introducing massive spending packages. First, Germany's constitutional debt brake, with its balanced budget requirements, gave effective guidance to the state parliaments and the federal parliament. In addition, over the last two legislative terms, the federal government insisted on a balanced budget (the "black zero") that did not fully leverage the deficit allowance of the debt brake (which is 0.35% of GDP on a structural basis). This policy also reflects the broad popularity of balanced budgets among the German public (Hayo und Neumeier 2016). The path of debt reduction was strongly supported by a favorable fiscal environment. Until 2019, revenues had grown dynamically as a consequence of the German labor market boom. In addition, record low and even negative interest rates on German government bonds led to a sharp fall in interest expenditure. As a result, even the significant growth in spending could be financed without issuing new debt so that public budgets were balanced or in surplus for eight years, from 2012 to 2019.

Explicit public debt was therefore clearly under control before the pandemic. However, observers point to concerns regarding sustainability in terms of the government's generous spending promises with regard to pension, health and old-age care systems, particularly in the context of an aging population. Studies examining the present value of all these future promises have pointed out that the implicit debt derived from Germany's social security system is substantial and has been growing in recent years (Bahnsen et al. 2019). The strong short-term state of public revenues has fueled more generous social policies that bear risky consequences for the long-run sustainability of public finances in general and the federal budget in particular. A further possible downside of the budgetary situation is that consolidation may have come at the

cost of public infrastructure. Critics point to a backlog of investment in various areas, including modernizing the country's digital infrastructure. The current government defends itself in part by hinting at an increase in investment spending over the last years.

Overall, Germany's excellent reputation as a responsible and creditworthy borrower remains solid. Germany's improved credit standing over the last ten years is in part due to the sharp contrast between its decline in public debt and the rapid growth of such debt in other large European countries and the United States.

Citation:

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Research and Innovation

Research and
Innovation Policy
Preparedness
Score: 9

Germany continues to perform well in terms of research and development. According to the World Economic Forum's Global Competitiveness Report (2019), Germany ranks number one in terms of innovation capability, but seventh overall in terms of global competitiveness. Furthermore, Germany ranked 5th out of 140 countries for patent applications per inhabitant, improving two ranks over the previous year. The quality of scientific research institutions is ranked fourth out of 140 countries, which marks a strong improvement from eleventh place in 2017 (World Economic Forum 2019: 240). In the most recent coronavirus-oriented edition of the World Competitiveness Report (World Economic Forum 2020: 76), Germany is deemed to perform well in terms of its ability to create new "markets of tomorrow," though it ranks only 10th.

The German government continues to increase budgets for research and development. Relative to GDP, its spending has increased further and remains above the European average. The budget for the Ministry of Education and Research was increased from €18.2 billion in 2020 to €20.8 billion in 2021 (Forschung und Lehre 2020). Germany numbers among the top list of countries worldwide with respect to its public and private spending on R&D, exceeding the EU target of 3% (see "Private R&D Spending").

Unlike several other European countries, Germany long refrained from introducing general R&D tax incentives, choosing instead to focus on targeted funding for specific programs. In effect since 2020, the Research Allowance

Act (“Forschungszulagengesetz”) introduced an R&D tax incentive. Spending on R&D staff is incentivized through a 25% tax allowance that can be paid out in the event of a loss. The tax subsidy is limited to a cap of €500,000 per company per year.

Companies’ expenditures on R&D are strong, but more could be done in terms of public-private partnerships and university-industry collaboration. The government has continued to pursue its so-called Excellence Initiative within the tertiary education sector. Now referred to as the Excellence Strategy, the initiative receives €533 million a year for the current funding period (2019 – 2025). The federal government and states have agreed to resume their Joint Initiative for Research and Innovation, and intend to increase the program’s budget by 5% every year. In recent years, as Germany increased its research and education budget and pursued its Excellence Initiative within the tertiary education sector, the quality of its scientific research institutions showed some improvement. According to the 2019 Global Competitiveness Report, Germany performs well in higher education and training, but ranked 16th out of 140 countries with regard to the population’s digital skills (World Economic Forum 2019: 240).

Germany has a highly developed ecosystem of research associations – beyond the university research community – that contributes to social and technological innovation. The Commission of Experts for Research and Innovation (Expertenkommission Forschung und Innovation – EFI) also advises the German government and presents an annual report on research, innovation and technological performance in Germany. One of the EFI’s key tasks is to provide a comprehensive cross-national analysis of the strengths and weaknesses of Germany’s innovation system across time.

Citation:

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Commission of Experts for Research and Innovation:

www.e-fi.de/1/expertenkommission/die-expertenkommission/

Data on excellence strategy:

www.bmbf.de/de/die-exzellenzstrategie-3021.html

II. Welfare State Preparedness

Education System Preparedness

Education Policy
Preparedness
Score: 7

The Program for International Student Assessment (PISA) remains an important indicator of the quality and efficiency of a country's educational system. Since the first PISA study in 2000, the OECD has repeatedly criticized Germany for the stratified nature of educational access and the role of socioeconomic backgrounds in educational attainment. Children from low-income families and immigrants in particular face barriers to educational opportunity. However, Germany has shown some significant improvements. It ranked above the OECD average in mathematics, reading and science, and the importance of students' socioeconomic background had lessened. While the level of social equity in the German educational system was among the lowest of all OECD countries in 2000, the overall quality of the primary and higher education system has improved steadily since then, and equality in access to different levels of the educational system has increased. Concerning the skills of the workforce, Germany now ranks 5th out of 137 countries (World Economic Forum 2019: 239).

A total of 33% of German university graduates hold a degree in one of the science, technology, engineering or mathematics fields that are of particular importance for a country's technological and innovation capacities, compared to a 25% average across the OECD countries. In contrast to other countries, the proportion of individuals with tertiary education has remained astonishingly low for several decades. The proportion of young people with tertiary education in 2020 still lags behind the OECD average (OECD 2020). In 2000, only 17% of young adults (aged 25-34) held a tertiary degree. By 2020, this figure had increased to 33.5%. Despite this improvement, tertiary attainment in Germany remains below the OECD average of 44%, mostly as a result of its strong vocational education system that offers a reliable path into qualified employment as well. The share of upper-secondary or post-secondary education again is high compared to the OECD average (58% to 44%). However, this figure has steadily declined over the past decades.

Germany's vocational and education training (VET) system is effective and provides skilled workers with good jobs and income prospects. The rate of post-secondary VET is about 20%, much higher than the OECD average. All in all, the German education system excels in offering skills relevant for labor market success, resulting in a very low level of youth unemployment (rank 2

among OECD countries). Thus, defining educational achievement primarily on the criterion of university degrees (as the OECD does) might not do justice to the merits of the segmented German dual education system.

Before the pandemic, experience with online or digital learning formats was narrow in scope. The lack of technological equipment and technological training among teaching staff are the biggest obstacles here. In addition, an often very restrictive interpretation of data protection laws and an inflexible education administration have hampered progress. The extremely low technology adoption rate among educators can be attributed to the high average age of teachers, disincentives in civil servants' lifelong contracts, the absence of effective evaluations for individual educators involving genuine opportunities for promotion or improved pay. As a result, German schools were comparatively ill-prepared for the sudden need to shift their classes online to remote teaching formats in the spring of 2020, particularly when compared with northern Europe's digital frontrunners or the Baltic states.

Citation:

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Social Welfare Preparedness

Social Welfare
Policy
Preparedness
Score: 8

Germany's mature and highly developed welfare state guarantees a subsistence level of income to all citizens. Historically, the German social security system is based on the statutory insurance model that is supplemented by a needs-oriented minimum income. There are a variety of minimum-income benefit schemes, including income support for unemployed ("Hartz IV") and disabled people, an old-age minimum income, and assistance for asylum-seekers. The number of Hartz IV recipients is declining, having decreased from 4.362 million in 2017 to 3.894 in 2019 and thus dropped below the 4 million mark for the first time in many years. Even in 2020, during the coronavirus recession, the annual average of Hartz IV recipients remained roughly constant at 3.887 million (Statistisches Bundesamt 2020). The decline in recent years is all the more remarkable given the fact that many of the refugees who have been in Germany since 2015 are drawing Hartz IV benefits.

Nevertheless, recent data confirm that the labor market integration of refugees who arrived in 2015 has been more smooth than many expected (Tagesschau 2019). In autumn 2019, about 40% of refugees from the main countries of origin (Syria, Iraq, Afghanistan, Turkey and Iran) were already in

employment, mostly in regular employment with full social security coverage. However, labor-market integration has been much slower for female refugees than it has been for their male counterparts. The OECD recently praised the effectiveness of Germany's dual vocational training system as having been successful in providing migrants with professional qualifications and bringing them into skilled employment (Handelsblatt 2019).

Since 2015, Germany has had a national statutory minimum wage designed to increase and stabilize market incomes within the low-wage segment of the population. The minimum wage was raised to €9.50 in 2021. No massive job losses have as yet been registered.

The German welfare state has at its disposal the so-called short-time compensation benefits (Kurzarbeitergeld), which provide an additional social safety net in times of severe crisis. As a well-established mechanism, this scheme proved its effectiveness in the financial crisis of 2009, and it has played a crucial role in protecting German workforce incomes during the coronavirus crisis (see "Labor Market Policies" for details).

After protracted debate, Germany introduced in January 2021 a "basic pension" ("Grundrente") that aims to reduce old-age poverty (BMAS 2021). The program seeks to increase pensions among low-income earners who have contributed at least 33- 35 years (including child-rearing years and periods of care for elderly relatives) to the statutory old-age pension system. The resulting additional pension payments are subject to a means test. Other types of income that exceed an allowance of €1,250 for singles and €1,950 for couples will reduce the claim. For 2021, the program's initial year, costs are expected to reach about €1.3 billion and benefit 1.3 million recipients. The program will be financed by general tax revenues allocated through the federal budget. In addition, the government took some measures to improve private and occupational pension provisions. Most of the aforementioned measures are aimed at preventing poverty in society.

Overall, the welfare state's toolbox to correct the large inequality of market incomes and to prevent poverty has been effective in reducing the post-redistribution Gini coefficient to a moderate level (see "Gini Coefficient"). Largely as a consequence of the employment boom, the poverty rate had been on the decline before the recession associated with the pandemic, falling from 10.5% in 2014 to 9.0% in 2019 ("Poverty Rate"). Preliminary data show that, as to be expected, the coronavirus recession pushed up poverty rates in 2020 (Der Paritätische Gesamtverband 2020). It is too early to judge whether this marks a fundamental reversal of the downward trend in poverty rates, or is reflective of a temporary shock.

Citation:

BMAS (2021): Fragen und Antworten zum Thema Grundrente, 12. Januar 2021, www.bmas.de/DE/Soziales/Rente-und-Altersvorsorge/Grundrente/Fragen-und-Antworten-Grundrente/fragen-und-antworten-grundrente-art.html

Der Paritätische Gesamtverband (2020):

www.der-paritaetische.de/presse/paritaetischer-armutsbericht-2020-armut-in-deutschland-auf-rekordhoch/
Handelsblatt (2019): OECD lobt deutsche Integration durch Ausbildung, 17.12.2019.

Statistisches Bundesamt (2020):

<https://de.statista.com/statistik/daten/studie/1396/umfrage/leistungsempfaenger-von-arbeitslosengeld-ii-jahresdurchschnittswerte/>

Tagesschau (2019):

<https://www.tagesschau.de/wirtschaft/migration-arbeitsmarkt-101.html>

Healthcare System Preparedness

Health Policy
Preparedness
Score: 8

The German healthcare system is of high quality, inclusive and provides healthcare to almost all citizens. Most employees are insured in the public health insurance systems, whereas civil servants, self-employed persons, high-income persons and some other groups are privately insured. The system is, however, challenged by increasing costs. Recently, the system's short-term financial stability is better than expected due to buoyant contributions resulting from the employment boom. However, long-term financial stability will be challenged by the aging population and increasing costs within the healthcare system. The system guarantees equal access to all the necessary medical services on a high standard.

The German healthcare system was well prepared to cope with a pandemic and features excellent emergency capacities. It is number one with respect to the ratio of intensive care beds per 100,000 inhabitants ("Intensive Care Beds") and scores high on indicators regarding available hospital beds, doctors and nurses relative to the population (Dutt et al. 2021). During the first wave of the coronavirus pandemic, the healthcare system reacted swiftly and with foresight to the anticipated emergency by reserving intensive care units and mobilizing large numbers of additional ventilation devices. Some shortages were felt during the first months of the pandemic with regard to protective materials. The large numbers of infection during the second wave put the system under stress. However, throughout the reporting period, the healthcare sector has remained functional even during the severe conditions brought on by the pandemic and, unlike several other countries, ensured that COVID-19 patients receive professional treatment that reflects the current state of knowledge regarding the virus and treatment.

Test capacities clearly lagged behind what the country needed and did not meet the standards achieved in other highly developed industrial countries. It was not until relatively late in the second wave and with the help of the

German army that sufficient test facilities for old-age and long-term care homes were established. The laggard state of digitalization in the German healthcare system handicapped the country in rapidly expediting test processing capacities.

Citation:

Dutt, Verena, Fischer, Leonie, Heinemann, Friedrich, Kraus, Margit and Minkus, Fynn (2021), Exkurs: Vergleich der Gesundheitssysteme, in: Länderindex Der Stiftung Familienunternehmen, 8. Auflage, München: Stiftung Familienunternehmen, 117-132.

Families

Family Policy
Preparedness
Score: 8

For decades, a broad consensus among political parties and major societal actors aligned the German system paradigmatically toward the male breadwinner model. Universal family benefits, incentives tailored to the needs of married couples and single-earner families, and a shortage of public childcare services contributed to the low rate of female participation in the workforce.

Today, this traditional approach has been substantially corrected. Parental leave, previously short and lacking income compensation, has been extended. Paternity leave has been introduced and promoted, and income loss compensated. As a result, a person's net income while on parental leave is, on average, just 25% less than net income prior to parental leave. Additionally, the number of public childcare slots has increased. A legal right to childcare beginning at the age of one year came into effect in August 2013. By international standards, the ratio of children under three years of age that are enrolled in a childcare facility is below average but rising. The ratio reached 35.0% in March 2020 and shows a strong regional variation between the eastern federal states (52.7%) and those in the west (31.0%), which mirrors the different traditions of female employment in both parts of the country (Destatis 2021). Moreover, many childcare facilities and schools are only available for limited hours, making it difficult for both partners to engage in full-time employment.

The German welfare and tax system provides families substantial financial support. Children are included in their parents' statutory health insurance without requiring additional contributions. Child benefits were increased on Jan 1, 2021 and provide families a monthly payment of €219 per child for the first and second child, €225 for the third, and €250 for the fourth child (Bundesagentur für Arbeit 2021). In 2017, the government changed the regulations concerning parental allowances and parental leave. Parental allowances (Elterngeld) aim to compensate for parents' loss of income; the

amount paid depends on a parent's income previous to taking leave. Its replacement rate is 65% with minimum and maximum monthly payments of €300 and €1,800, respectively, over a 14 month-period after birth that can be freely shared between the parents (with a maximum of 12 months for one parent). A particular scheme (ElterngeldPlus) targets parents who work part-time and involves only half of the normal amount, but can be drawn for twice as long as the basic scheme (BMFSFJ 2021). While the rules are strictly gender-neutral, there is a distinctly gendered pattern in terms of who actually takes advantage of parental leave. In 2019, 24.5% of women and only 1.6% of men with children below the age of six were on parental leave (Destatis 2021). Moreover, equal labor-market participation is somewhat hindered by the way in which couples are taxed.

In summary, improvements to the childcare support infrastructure, combined with a growing shortage of qualified labor, have led to a considerable increase in the female labor force participation rate: While in 2005 only 66.9% of 15-to-64 year-old women were employed, this measure increased to 74.9% by 2019, placing Germany among the top performers of industrial countries (OECD 2021). However, 36.3% are working part-time, which is far above the OECD average of about 25% (OECD 2021).

Overall, Germany features the financial and infrastructural preconditions that allow parents to freely decide whether or not to enter the labor market, even during child-rearing years, and there is legislation in place to prevent discrimination. Thus, the stronger role played by mothers in the early years of child-rearing seems to reflect voluntary decisions made by families on an individual basis and the impact of societal norms, not government-induced incentives.

Citation:

Bundesagentur für Arbeit (2021), Kindergeld: Anspruch, Höhe, Dauer, www.arbeitsagentur.de/familie-und-kinder/kindergeld-anspruch-hoehe-dauer

Bundesministerium für Familie, Senioren, Frauen und Jugend (2021), Elterngeld und ElterngeldPlus, www.bmfsfj.de/bmfsfj/themen/familie/familienleistungen/elterngeld/elterngeld-und-elterngeldplus/73752

Destatis (2020), Betreuungsquote der unter 3-jährigen Kinder auf 35,0 % gestiegen, Pressemitteilung Nr. 380 vom 30. September 2020.

Destatis (2021), Qualität der Arbeit, Personen in Elternzeit, www.destatis.de/DE/Themen/Arbeit/Arbeitsmarkt/Qualitaet-Arbeit/Dimension-3/elternteil.html

OECD (2021), Employment database, stats.oecd.org/Index.aspx?DataSetCode=GENDER_EMP

III. Economic Crisis Response

Economic Response

Economic
Recovery
Package
Score: 9

Germany's economic policy response to the coronavirus recession was swift, comprehensive and of historic magnitude. The extent of Germany's discretionary fiscal measures, including additional spending, foregone revenues, loans, equity and guarantees, total 38% of GDP, according to the IMF. With this enormous effort, Germany numbers among those industrial countries that did the most to supported economic recovery in their country (IMF2021a; see also: Bruegel 2020). Germany's excellent pre-pandemic budgetary situation, combined with a broad political consensus, enabled both the federal and state governments to react swiftly and vigorously.

The toolbox of coronavirus crisis-stabilization instruments is widely diversified and targets a broad range of recipients, including companies of different sizes, workers, the self-employed, and the cultural sector, and has been repeatedly adjusted as the pandemic develops. The expanded access to short-term work subsidies ("Kurzarbeit") has been a key element in the labor market policy response (for details see "Labor Market Response").

While the list of measures is long and detailed, some of the most prominent include the following (IMF 2021b). Early measures introduced in spring: (1) spending on healthcare equipment, hospital capacity and R&D (vaccine); (2) expanded childcare benefits for low-income parents and easier access to basic income support for the self-employed, (3) €50 billion in grants to small business owners and self-employed persons severely affected by the COVID-19 outbreak in addition to interest-free tax deferrals until the year's end. The stimulus package in June comprised a temporary VAT reduction, income support for families, grants for hard-hit SMEs, financial support for local governments, expanded credit guarantees for exporters and export-financing banks, and subsidies/investment in green energy and digitalization efforts. Moreover, the government suspended deadlines to file bankruptcy and other legal regulations.

However, not all measures are considered to be particularly effective. According to the German Council of Economic Experts, the temporary VAT reduction, for example, which was one of the most expansive measures included in the stimulus package, has had a limited impact and was not sufficiently targeted (Sachverständigenrat 2020, p.122).

Through the newly created economic stabilization fund (Wirtschaftsstabilisierungsfonds, WSF) and the public development bank KfW, the government has expanded the volume of available guarantees and access to public guarantees for firms of different sizes, credit insurers, and non-profit institutions, with some proving eligible for up to 100% guarantees. The WSF and KfW also include facilities for public equity injection into firms with strategic importance.

In addition to the federal government's fiscal package, many subnational governments (Länder and municipalities) have announced their own measures to support local economies. In total, these measures amount to €141 billion in direct support and roughly €70 billion in state-level loan guarantees (IMF 2021b).

Parallel to the renewed lockdown introduced in autumn 2020 to combat the second wave of COVID-19 infections, the government introduced additional fiscal measures and enhanced existing ones to support affected businesses, including revenue compensation (of up to 75%), as well as public loan guarantees and basic income provision.

Germany's powerful economic response to the pandemic crisis can be attributed to the fact that its recession in 2020 was milder than that endured by the average EU state, unemployment growth was limited, and economic sectors not immediately hit by the second lockdown have proved able to recover quickly.

Citation:

Bruegel (2020): The fiscal response to the economic fallout from the coronavirus, Last update: 24 November 2020, www.bruegel.org/publications/datasets/covid-national-dataset/

IMF (2021a): Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic, January 2021, www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19

IMF (2021b): Policy Responses to Covid-19, Policy Tracker, www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2020): Jahresgutachten 2020/21

CORONA-KRISE GEMEINSAM BEWÄLTIGEN, RESILIENZ UND WACHSTUM STÄRKEN, available at <https://www.sachverstaendigenrat-wirtschaft.de/jahresgutachten-2020.html>

Sustainability of Economic Response

Recovery
Package
Sustainability
Score: 9

An important aim of Germany's coronavirus stimulus package is to combine the short-run stabilization objective with increased support for its carbon reduction strategy and thus features key items addressing electromobility and the country's energy transition (Bundesregierung 2020).

For starters, the federal government increased its financial support to public transport companies by €2.5 billion in 2020 in order to cushion public transport companies from revenue shortfalls. More importantly, the government introduced an economic rescue package, the “Package for the Future” (Zukunftspaket), which will total €50 billion over the next five years, together with substantive ecological measures that mirror the country’s increased climate ambitions (see “Economic Vulnerability”). These include:

- Increased funding for project-related research focusing on the transition of energy systems and sector coupling.
- Various measures fostering the transition to electromobility, including a doubling of the federal premiums for the purchase of e-vehicles. A bonus program has been launched to incentivize auto manufacturers and suppliers to invest in R&D, new technologies, processes and facilities related to electric cars, including battery development and production. Additional federal resources have been introduced to support the expansion of the charging infrastructure. Bonuses targeting the purchase of traditional cars were discussed but rejected due to ecological considerations (Thorwarth 2020).
- The federal government decided to provide more equity to the German rail company Deutsche Bahn in order to compensate for the company’s loss in sales as a result of the pandemic and to stabilize its investment plans. Other programs have been introduced that foster electromobility for buses and reducing CO₂ emissions among airplanes and ships through fleet modernization.
- The Package for the Future also provides funds for Germany’s new National Hydrogen Strategy, which aims to make the country a supplier of modern hydrogen technology and ensure that these new technologies are applicable on an industrial scale in Germany by 2030.
- Finally, the CO₂ reduction program for the housing sector has been expanded, as has federal funding for the energy-efficient renovation of municipal buildings and non-profit institutions.

Citation:

Bundesregierung (2020): Corona-Folgen bekämpfen, Wohlstand sichern, Zukunftsfähigkeit stärken
 Ergebnis Koalitionsausschuss 3. Juni 2020,
www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/Konjunkturpaket/2020-06-03-eckpunktetpapier.html
 Thorwarth, Katja (2020): Sigmar Gabriel kritisiert SPD-Spitze wegen Kaufprämien-Blockade scharf: „Grün-Populistische Politik“, <https://www.fr.de/politik/corona-krise-konjunkturpaket-gabriel-kritisiert-wegen-abwrackpraemie-zr-13784271.html>

Labor Market Response

Labor Market
Policy Response
Score: 9

A key instrument with proven efficacy for the German welfare state is the so-called short-time work allowance (“Kurzarbeitergeld”). With this more or less ready-to-implement tool at its disposal, the government could act quickly and adjust to the sudden and severe impact of the spring lockdown and the global economic contraction.

In normal times, the short-time work subsidy is granted if a company reduces its employee’s working hours instead of laying them off. In such cases, the Federal Employment Agency will pay 60% of the net income (for employees with one child, this increases to 67%, and social security contributions, except for unemployment insurance, are reimbursed on a lump-sum basis). Before the coronavirus crisis, short-time work benefits could be claimed for a maximum of 12 months.

In April, the government expanded the instrument in order to avoid massive layoffs and income losses as a consequence of the lockdowns (IMF 2020, IMF 2021). The replacement rate, starting at 60% for the first three months, was raised to 70% during the 4th to 6th months, and further to 80% from the 7th month. The maximum duration of the program was extended to 21 months. Moreover, coverage was expanded to include temporary workers (about 2% of total employment). For employers, their social security contributions have been waived. Furthermore, income from secondary employment will not be fully deducted from short-time benefits. In August, the government extended the maximum duration of short-term work benefits to 24 months.

The basic idea here is that short-time work will offset some of the temporary earning losses and prevent job losses. The number of those on short-time work reached a historically high 6.0 million in April 2020. This figure fell to 2.1 million in October, before the second wave and renewed lockdowns led to a resurgence in claims which, however, came nowhere near the levels reached earlier in the year (Bundesagentur für Arbeit 2020). The only modest increase in unemployment during the recession year of 2020 (see “Vulnerability of Labor Markets”) underscores the instrument’s success. Germany thus appears to be repeating the success it had with this instrument in the wake of the financial crisis, which has drawn considerable international attention and has been copied in a growing number of other countries.

While thus there is no doubt that Germany’s labor market policy response was well targeted and successful, there are more critical views with respect to the longer-term perspective. Critics point in particular to the extended duration of

payments with replacement rates increasing over time, which could damage flexibility and the labor market's ability to absorb structural change. It is widely understood that the pandemic is expediting structural change, for example, with retail sales moving to online platforms permanently. Experts also anticipate a considerable decline in the number of business trips conducted with profound consequences for mobility. The consequence is that the demand for labor after the crisis will be very different from that before. The short-time work scheme, however, tends to freeze employment in old sectors and may not properly incentivize worker mobility into other emerging sectors. Germany's labor market policies may also be criticized for not having paid enough attention to further education (Fortbildung) and advanced training (Weiterbildung) as a means of fostering sectoral mobility.

However, with respect to its short-term response to an acute crisis, German labor market policy clearly deserves a top grade.

Citation:

Bundesagentur für Arbeit (2020): Realisierte Kurzarbeit, Februar 2021, <https://statistik.arbeitsagentur.de/DE/Navigation/Statistiken/Fachstatistiken/Leistungen-SGBIII/Kurzarbeitergeld/Kurzarbeitergeld-Nav.html>

IMF (2020): IMF Country Focus: Kurzarbeit: Germany's Short-Time Work Benefit, June 15, 2020, www.imf.org/en/News/Articles/2020/06/11/na061120-kurzarbeit-germanys-short-time-work-benefit

IMF (2021): Policy Responses to Covid-19, Policy Tracker, www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

Fiscal Response

Fiscal Policy
Response
Score: 9

There is overwhelming consensus among German policymakers and economists that the German government's massive fiscal response constituted a responsible reaction to the pandemic. Though observers may criticize various details, most agree that, overall, the stimulus packages and emergency aid provided have mitigated the economic and societal impact of the pandemic by softening the negative long-term effects. However, the packages and the recession-induced shortfall in tax revenues will lead to a substantial increase in public debt. As discussed under the "Fiscal Vulnerability" indicator, German public finances were well-positioned to finance additional debt at the outbreak of the pandemic. Germany's debt level (at the end of 2020) remains moderate, at 73.3% ("Debt-to-GDP"), compared to other large EU countries, the United States or Japan. More importantly, in contrast to many other industrial countries, Germany has demonstrated its capacity for fiscal consolidation, as demonstrated by its success in reversing public debt growth since 2010.

Since introducing its constitutional debt rule, the so-called debt brake, institutional precautions are in place that are designed to enforce an exit from

crisis-related deficit spending. Article 115 of the constitution prescribes structurally balanced budgets for the states and a deficit limit of 0.35% of GDP for the federal level. Of crucial importance for fiscal leeway during the coronavirus crisis is the escape clause of the same article: In the event of a natural catastrophe or unusual emergency situations that are beyond the government's control and which could prove substantially harmful to the state's financial capacity, these credit limits may be exceeded on the basis of a decision taken by a majority of the members of the Bundestag. This escape clause was activated for the years 2020 and 2021. Thus, contrary to some misleading claims made in public discourse, the constitutional debt brake has not been suspended; in fact, the government has acted appropriately and within the bounds of the law. The debt brake has an institutional memory for the crisis-related debt increase. This memory can support the exit strategy as follows: Any decision to activate the clause must be combined with an amortization plan. This plan defines the timeline for the repayment of the funds borrowed in the crisis. Both the federal government and state-level governments, when adopting their coronavirus budgets, were required to define their repayment terms. The federal level plans to start the repayment in 2026 with annual payments of €15 billion until 2042.

While a constitutional rule predefines the exit strategy from coronavirus-related debt, there is intensifying debate over the extent to which the debt brake is still adequate. Critics regard the debt brake as an obstacle to sufficient investment, defendants point to its success in recent years in enforcing budgetary discipline, which proved crucial to providing the government its ample fiscal leeway during the pandemic. Whatever the weight of arguments pro and con, the debt brake is legally secure, as it is enshrined in the constitution. Changing it would require a two-thirds majority in both federal parliamentary chambers, an unlikely prospect. There is thus a credible constitutional guarantee that an exit from the current high-deficit spending will be enforced.

Spending on investment and families (see "Family Policy Response") has played some role in the design of the government's fiscal response to the crisis, with the stimulus package including various elements targeting investment (Bundesregierung 2020). In order to stabilize municipal investment spending, municipalities are receiving compensation for their shortfalls in trade tax revenues. A larger component targets green mobility (for details, see "Sustainability of Economic Policy Response"). Additional funds are being invested in digital infrastructures (e.g., 5G network, artificial intelligence, digital administration). The massive guarantees and liquidity support for companies also aims at stabilizing corporate spending for investment and R&D and, in this sense, is oriented at future sustainability. However, much of

the funds in these packages simply seeks to stabilize private household incomes and consumption spending (e.g., temporary VAT rate reduction), and to protect employment – thus they do not, strictly speaking, constitute investment spending. However, this is not unusual for an anti-cyclical spending package that aims to foster stability in society and trigger rapid economic stabilization effects.

Citation:

Bundesregierung (2020): Corona-Folgen bekämpfen, Wohlstand sichern, Zukunftsfähigkeit stärken
 Ergebnis Koalitionsausschuss 3. Juni 2020,
www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/Konjunkturpaket/2020-06-03-eckpunktepapier.html

Research and Innovation Response

Research and
 Innovation Policy
 Response
 Score: 9

Germany is a leading location for biomedical innovation. In the context of the COVID-19 pandemic, German companies have numbered among the leaders in vaccine development and manufacturing. The first vaccine to be licensed for use in the European Union from BioNTech/Pfizer was co-developed by a German company and is based on the innovative mRNA approach. Germany thus features the environmental conditions needed to enable pioneering pharmaceutical innovations, including high (and increasing) levels of public and private R&D spending (see “R&I Policy Vulnerability”).

Germany is a founding member of the international vaccine initiative Coalition for Epidemic Preparedness Innovations (CEPI). CEPI has received €90 million in funding from the Federal Ministry of Education and Research (BMBF) for the period 2017 to 2021 (BMBF 2020). The BMBF made additional funds of €140 million available in 2020 to promote vaccine development within the framework of CEPI. The German government promised further funds for CEPI at the EU Commission’s global donor conference in May 2020. The BMBF has furthermore launched a special program worth up to €750 million to strengthen and accelerate the development and production of vaccines. Through this program, the BMBF has supported three companies that use different technologies to develop vaccines – BioNTech, CureVac, and IDT Biologika – and has thus contributed to the rapid availability of vaccines in Germany, Europe and worldwide. Germany supported the EU decision for a joint European procurement of vaccines. Critics have pointed to Europe’s slow and timid strategy to securing vaccines through the EU Vaccine Strategy, which led to a sluggish start in vaccination rollouts within the EU compared to countries like Israel, the United Kingdom or the United States. However, these mistakes made by the EU can hardly be ascribed to the German government. The decision to prevent a chaotic race among states within Europe to procure vaccines is in line with Germany’s strong European and multinational policy

strategy. Public R&D funds do not only support vaccines but also efforts to better understand the virus and to develop drugs for use in battling the respiratory conditions triggered by COVID-19.

Germany was not well-positioned to develop innovative digital solutions for contact tracing. First, compared to its peers, Germany lags behind in digitalizing its healthcare sector and public administration, which amounts to a severe handicap when it comes to enabling the swift exchange of information on infections and contacts. Second, German data protection standards are very high, and data protection authorities have wide reach in interpreting these standards. These high data protection standards are frequently named as a barrier to a more successful contact tracing app because of the limits placed on the level of contact information that can be detected. The country's corona app did not get off to a bad start, and its technical functionality is sound. By mid-January 2021, the app's downloads reached 25 million, and 185,000 positive test results had been shared through the app (Robert Koch Institute 2021). However, this amounts to a small number relative to total infections since nobody is legally obliged to register a positive test result with the app. Due to limited digital development, not all independent laboratories transmit results through the app, and almost none of the hospital-related labs are connected. In this environment, the success of the app depends significantly on user responsibility, their digital skills and willingness to collaborate, which limits the app's potential efficacy.

Citation:

BMBF (2020): Coronavirus: Was tut das BMBF, www.bmbf.de/de/coronavirus-was-tut-das-bmbf-11069.html

Robert Koch Institut (2021): Kennzahlen zur Corona-Warn-App, 8.1.2021, www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/WarnApp/Archiv_Kennzahlen/Kennzahlen_08012021.pdf?__blob=publicationFile

IV. Welfare State Response

Education System Response

The sudden closure of schools and universities brought on by the pandemic exposed the extent to which Germany's digital education infrastructure and educators' digital skills lag behind. Schools on all levels (preschools, primary, secondary, tertiary, and vocational schools) were poorly prepared for home schooling and other alternatives. During the first wave of the pandemic in March/April 2020, schools scrambled to get emergency and largely

Education
Response
Score: 7

improvised measures underway that depended for the most part on the efforts, creativity and initiatives of local school management and educators. Whereas universities, which had the benefit of much better digital equipment, were able to quickly shift to digital teaching modules, schools responded by trying to ensure student access to paper-based learning materials and improvised efforts to maintain contact with students, all of which varied substantially from school to school.

State governments and the federal government reacted with massive investment programs intended to swiftly improve schools' digital infrastructure. The following measures were introduced at the federal level alone (BMBF 2020), thus adding to further investment programs introduced by all states:

- €100 million from the DigitalPact for Schools fund were made available to the federal states at short notice. These funds are to be used by the states for financing new infrastructures that improve digital education and learning when schools are closed nationwide.
- €500 million were mobilized to provide digital devices to schoolchildren who do not have access to digital equipment. A further €500 million has been mobilized to provide educators technical equipment. Another €500 million package focuses on providing digital training to school administrators and educators. In total, all these new federal programs aimed at modernizing schools in terms of digital transformation add up to €6.5 billion.
- For schools that do not have their own digital cloud, the Federal Ministry of Education and Research (BMBF) has launched the HPI School Cloud project to provide them such access.

By the time the second wave of the pandemic hit and forced schools across the country to close in mid-December, the conditions under which digital learning and online classes could be conducted had clearly improved, thanks to the broader availability of digital equipment and the substantial digital learning curve that took place among educators, the students and their families. Moreover, the regulatory framework (including data protection constraints) had been clarified to some extent. Whereas many educators, citing data protection issues, had initially expressed concerns about using digital education formats, the education authorities for each state have since largely settled most questions and defined which available resources can be used under which circumstances.. The pandemic has therefore pushed forward, within a relatively short time period, considerable development in Germany's digital education landscape, which includes onboarding everyone involved.

Although the situation with regard to remote teaching improved considerably in 2020, significant problems persist. Even with the improvements, education

remains compromised. During the first school closure in spring 2020, the amount of time spent on classwork by students in a remote-learning context (regardless of socioeconomic background) was essentially halved (Grewening et al. 2020). Even the best digital equipment can do little to solve the problem of increasing social disparities in educational success in remote education contexts. Educationally disadvantaged students, who generally lack digital equipment at home and possess weak independent learning skills, suffered the most from school closures. During the first lockdown, children from disadvantaged groups spent about 6.3 hours per day consuming content on TV, through computer games or other online media, which amounts to 1.3 hours more than students with a better educational record. Estimates assume that the learning losses for children from educationally disadvantaged families are up to 55% higher than that of children in families with higher education attainment levels.

The federal states' rules on school closures and emergency access have increasingly paid attention to the risk of social segregation. Emergency schooling rules now include clauses that provide students, who might otherwise languish due to a lack of family support, physical access to local schools. But clearly, as is the case in all other countries, these measures can only somewhat mitigate the severe social consequences of long periods of school closures.

In terms of the crisis' impact on tertiary-level students financial situation, it should be noted that state universities and institutions of higher education in Germany are free of tuition fees. Also, the government has been quick to adjust the rules for student financial support (BAföG) during the pandemic (BMBF 2020). Grants to students have also been paid out even when coursework has been suspended due to the COVID-19 pandemic. The maximum BAföG funding period has been extended to compensate for any interruption of courses due to the pandemic. Students who have lost their student jobs in the wake of the pandemic and need financial support can apply to the public lender KfW for an interest-free loan of up to €650 per month. This student loan option was opened up to foreign students from July 2020 to March 2021. In addition, the BMBF made up to €100 million available to the student unions, which have the authority to provide students in acute situations with grant monies.

Citation:

BMBF (2020): Coronavirus: Was tut das BMBF, www.bmbf.de/de/coronavirus-was-tut-das-bmbf-11069.html

Grewening, E, P Lergetporer, K Werner, L Woessmann, and L Zierow (2020), "COVID-19 and Educational Inequality: How School Closures Affect Low- and High-Achieving Students," CESifo Working Paper 8648.

Social Welfare Response

Social Welfare
Policy Response
Score: 9

The generous income support delivered through the short-time work benefits provide effective income protection for workers in regular employment, which protects many (e.g., migrants, single parents) but not all vulnerable groups.

All welfare programs have been maintained during the crisis and many have been expanded or new ones established.

A crucial extension concerns the facilitated access to the system of basic income support targeting small enterprises, freelancers, single-person businesses, older people and people with a reduced earning capacity (Bundesregierung 2020). During the crisis, simplified procedural rules have rendered such individuals eligible for a basic income as job-seekers. Assets testing has thus been suspended and the actual amounts paid as housing rent are accepted as appropriate. This legislation assures that comparable protection is in place across all livelihood-securing systems.

In addition, the government has tried to mitigate the pandemic's negative impact on the livelihoods of more specific groups. In December 2020, the Ministry of Finance introduced its temporary aid scheme ("Überbrückungshilfe III") for the solo self-employed and self-employed members of the so-called liberal professions. This scheme provides these individuals grants to cover their fixed costs. The so-called exceptional business aid ("außerordentliche Wirtschaftshilfe"), which was introduced to help cover losses incurred during the November and December lockdown, could be applied for as of December 2020. As of January 2021, so-called restart assistance ("Neustarthilfe") was made available for the solo self-employed.

Of course, the economic consequences of the long and repeated lockdowns are for some sectors particularly dramatic and a wave of insolvencies is anticipated. However, as of January 2021, the overall impression is that German support schemes were comprehensive and afforded vulnerable groups in particular specific attention.

The government's family-related measures paid considerable attention to single parents through various instruments (see "Family Policy Response").

Citation:

Bundesregierung (2020): Protection for the self-employed and social services, www.bundesregierung.de/breg-de/themen/coronavirus/sozialschutz-paket-1735076

Health Policy
Response
Score: 9

Healthcare System Response

As discussed under “Health System Vulnerability,” the German health system was in a much better position than most other countries to cope with the medical challenges of a pandemic. Even though the number of hospitals in Germany decreased over the last years, the country has one of the highest number of hospital beds relative to population size in Europe. In addition, the German hospital sector is highly decentralized, which results in very good regional accessibility.

Given this rather favorable environment, health policymakers were able to respond early on in the pandemic by increasing resources and coordinating regional imbalances. As of April 2020, hospitals were required by law to report on a daily basis their intensive care capacities with ventilators to the German Interdisciplinary Association for Intensive Care and Emergency Medicine (DIVI) intensive care registry. The DIVI registry has proved effective in being able to identify regional shortages early on and in coordinating strategic patient relocations.

To increase emergency capacity during the first wave, the federal government urged all hospitals to postpone elective surgeries and treatments, and to recruit additional health professionals. Specialized treatment centers for COVID-19 patients and patients with respiratory symptoms were set up. By early April, the German Hospital Federation reported that due to the government’s request to free up capacity for coronavirus patients, the number of ICU beds had increased by 12,000 to about 40,000 . However, according to the DIVI intensive care registry, actual ICU capacity was lower, due primarily to staff shortages. Particularly hard-hit states suspended limits to working hours. During the second wave, the federal state of Lower Saxony increased the maximum number of working hours for employees in clinics and nursing homes to up to 60 per week, including a daily maximum of 12 hours.

The Robert Koch Institute (RKI) plays a key role in communicating the ever-growing medical knowledge on COVID-19 and its treatment. Since the outbreak of the pandemic, the RKI has released documents providing guidance for prevention and management of COVID-19 cases for all relevant care areas (e.g., inpatient, ambulatory, elderly care), as well as updated case definitions which impacts on the reconfiguration of services in care facilities.

During the reporting period, the German healthcare system was always able to provide all COVID-19 patients treatment reflective of the current state of medical knowledge while, at the same time, continuing to provide essential medical services for other groups of patients. In addition, German hospitals

were able to help neighboring countries by accepting critically ill patients (see “International Cooperation”). In December 2020, the DIVI and RKI jointly declared that, so far, no rationing of medical treatment has become necessary in Germany thanks to its vast resources and the smoothly organized, forward-looking regional coordination efforts (DIVI 2020).

Citation:

DIVI (2020): Aktuelle Lage in Deutschland: Wir haben noch Kapazitäten auf den Intensivstationen – überregionale Verlegungen möglich, Pressemitteilung 16.12.2020, www.divi.de/presse/pressemeldungen/pm-aktuelle-lage-in-deutschland-wir-haben-noch-kapazitaeten-auf-den-intensivstationen-ueberregionale-verlegungen-moeglich

Response Monitor (2021): COVID-19 Health System Response Monitor – Germany, www.covid19healthsystem.org/countries/germany/countrypage.aspx

Family Policy Response

Family Support
Policies
Score: 9

The government has taken various actions to help families cope with income losses and school/childcare facility closures during the different phases of the pandemic (BMFJS 2021). These include the following measures:

Providing more generous access to short-term work benefits that includes an increase of the replacement rates for parents (see “Labor Market Policies” for details).

By the end of March 2020, the government introduced an entitlement for parents and single parents in the amended Infection Protection Act. In the case of school and day care center closures, there is a compensation entitlement that is designed to replace 67% of the loss of earnings if a parent has to stay at home. The entitlement can be claimed for children under 12 years of age and for those cases requiring care, and is granted for a maximum of 10 weeks (a maximum of 20 weeks for single parents). Parents working in home office are not entitled to compensation payments. In December 2020, the government decided to extend this measure with minor improvements until 31 March 2021.

Taking effect in January 2021, the number of sick days a parent can claim for taking care of sick children has been doubled. In 2021, parents can apply for a total of 20 instead of 10 days of children’s sickness benefit per parent. The benefit claim includes days of school or child daycare center closures independent from any sickness of the child. For single parents, the entitlement has been doubled this year from 20 to 40 days per child. If there are several children, each parent is entitled to a maximum of 45 working days. For single parents, the entitlement increases to a maximum of 90 working days.

In 2020, parents received a one-time child bonus of €300 for each eligible child. The bonus is taxed, but not offset against social benefits. It is intended

to specifically benefit families with small and medium incomes. In addition, a child supplement is being paid out to low-income families and the parental allowance has been made more flexible. Single parents will receive additional tax relief for 2020 and 2021. Their tax-free allowance increased from €1,908 to €4,008 per year.

Parental leave benefits have been made more generous in order to prevent benefit reductions that could otherwise result from lower income due to short-term work or unemployment.

Over the course of the pandemic, emergency childcare has been expanded. While this access was limited to children whose parents are employed in system-relevant occupations during the first wave, access was expanded during the second wave of lockdowns that began in fall 2020.

All adjustments made to the law are formulated in a gender-neutral manner, but – presumably due to gendered wage differentials and traditional work norms, women are less likely to engage in full employment.

Citation:

BMFSFJ (2021): Corona-Pandemie, finanzielle Unterstützung, www.bmfsfj.de/bmfsfj/themen/corona-pandemie/finanzielle-unterstuetzung

International Solidarity

International
Cooperation
Score: 9

In March 2020, the Federal Ministry for Economic Cooperation and Development (BMZ) launched an immediate action program to mitigate the pandemic burden for developing countries, in particular to strengthen health systems, refugee support, food security and crisis management (BMZ 2020, Bundesregierung 2020). For this purpose, the ministry provided €1 billion in March 2020 and increased it by another €1.5 billion in mid-2020. A large part of the budget went toward the delivery of urgently needed materials to 30 affected countries, like emergency beds, respirators, protective clothing and mobile hand-washing units. In addition, the ministry has provided the African Union with around 1.4 million COVID-19 tests to fight the pandemic. In addition, South Africa, which was most affected by COVID-19 in Africa, received 750 hospital beds and 150 mobile oxygen tanks. A coronavirus test center is also under construction there. A project commissioned and launched by the BMZ in 2015, the German Epidemic Preparedness Team (SEEG), has been providing 10 countries with equipment and training local experts and health offices. Another project, the Drone and Data Aid project, which is operated under the auspices of the GIZ, delivers vital medical supplies and equipment by drone to remote areas in Rwanda and Malawi and will be

providing populations in these countries COVID-19 vaccines when they are available. Another measure targeting misinformation about the virus abroad involves financial support being provided to local media outlets in some developing countries. Compared with German efforts to combat the virus in Germany and the EU, the country's contribution to the global context has been marginal.

Germany demonstrated its solidarity with Europe in several ways, in part by providing massive financial support for the large EU rescue packages, which involves a weighty net financial burden for the country. German states have also flown in critically ill patients from particularly hard-hit EU countries and treated them in their available hospital beds. During the first wave in March/April, more than 200 patients from France, Italy and the Netherlands were transported to Germany and treated. Medical support in the form of medical staff, materials and equipment such as ventilators and anesthesia face masks were sent to Italy (Federal Foreign Office, 2020).

Playing an active role in the advancement of international vaccine initiatives, Germany is a founding member of the international vaccine initiative Coalition for Epidemic Preparedness Innovations (CEPI, see "R&I Policy Response").

Citation:

Federal Foreign Office (2020): How Germany is helping Europe in the Covid-19 crisis, www.auswaertiges-amt.de/en/aussenpolitik/europa/maas-corona-europe/2328352

BMZ (2020): Federal Ministry for Economic Cooperation and Development, Umsetzung des Corona-Sofortprogramms, www.bmz.de/de/zentrales_downloadarchiv/Presse/bmz-corona-sofortprogramm-umsetzung.pdf

Bundesregierung (2020): Corona-Sofortprogramm, Internationale Solidarität in Krisenzeiten, www.bundesregierung.de/breg-de/aktuelles/corona-sofortprogramm-1765238

Resilience of Democracy

Media Freedom

Media Freedom
Score: 9

Having climbed to places since 2019, the 2020 World Press Freedom Index ranks Germany ranks 11th out of 180 countries.

During the coronavirus crisis, freedom of the press was never subject to interference by the German government. Critics, however, point to the dependencies that exist between authorities and the public media organizations (ARD and ZDF) that may hamper a fully open and impartial debate of political decisions in the pandemic. However, reports on the government's actions – including criticism of them – was always possible and the government did not interfere with media activity. While media reports on the government's initial response to the crisis were mostly positive, news coverage has become more critical, particularly with regard to the sluggish vaccination rollout (Deutschlandfunk 2021). The initially positive reports can be attributed to a rally-around-the-flag sentiment rather than any fear of government intervention.

Opinion polls show that trust in media reporting, and public service broadcasting in particular, is high and that faith in the media's independence has increased during the crisis (infratest dimap 2020).

Citation:

https://www.reporter-ohne-grenzen.de/fileadmin/Redaktion/Downloads/Ranglisten/Rangliste_2020/Rangliste_der_Pressefreiheit_2020_-_RSF.pdf

Deutschlandfunk, 2021: Corona-Berichterstattung in Deutschland. NYT-Korrespondentin: „Stimmung in den Medien gekippt“, available at https://www.deutschlandfunk.de/corona-berichterstattung-in-deutschland-nyt-korrespondentin.2907.de.html?dram:article_id=494673

infratest dimap, 2020: Glaubwürdigkeit der Medien 2020, available at <https://www.infratest-dimap.de/umfragen-analysen/bundesweit/umfragen/aktuell/glaubwuerdigkeit-der-medien-2020/>

Civil Rights and Political Liberties

Civil Rights and
Political Liberties
Score: 8

By international comparison, Germany's lockdown measures were moderately strict, milder than those levied in Italy or Spain but more restrictive than those introduced Sweden or Switzerland.

However, they included substantial restrictions of fundamental rights that were unprecedented in the history of the Federal Republic of Germany (Gesellschaft für Freiheitsrechte 2021). The most important restrictions on fundamental rights and freedoms concern: the right to freedom of movement (Art. 11); the right to freedom of assembly (Art. 8); the freedom of the person (Art. 2), insofar as persons must be quarantined; the inviolability of the home (Art. 13), because homes of infected persons may be entered by the public health officer under certain conditions; the right to freedom of occupation (Art. 12), because many stores are no longer allowed to open; the right to the development of the personality (Art. 2), because in everyday life many activities (going to cinemas, theaters, concerts, doing sports, etc.) can no longer be pursued; freedom of religion (Art. 4), because visits to religious services were not possible for some time; freedom of property (Art. 14), because, for example, access to one's own vacation home, is no longer possible. The government sees these restrictions as justified in order to protect the right of life and physical integrity (Art. 2).

The federal and state-level governments have made their decisions in close exchange with the scientific community. These decisions have been informed by the expertise of researchers from the Robert Koch Institute (RKI) and a close monitoring of objective data on the dynamics of the pandemic. The legal restrictions imposed have been frequently challenged in the states' administrative and constitutional courts and at the federal level (see the overview for the Federal Constitutional Court in Bundesverfassungsgericht 2021: 59-60). Overall, and in view of the – at times – exponential growth in infections, the courts have more often than not approved the state-imposed restrictions, classifying them as adequate and proportionate measures to be taken in the context of a severe health threat to the population (Haufe 2021). However, especially in spring and summer 2020 when the numbers of infections were on the decline, state constitutional courts frequently deemed such restrictions as no longer justified, thus forcing state governments to lift restrictions. At the end of 2020, most courts confirmed the new restrictions introduced by the federal government during the second wave of the pandemic. However, in some cases, such as Baden-Württemberg's dusk-to-dawn curfew introduced in December 2020, courts forced authorities to bring an end to measures.

The government has tried to improve its capacity to predict when civil liberties can be restored on the basis of incidence rates, although the indicators or the thresholds have been subject to change.

There has been debate over the extent to which the executive has overstretched its competencies when making the decision without parliamentary consent to

place severe restrictions on basic freedoms. Commentators have criticized the executive for engaging in “illiberal prohibitory populism,” suggesting that these decisions have been driven more by the anticipated impact they have on potential voters rather than whether or not such measures are actually appropriate. Defenders of the executive’s actions point out that the Bundestag has been sufficiently involved through the amendment of the Infection Protection Act, which ensures that parliament rather than the executive determines whether an epidemic of national relevance (still) exists. Moreover, the RKI as well as the research community have supported the restrictions, which renders accusations of “prohibitory populism” unconvincing. The government’s actions have enjoyed considerable public support, but this seems to be based on a relatively well-informed public that finds the measures taken to be necessary in order to save lives.

Citation:

Bundesverfassungsgericht (2021): Jahresbericht 2020. available at https://jahresbericht.bundesverfassungsgericht.de/pdf/#dfliip-df_7/61/

Haufe (2021): Harte Grundrechtseingriffe im Corona-Winter – Urteile zur Rechtmäßigkeit, www.haufe.de/recht/weitere-rechtsgebiete/strafrecht-oeffentl-recht/sind-alle-regelungen-zur-corona-abwehr-mit-dem-gg-vereinbar_204_513412.html

Gesellschaft für Freiheitsrechte (2021): Corona und Grundrechte: Fragen und Antworten, freiheitsrechte.org/corona-und-grundrechte/

Judicial Review

Judicial Review
Score: 10

Throughout the pandemic, the judiciary has acted as an effective check on the risk of basic rights and political liberties being undermined. Even during lockdown periods, all courts were able to operate in full.

Courts across all jurisdictional levels, from the various lower courts at the state level to the Federal Constitutional Court, have reviewed various details of the lockdowns issued and have set certain limits. The case law of the Federal Constitutional Court was particularly important in this regard, because it repeatedly overturned government decisions, in particular those involving restrictions placed on the freedom of assembly. By the end of the first wave of the pandemic, state court decisions forced state governments to lift various lockdown measures earlier than planned for by the executive.

In other cases, however, especially in its ruling of December 4, 2020, the Federal Constitutional Court upheld certain bans confirmed by constitutional courts at the state level (Länder). This involved confirming the denial of a permit to demonstrate by the so-called Querdenker (lateral thinking) movement in Bremen, where 20,000 people were expected to attend, which would have meant the minimum distance of 1.5 to 2 meters could not be met

(Bundesverfassungsgericht 2020). In weighing Art 2 (2) (right to life and physical identity) against Art 8 (1) (freedom of assembly) of the Basic Law, the Federal Constitutional Court ruled in favor of protecting the rights of third parties.

Current opinion surveys show that German courts and their ability to protect basic freedoms during the pandemic are viewed favorably by citizens (FAZ 2021).

Citation:

Bundesverfassungsgericht (2020): Beschluss vom 05. Dezember 2020 – 1 BvQ 145/20, www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/DE/2020/12/qk20201205_1bvq014520.html

FAZ (2021): Umfrage zur Corona-Politik : Das Vertrauen in Gesetze und Gerichte ist groß, 15.02.2021, www.faz.net/aktuell/wirtschaft/buerger-vertrauen-der-corona-politik-und-der-justiz-17197677.html

Informal Democratic Rules

Informal
Democratic Rules
Score: 8

Non-partisan cooperation during crisis management was strong. There was consensus among the main parties on all important measures, even those that involved substantially restricting basic freedoms. Only the right-wing populist Alternative for Germany (AfD) party voted against almost all measures in the Bundestag and even claimed that the government tried to erect a dictatorship (Gauland 2020, pp. 24051-2). The AfD also supported demonstrations protesting coronavirus regulations and thus clearly contributed to political polarization in party politics. Nonetheless, the legitimacy of the government's decisions remained high and strengthened the population's trust in the corresponding measures (Statista 2020, 2021). Though some decisions differed from state to state, they were supported by most mainstream parties and to the extent that differences were articulated they were moderate. In this respect, the regulations were only slightly politicized and could be implemented smoothly, for the most part.

Citation:

Gauland, Alexander (AfD member of Bundestag): Speech in the Bundestag, 18 November 2020, 19th legislative period, 191st session, pp. 24050-24052

Statista (2020): Vertrauen in die deutsche Regierung, de.statista.com/statistik/daten/studie/153823/umfrage/allgemeines-vertrauen-in-die-deutsche-regierung/

Statista (2021): Zufriedenheit mit der Arbeit der Bundesregierung im Februar 2021, de.statista.com/statistik/daten/studie/2953/umfrage/zufriedenheit-mit-de

Resilience of Governance

I. Executive Preparedness

Crisis Management System

Crisis
Management
System
Score: 7

“Germany may have been better prepared than many other European countries” (Plümper and Neumayer 2020: 6). Indeed, Germany had been preparing for a pandemic for years. The Robert Koch Institute (RKI) published in early 2005 the National Pandemic Influenza Plan, which was jointly supported by the federal and state governments, and updated it in 2017 (Robert Koch Institut 2017). Disaster management is characterized by joint decision-making between the federal government and the states. Experts like Wolf (2014: 175-182) have long warned that hospitals in particular might not be properly prepared. By and large, however, this did not turn out to be the case, with two exceptions. First, as suggested by Wolf (2014: 176), local health offices were understaffed, which resulted in bottlenecks with regard to contact tracing efforts. Second, the stock of protective equipment proved to be inadequate, leading to shortages in the first months of the pandemic which, however, were overcome by summer. Ironically, however, the German government had sent protective medical gear to China and Iran as late as February 18 and March 2, respectively (Plümper and Neumayer 2020: 6-7).

The federal government reacted swiftly to developments in the pandemic in part as a result of the various coordination teams and task forces that were established to cultivate a close exchange with experts at the RKI.

Interministerial coordination is intense. The so-called small corona cabinet, which includes the chancellor, the ministers of defense, finance, home affairs, foreign affairs and health as well as the head of the Chancellery, has met every Monday to discuss the state of coronavirus affairs and measures. Regular cabinet meetings have been held on Wednesdays and have been followed by a briefing with (usually RKI) experts. The “large corona cabinet” meets one day later and includes all specialist ministers who are responsible for the issues

addressed. Various task forces deal with issues like health procurement or economic emergency support (Bundesregierung 2020).

Germany's public health authority system has effective early-warning and crisis management tools in place (see "Health System Response"). Thanks to these tools and early guidance provided by the public health authorities, the health sector was able to swiftly introduce far-reaching measures to slow the spread of the virus and mobilize additional medical resources. The coordination of intensive care units through the DIVI made it possible to rapidly increase capacities to accommodate a growing number of patients.

Citation:

Bundesregierung (2020): www.bundesregierung.de/breg-de/themen/coronavirus/regierungshandeln-covid19-1740548

Plümper, Thomas & Eric Neumayer (2020): Lockdown policies and the dynamics of the first wave of the Sars-CoV-2 pandemic in Europe, *Journal of European Public Policy*, DOI: 10.1080/13501763.2020.1847170

Robert Koch Institut (2017): Nationaler Pandemieplan Teil I, Strukturen und Maßnahmen, www.gmkonline.de/documents/pandemieplan_teil-i_1510042222_1585228735.pdf

Wolf, Frieder (2014): Gewalt, Armut, Ignoranz. Die Arbeitsteilung zwischen Staat und privatem Sektor bei der Bearbeitung ausgewählter vernachlässigter Probleme - Deutschland im intra- und internationalen Vergleich. Baden-Baden: Nomos.

II. Executive Response

Effective Policy Formulation

Effective Policy
Formulation
Score: 7

As one of the first European countries after Italy to be hit by the coronavirus pandemic (Plümper and Neumayer 2020: 5), Germany did not have a latecomer advantage. The country responded early on by introducing a "soft" lockdown, which had to be intensified after around two weeks. This harder lockdown thus came relatively late in epidemiological terms (i.e., number of infections per 100,000 population) (Plümper and Neumayer 2020). The initial response was thus swift but insufficient while later on (but relatively late in international comparison) the measures became more coherent.

The government had structures in place that guaranteed a close interaction with experts from the onset of the pandemic. The federal cabinet is briefed weekly by experts (see "Executive Preparedness"), and the expertise provided by the RKI bears considerable influence. All federal and state government decisions draw heavily on the most recent state of knowledge and research on the pandemic coming from multiple sources. For example, key decisions that

involve difficult trade-offs are discussed with the German Ethics Council which consists of more than 20 researchers from various disciplines. Leopoldina, an association of leading researchers in various fields also delivers a broad spectrum of advice on various issues. The German Council of Economic Experts also provides comprehensive advice on economic issues. Able to draw on this wealth of knowledge and advice, the government has responded to the pandemic with a conceptually sound strategy that has been anchored in scientific research.

Citation:

<https://www.tagesschau.de/inland/coronavirus-bundesregierung-berater-101.html>

Plümper, Thomas & Eric Neumayer (2020): Lockdown policies and the dynamics of the first wave of the Sars-CoV-2 pandemic in Europe, Journal of European Public Policy, DOI: 10.1080/13501763.2020.1847170

Policy Feedback and Adaptation

Policy Feedback
and Adaptation
Score: 7

The federal and state governments have kept a close eye on the pandemic and its development, thus repeatedly taking account of new insights. Decisions regarding the number of non-medical interventions to be permitted have been constantly adjusted and based on information coming from experts at the RKI. In fall 2020, as the number of infections was growing, some state governments clearly hesitated to reintroduce lockdown measures, but eventually decided to follow the overwhelming expert advice. Also, the government's economic packages aimed at mitigating social and economic hardship have been regularly assessed in extensive dialogues with trade unions and business associations. Over the course of 2020, these measures have become more and more extensive (see "Economic Recovery Package" and "R&I Policy Response").

Public Consultation

Public
Consultation
Score: 6

In general, meeting with societal stakeholders is part of the daily routine of a government representative in Germany. The impact of civil society actors depends largely on their organizational status and resources. Since interests are sometimes mediated through institutionalized corporatist structures, employers' associations and trade unions play a privileged role in some issue areas (v. Beyme 1997). Experts and interest groups regularly take part in parliamentary committee hearings throughout the course of the legislative process.

During the pandemic, while there have been various ad hoc consultations with the representatives from the sectors suffering from the lockdown measures, the consultations have not been particularly prominent and the necessity to find

agreement between the various actors in the federal government and the states reduces the role of interest groups (see Zohlnhöfer and Tosun 2021). State governments have also consulted with religious communities in order to reach a consensus on health regulations regarding the conduct of religious services.

Citation:

v. Beyme, Klaus, 1997: Der Gesetzgeber. Opladen: Westdeutscher Verlag.

Zohlnhöfer, Reimut and Jale Tosun, 2021: From the 'Rationalist Consensus' to 'Exclusive Incrementalism': The 'New' German Policy Style, in: Michael Howlett and Jale Tosun (eds.): The Routledge Handbook of Policy Styles, London: Routledge.

Crisis Communication

Crisis
Communication
Score: 8

Messaging on the part of federal and state governments has been serious in nature and aimed at communicating the urgent necessity of policy measures taken. In her periodically issued news conferences, Chancellor Angela Merkel has sought to solicit public support for the government's measures which involve massive restrictions affecting everyday life and interference with personal rights. The entire government has invested heavily in communicating the legitimacy of its policies through a variety of channels, including social media. Public media, in particular public service television, are the most important channels of communication. However, the federal and state governments do not communicate as one voice, and their cacophony of voices are not coordinated to deliver a cohesive message.

Government representatives have been hesitant to forecast with any precision when the public can expect an end to the restrictions. This caution is justified given the real-life uncertainty of the pandemic and is mostly seen as an indication of government actors' honesty regarding the limits of knowledge, also among experts.

According to Germany's long-running political polling and TV show Politbarometer, 56% of the population believe that the coronavirus is the country's most important problem and that it poses a risk to their health (December 2020). More importantly, about 55% are convinced that the government's policies have been appropriate in responding to the pandemic, while 43% question this. Only 23% endorse further measures. In general, support for the government's policies has been strong and fairly constant, ranging between 50% and 60%. Support for coronavirus measures was even during the summer of 2020 (Kirsch et al. 2020).

However, there has been some resistance to these policies, much of it organized by the so-called Querdenker (lateral thinking) group. This group has successfully mobilized an odd mix of those who believe the coronavirus is a

hoax, those who question the future of democracy, as well as right-wing populists and extremists. At the same time, however, more than 85% of the population in Germany disapprove of the movement.

Citation:

<https://presseportal.zdf.de/pressemitteilung/mitteilung/zdf-politbarometer-dezember-2020/>

Kirsch, Peter, Hanno Kube, Reimut Zohlhöfer, 2020: Die Akzeptanz der Maßnahmen zur Eindämmung der Corona-Pandemie in der deutschen Bevölkerung im Dezember 2020 – Zusammenfassung der Ergebnisse, available at <https://www.marsilius-kolleg.uni-heidelberg.de/fellows/Publikationfellows2020.html>

Implementation of Response Measures

Implementation
of Response
Measures
Score: 7

The implementation of pandemic measures in Germany has generally been impartial, swift and effective, thanks to efficient public administration across the federal states and municipalities.

Local police exercised some restraint in controlling compliance with the coronavirus restrictions. According to a July 2020 survey, only 10% of respondents thought it very likely that they would be caught for not complying with coronavirus regulations, another 25% thought it somewhat likely (Kirsch et al. 2020). On average, it seems to have been regarded as unlikely that non-compliance would be found out by the authorities. At the same time, respondents who thought it unlikely to be caught were less likely to comply with the regulations (Kirsch et al. 2020). Moreover, offenders who were not compliant with a regulation normally received a warning before they were fined. This kind of soft implementation is based on the understanding that citizens are in general cooperative and a too-aggressive response will only generate resistance.

Contact tracing and monitoring quarantine measures through local health authorities has been one area of implementation that clearly flailed. The entire public health authority system suffers from the fact that it has not fully digitalized and – at least in pandemic conditions – is understaffed. Attempts to resolve the bottlenecks faced involved a massive hiring surge and help from the army (Bundeswehr) but, particularly during the second wave of the pandemic, the public health authorities were clearly overwhelmed.

With regard to the implementation of economic support monies, there have been complaints that the generous financial support provided by the government has been paid out with substantial delays.

Citation:

Kirsch, Peter, Hanno Kube, Reimut Zohlhöfer, 2020: Die Akzeptanz der Maßnahmen zur Eindämmung der Corona-Pandemie in der deutschen Bevölkerung – Zusammenfassung erster Ergebnisse. available at https://www.marsilius-kolleg.uni-heidelberg.de/md/einrichtungen/mk/fellows/zohlhofer__kuba__kirsch.pdf

National Coordination

National
Coordination
Score: 8

During the pandemic, federal states have seen their rights of autonomy enjoy a kind of renaissance as they can determine how health and safety measures apply in their territory. The federal government can therefore not simply instruct state governments but has had to coordinate with them and develop a consensus. The regulatory leeway of the states has also allowed for a considerable variation in measures depending on the regional incidence rate of infections. However, so far, the large fundamental consensus and strong reliance on scientific guidance in the process has prevented any serious frictions from emerging in the management of pandemic efforts.

Obviously, the states' strong position also allowed for political competition and attempts to be made by some heads of state-level governments to distinguish themselves from other leaders through their assertiveness and/or in an effort to raise their profile in advance of the upcoming national elections.

As a rule, regular conferences held by the chancellor with the sixteen heads of the state-level governments are where the principles of the national coronavirus strategy are decided upon. These conferences are prepared and coordinated by Head of the Federal Chancellery Helge Braun. The strategic decisions made at this level allow regional and local governments to act and react effectively to the crisis as they develop their own strategies and policies within the context of a coordinated national strategy.

The federal government has also provided subnational administrative units with financial support through federal transfers (for details on how this affects municipalities see, for example, Döring 2020). In addition, the federal government has assumed most of the additional expenditures (Girschick 2020), which can be regarded as a means of empowering subnational units such as the states, in this particular case.

Citation:

Döring, Thomas, 2020: Corona-Finanzhilfen des Bundes zur Entlastung der Kommunen, *Wirtschaftsdienst* 100 (11):869–875.

Girschick, Kirsten, 2020: Streit Bund und Länder: Wer bezahlt die Corona-Hilfen?, available at <https://www.tagesschau.de/inland/corona-finanzierung-101.html>.

International Coordination

International
Coordination
Score: 9

Germany has the capacity to contribute to global public health, also within the context of the COVID-19 pandemic (see also “International Cooperation”). The Federal Ministry for Economic Cooperation and Development is an

important player in this regard and has launched assistance programs aimed at fighting the pandemic in developing countries.

Germany is an active player in international vaccine initiatives and is a founding member of the international vaccine initiative, the Coalition for Epidemic Preparedness Innovations (CEPI, see “R&I Policy Response”). Germany demonstrated its solidarity with European countries not only through its massive financial support for the large EU rescue packages but also through the medical support it provided in treating in Germany critically ill COVID-19 patients from hard-hit EU countries.

Citation:

https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/overview-commissions-response_de

Learning and Adaptation

Learning and
Adaptation
Score: 5

Because federal and state governments have to date been operating in the context of an acute emergency, a thorough evaluation of what has gone wrong in managing the coronavirus crisis will have to be done in the future. Because the willingness to debrief and engage in constructive evaluations of past mistakes is an established part of German political culture, there is reason to be cautiously optimistic that the experience with the pandemic will yield substantive learning effects. Thorough ex post analyses are already applied in labor market, education and family policy fields. A milestone for ex post labor market research was the introduction of a legal obligation to evaluate the impact of active labor market policies in 1998. Since then, important legislation like labor market and social security reforms (the so-called Hartz reforms), and later the introduction of minimum wages have undergone a far-reaching ex post evaluation. It remains to be seen how seriously the pandemic measures will be scrutinized. But these procedures and methods are in place and valued.

While some failed coronavirus policies have been revised, sometimes with an eye to what other countries had done, there has been no systematic assessment and adoption of experiences in other (more successful) countries. The rather timid testing strategy pursued in Germany is one such example.

III. Resilience of Executive Accountability

Open Government

Open
Government
Score: 10

Government information on the pandemic is comprehensive, up-to-date and detailed. The Robert Koch Institute (RKI) is the federal agency that serves as the key provider of information and enjoys an excellent reputation as a trustworthy institution that draws on academic expertise. The RKI's information on the pandemic includes daily data on infections for Germany as a whole, the federal states and counties. Reports include the number of new daily infections, the number of new deaths and estimates of the infection rate R . Infection rates are reported as a seven-day average per 100,000 inhabitants. Data are also provided as downloads in the form of long-time series. The seven-day incidence rate is also key to the government's communication strategy and serves as the most important indicator guiding political decisions. Moreover, the RKI constantly updates its information on COVID-19 diagnostics and treatments as well as vaccines and the ongoing vaccination campaign. The information website also includes answers to FAQs about the pandemic in layperson's terms. In addition, the German Interdisciplinary Association for Intensive Care and Emergency Medicine (DIVI) provides daily reports on the availability of intensive care units, which is another key policy indicator signaling the extent to which the health system is reaching its capacity limits.

The federal states are supplied with up-to-date and detailed information on all crisis policies, including current rules and restrictions.

Citation:
www.rki.de/DE/Home/homepage_node.html
www.divi.de

Legislative Oversight

Legislative
Oversight
Score: 9

At no time throughout the pandemic and including the most severe lockdown phases have the federal and state legislatures been restricted in carrying out their work. There were no de jure or de facto curtailments in place that prevented parliamentarians from assembling and conducting their normal legislative activities. Rules restricting interaction, contact or mobility never kept elected parliamentarians from carrying out their duties. The federal

parliament has adjusted its rules of procedure to guarantee continued functionality during pandemic conditions. For this purpose, the Bundestag lowered the quorum that needs to be present in the plenary, extended the use of electronic or written voting procedures, and relaxed rules governing the conduct of digital committee meetings and hearings. Similar precautions were taken by the state parliaments.

There is a debate over whether too many decisions have been made by the executive and not exclusively by the legislatures. However, all executive measures have been based on federal or state laws, mostly the Infection Protection Act as adjusted by the Bundestag during the pandemic. One important issue has centered on the question of who has the authority to determine whether an epidemic of national relevance exists and when it ends. This is important because the centralization of decision-making authority (i.e., with the executive) is allowed only under such conditions. In contrast to the federal government's original plans, the Bundestag – and not the federal government – is now responsible for making that decision (§5 Infection Protection Act; see Bundestag printed matter 19/18111).

As a result, decisions made in the executive are clearly based on a parliamentary mandate. The Bundestag's legislation on pandemic-related policies is comprehensive and very extensive – which demonstrates the effective role played by the parliament (Bundestag 2021).

Finally, the Chancellor regularly informs the Bundestag of government declarations regarding coronavirus policies, most importantly with regard to negotiations between the federal and state governments. The opposition has ample opportunity to criticize government policy.

Citation:

Bundestag (2021): Corona-Dossier, Parlaments-materialien zur Corona-Pandemie, www.bundestag.de/dokumente/parlamentsdokumentation/dossier

Independent Supervisory Bodies

Auditing
Score: 9

Germany's Supreme Audit Institution (SAI) issued no objections to the government's first supplementary budget for 2020, which enormously increased government spending in order to fight the negative effects of the coronavirus crisis (Bundesrechnungshof 2020a). The SAI only noted that these one-off financial measures would now have to be closely monitored in terms of their effects and that it would advise and support the federal government in this regard. The opinion on the second supplementary budget, on the other hand, was more critical (Bundesrechnungshof 2020b). Here it criticized much of the new round of borrowing as superfluous in nature, and stated that the

additional spending was in many respects unnecessary and questionable from a constitutional viewpoint. It also called for much greater accuracy in selecting potential funding sources, a more detailed analysis of the effectiveness of the funds used to date, greater financial participation by the states, and an improved regulation of the increased financial support that is now provided to local governments.

Overall, the SAI is able to effectively monitor the federal government's decisions, although many of the official justifications provided by the government remain vague, which makes it difficult to monitor with impact.

The government has largely ignored the criticism issued by the SAI and continues to pursue its policy of increasing public debt.

Citation:

Bundesrechnungshof (2020a): Information an die Mitglieder des Haushaltsausschusses des Deutschen Bundestages, Haushaltspolitische Maßnahmen zur Bekämpfung der Auswirkungen der Corona-Pandemie/Eckdaten Nachtragshaushalt 2020.

Bundesrechnungshof (2020b): Schriftliche Stellungnahme des Bundesrechnungshofes zur Öffentlichen Anhörung über das Verfahren zum Entwurf des Zweiten Nachtragshaushaltsgesetzes 2020 (BT-Drs. 19/20000) und zum Entwurf eines Gesetzes über begleitende Maßnahmen zur Umsetzung des Konjunktur – und Krisenbewältigungspakets (BT-Drs. 19/20057)

Download beider Stellungnahmen über:

www.bundesrechnungshof.de/de/veroeffentlichungen/bundesrechnungshof-mitteilung-coronakrise

Data Protection
Score: 10

Germany has a Data Protection Commissioner who stood up for data protection during the coronavirus crisis. Overall, personal data protection has played a major role. When tracking contacts in the chain of infections, only anonymized data could be forwarded to the Robert Koch Institute for identifying movement patterns. This involved purely statistical observations, for example, how many people have moved from one area to another. Unlike countries like South Korea or Taiwan, in Germany, personal movements and contacts cannot be traced. Thus, data protection in Germany is effective and far-reaching. Some would even argue it is too far-reaching since data protection rules have negative consequences for other essential civil rights in the context of a pandemic requiring effective contact tracing in order to contain infection rates. However, given that the question posed here does not address this kind of trade-off and focuses only on data protection – the level of data protection in Germany is very high, even in the context of a pandemic.

Citation:

<https://www.twobirds.com/de/news/articles/2020/germany/covid-19-leitlinien-von-datenschutzbehoerden-bund-und-laendern>

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of the COVID-19 Crisis. Bertelsmann Stiftung: Gütersloh.
<https://doi.org/10.11586/2021091>

www.bertelsmann-stiftung.de
www.sgi-network.org