



# **Germany**

## **Special Case Study**

### **Covid-19 Safety Assessment**

# Germany: #2 Region by COVID-19 Safety Ranking

## COVID-19 Quarantine Efficiency

Weight 2.2 Category Score 59.45

- Scale of Quarantine 16.51
- Quarantine Timeline 4.25
- Criminal Penalties for Violating Quarantine 10.24
- Economic Support for Quarantined Citizens 13.02
- Economic and Supply Chain Freezing 9.30
- Travel Restrictions 6.12

131  
POINTS

## COVID-19 Government Efficiency of Risk Management

Weight 2.2 Category Score 88.13

- Level of Security and Defense Advancement 17.00
- Rapid Emergency Mobilization 14.57
- Efficiency of Government Structure 14.26
- Economic Sustainability 11.38
- Legislative Efficiency 16.00
- Political Stability 14.92

194  
POINTS

## COVID-19 Monitoring and Detection

Weight 1.5 Category Score 91.97

- Monitoring Systems and Disaster Management 18.00
- Scope of Diagnostic Methods 15.00
- Testing Efficiency 13.37
- AI for Diagnostics and Prognostics 15.00
- Government Surveillance Technology for Monitoring 13.60
- Reliability and Transparency of Data 17.00

138  
POINTS

749  
CUMULATIVE  
SCORE



## COVID-19 Healthcare Readiness

Weight 1.3 Category Score 83.31

- COVID-19 Equipment Availability 17.10
- Mobilization of New Healthcare Resources 17.50
- Quantity and Quality of Medical Staff 14.08
- Level of Healthcare Progressiveness 12.59
- Level of Technological Advancement 11.15
- Epidemiology System Level of Development 10.89

102  
POINTS

## COVID-19 Regional Resiliency

Weight 1.3 Category Score 71.66

- Infection Spread Risk 11.09
- Culture Specifics and Societal Discipline 15.15
- Level of Modern Sanitization Methods 14.49
- Demography 4.02
- Chronic Diseases 9.1
- Political Risks 17.00

105  
POINTS

## COVID-19 Emergency Preparedness

Weight 1.5 Category Score 52.92

- Societal Emergency Resilience 20.25
- Emergency Military Mobilization Experience 7.67
- Surveillance Capabilities (Scale, Scope and Technological Sophistication) 13.50
- Previous National Emergency Experience 11.50

79  
POINTS

# COVID-19: SWOT Analysis of Germany



## STRENGTHS

- The community is politically participatory and very willing to heed the recommendations and regulations imposed by the government in national emergency scenarios.
- Economic strength allows the implementation of financial aid to the industry and the community, establishing a short-time work and basic income scheme that alleviates the crisis.
- Very well established ventilators industry.



## WEAKNESSES

- Self-employed people with low income and migrants have low accessibility to social insurance in comparison with other citizens.
- EU integration and dependence.
- Germany shows an average comparative performance in relation to the efficiency of its quarantine; the score is not low but can be improved.



## OPPORTUNITIES

- Considerable financial, human and organizational resources for enhancing the healthcare system in Germany.
- Large number of hospitals, physician and well trained nurses to provide quality services to the population.
- Large investments in R&D linked to personalized medicine and disruptive technologies, to integrate into the public health system.



## THREATS

- Very marked population aging, which also occurs in the medical workforce. The medium-term extensive implementation of P4 Medicine and digital health is a solution.
- Immigration can be challenging to control the pathogen's re-entry into the region. The health system must be up to the task.
- Easing the quarantine will bring more cases, as was stated in late April and early May after meetings of protesters in Germany.

# Germany: COVID-19 Quarantine Efficiency

It is important to consider that the population density of Germany is slightly more than half of that in Israel; that is, approximately 233 inhabitants per square kilometer. This yields considerably higher values for the parameter in question, and has an overall favorable impact on the performance of the "Scale of Quarantine" parental indicator compared to that of Israel; 16.51 points the first against 10.10 in Israel, as already analyzed.

Germany is one of the regions that shows average comparative performances in this category, just one point ahead of Vietnam and Norway. Despite having established a partial quarantine relatively early in the race against the pandemic, what has already been mentioned is one of the most decisive real factors in the fight against the spread of viral infections, poorer values for other sub-indicators cause Germany to be somewhat behind multiple regions in this category.

Regardless of those sub-indicators, Germany's performance is overall good: the region has established considerably more severe sanctions against citizens violating the legal norms of preventive isolation, presents a greater number of security force personnel per capita, and a decisive factor that has been favorable for quarantine efficiency is that compliance with social distancing laws has been promoted through a reduction in working hours, economic support to citizens and flexibility of tax rates, achievements by which Germany stands out from the other regions in our ranking.

Indicators	Points
Scale of Quarantine	16.51
Quarantine Timeline	4.25
Criminal Penalties for Violating Quarantine	10.24
Economic Support for Quarantined Citizens	13.02
Economic and Supply Chain Freezing	9.30
Travel Restrictions	6.12
<b>Final Score</b>	<b>59.45</b>
<b>Weight</b>	<b>2.2</b>
<b>Final Points</b>	<b>131</b>

# Germany: COVID-19 Government Risk Management Efficiency

In this category, Germany performs very favorably just 3 points ahead of Israel; it comparatively presents one of the highest scores, most likely due to measures taken by state agencies in the course of the crisis.

For example, the expansion of the "Emergency Information and News App" (NINA for short) and its supplementation with information on the COVID-19, carried out by the Federal Office for Civil Protection and Disaster Assistance (BBK), and thus responding to the growing need for comprehensive and up-to-date information in connection with the pandemic. Also the confirmation of a short-time work scheme, known as Kurzarbeit, which results in millions of secured jobs and protects the region from the costly effects of unemployment. Germany has a strong welfare state, very solidly established, with highly legitimate, functional institutions, and the same applies to its economy, which is why they are in a position to perform very favorably in terms of government efficiency for decision-making at the time to counteract the effects of COVID-19.

Some of the factors that slightly worsen Germany's performance with respect to Israel are in particularly the lower capacity of the state to adopt new surveillance laws (consequence of being immersed in a very different geopolitical context), as well as a much higher percentage of economic debt over total GDP.

Indicators	Points
Level of Security and Defense Advancement	17.00
Rapid Emergency Mobilization	14.57
Efficiency of Government Structure	14.26
Economic Sustainability	11.38
Legislative Efficiency	16.00
Political Stability	14.92
<b>Final Score</b>	<b>88.13</b>
<b>Weight</b>	<b>2.2</b>
<b>Final Points</b>	<b>194</b>

# Germany: COVID-19 Monitoring and Detection

Germany's performance for the COVID-19 outbreak monitoring and detection category is on par with the case of Israel, presenting well-established vigilance and disaster management systems; both in terms of optimized emergency management in individual cases and mass healthcare during disaster management, the German proactive medicine scheme with health agents approaching the patient directly and early, even within the same foci incidence of pathologies, has been a quality standard of medical care and a determinant of the high survival of patients for a long time in the region.

Germany has stood out from most regions for its efforts and investments in tracing early community transmission of COVID-19, and this methodical search for contagion chains has so far resulted in some of the lowest death rates in Europe. The German monitoring model is a global example of how epidemiological chains of infection must be carefully tracked in order to interrupt them.

Despite the above, one of the factors that Germany has an opportunity to resolve at the moment is linked with the efficiency of testing. We can see that while in Israel approximately 55K tests per million individuals are being performed, in Germany this value falls to just over 3K tests per million; a very strong detection program, but there is still a need for a more massive implementation.

Indicators	Points
Monitoring Systems & Disaster Management	18.00
Scope of Diagnostic Methods	15.00
Testing Efficiency	13.37
AI for Diagnostics and Prognostics	15.00
Government Surveillance Technology for Monitoring	13.60
Reliability and Transparency of Data	17.00
<b>Final Score</b>	<b>91.97</b>
<b>Weight</b>	<b>1.5</b>
<b>Final Points</b>	<b>138</b>

# Germany: COVID-19 Healthcare Readiness

The values for Germany in the evaluation of this category serve to highlight the deficiencies of the other regions, since Germany is one of the best positioned in terms of healthcare readiness but, still presenting higher values than the rest, those are probably lower than expected.

The approach of this study highlight that health systems of the regions in our pool would not be sufficiently prepared to face the emerging issue of epidemiological crises, or that they would be to a lesser extent than is assumed a priori. This exposes a substantial weakness that emerges from our analysis, perhaps associated with some central recommendations of this report: that health care systems, scientific and technological development linked to human health, and associated costs that must be addressed by states and governments, have been found far from its optimal state for a long time and these regions are still in time to take measures to reverse this serious vulnerability. A vulnerability that has the capacity to unbalance regional economies but also global geopolitics.

Germany shows almost no weaknesses with respect to the rest of the regions, positioning itself a single point below Switzerland in terms of the qualitative and quantitative dimensions of its medical staff, and two below Norway, and being less than a point ahead of Switzerland in terms of the overall level of healthcare progressiveness. Despite this, it should be noted that none of these regions have the highest level of development relative to the epidemiological system according to our indicators and parameters.

Indicators	Points
COVID 19 Equipment Availability	17.10
Mobilization of New Healthcare Resources	17.50
Quantity and Quality of Medical Staff	14.08
Level of Healthcare Progressiveness	12.59
Level of Technological Advancement	11.15
Epidemiology System Level of Development	10.89
<b>Final Score</b>	<b>83.31</b>
<b>Weight</b>	<b>1.3</b>
<b>Final Points</b>	<b>102</b>

# Germany: COVID-19 Region Resiliency

Germany turns out to be a region with average resilience compared to the rest of the pool as indicated by the measurements of the present study, and the apparent cause is a multiplicity of diverse factors, some of which will be briefly summarized below.

Firstly, there is a probability in Germany of a greater negative impact of the emerging COVID-19 on the community and on the health system, in terms of the mortality rate, due to the marked aging of the population. Although it is not the only region that presents this characteristic, since other regions such as Denmark or Hungary show similar levels for this trait, and even the region of Japan is worse positioned, this is one of the variables that determine more decisively on the value thrown by the category. Many will think that nothing immediate can be done to amortize the risks associated with this demographic situation. In this report, we point out that yes, it can be done, and we outline the way.

In addition to the above, there is a relatively high risk of COVID-19 spreading in Germany compared to most European countries, with some exceptions, mainly due to the easing of restrictions on social distancing for economic reasons, although in Germany there are no considerable power shortages or medical equipment shortages risks according to the evaluated data, and this places it in a better position than Hungary, Denmark, the Netherlands and Norway.

Indicators	Points
Infection Spread Risk	11.09
Culture Specifics and Societal Discipline	15.15
Level of Modern Sanitization Methods	14.49
Demography	4.02
Chronic Diseases	9.1
Political risks	17.00
<b>Final Score</b>	<b>71.66</b>
<b>Weight</b>	<b>1.3</b>
<b>Final Points</b>	<b>105</b>

# Germany: COVID-19 Emergency Preparedness

Germany's degree of emergency preparedness expressed by our indicators and parameters is not optimal, but far from bad. Although Chancellor Angela Merkel has urged Germans on some occasions to show endurance and discipline to get through the pandemic, mainly due to concerns that they are decreasing their efforts at social distancing after the federal government agreed to reopen stores during the third week of April, the cooperation of civilians with partial confinement rules has been high, showing a good tolerance to crises in the medium term.

As part of the support that the German military can offer to civil society, the military's procurement office, which is responsible for the purchase of military weapons and equipment, arranged € 241 million to find medical protective gear on the global market at the end of March, which the Health Ministry is to distribute among clinics and doctors' offices across Germany, and the Bundeswehr has also started food and camp beds provisioning, mobile doctors' facilities, and is storing medical goods in its barracks. The German armed forces have been showing active participation in the defense of the national security, but our qualitative parameters warn of their lack of previous experience in cases of national emergency equivalent to the COVID-19 outbreak. There have been no recent previous events relating to internal border epidemic crises in Germany, and this casts uncertainties about the efficiency of national defense systems to optimally respond to challenges and to ensure a rapid return to normality in the post-pandemic era.

Indicators	Points
Societal Emergency Resilience	20.25
Surveillance Capabilities (Scale, Scope and Technological Sophistication)	7.67
Emergency Military Mobilization Experience	13.50
Previous National Emergency Experience	11.50
<b>Final Score</b>	<b>52.92</b>
<b>Weight</b>	<b>1.5</b>
<b>Final Points</b>	<b>79</b>

# Germany: COVID-19 Recommendations

- Prioritize R&D for preventive and treatment measures aimed specifically at the elderly to minimize the impact of Germany's large aging population.
- Germany is conducting nationwide testing for COVID-19 antibodies since April, becoming the first European country to do so. The serological tests are helping officials in monitoring the infection spread. Germany has tested for COVID-19 on a larger scale than most regions in an attempt to slow the spread of the virus and this has resulted in very positive outputs. Despite this, there is a need to further expand the scope of testing specifically for senior citizens.
- It is important to focus efforts on limiting spread from neighboring European countries by restricting access to tourists, domestic travel and port container traffic.
- Germany's Healthcare Readiness score is generally good, but it lags behind other regions specifically in terms of epidemiological control. The region should prioritize funding and resources to optimize its epidemiological surveillance procedures.
- While Germany has been recognized for its efforts at very early testing within the overall quarantine timeline, there is room for improvement in the scale and breadth of testing. The region should try and ramp up the number of tests per million people as it continues easing lockdowns and coordinating economic unfreezing, with a prioritized focus on segments of the population returning to work.

Index Categories: All Scores	Points
Quarantine Efficiency	131
Government Efficiency of Risk Management	194
Monitoring and Detection	138
Healthcare Readiness	102
Regional Resiliency	105
Emergency Preparedness	79
<b>Cumulative Score</b>	<b>749</b>

# Germany: COVID-19 Conclusions

- As in Israel, one of the most positive factors that we have observed in Germany has been the political will and the capacity of the government to implement mechanisms for joint participation of the public and private sectors. The number of initiatives to find immediate solutions to the consequences of the COVID-19 health and economic crisis have multiplied strongly in the previous months. In Germany, scientific research and development of solutions have been prioritized, both aimed at taking preventive measures and treating affected citizens, mainly those who are part of risk groups, to minimize the impact of COVID-19 on aged populations.
- Germany's armed forces have been actively participating in containing the epidemiological outbreak, although they lack experience in equivalent national emergency cases. The region does not present pre-existing government plans or policies sufficiently conditioned to face emergencies equivalent to the COVID-19 pandemic, such as threats of chemical and biological warfare, and this casts uncertainties about the efficiency of national defense systems to optimally respond to challenges and to ensure a rapid return to normality in the post-pandemic era. Despite the above, they efficiently take part in the matter and the military's procurement office is allocating funds valued at millions in medical supplies.
- Germany imposed a relatively early partial quarantine in the race against the pandemic, one of the most decisive real factors in the fight against the spread of viral infections. In addition, it has established severe sanctions against civilians who violate the legal norms of preventive isolation, and is one of the regions with the highest number of security forces per capita. These factors determine Germany's good score in terms of the efficiency of its quarantine.
- The community is highly participatory and responds positively to government determinations. There is good cultural resilience to emergency scenarios. Nonetheless, some expressions of social opposition to the quarantine occurred at the end of April have caused increases in the infection rate. In addition, after the easing of its lock-down efforts in early May 2020, Germany saw its number of new daily cases triple in a single day. These risks should be mitigated.

# Germany: COVID-19 Conclusions

- In response to the abrupt drop in employment caused by CODIV-19, the German government implemented a short-time work scheme, known as Kurzarbeit, to appease the consequences on family economies, and ensure that social distancing measures are economically sustainable. This temporal reduction of the regular working time allowed companies to reduce personnel costs, while at the same time maintaining their workforce. The workers were partially compensated for their wage losses by a Federal Employment Agency plan that assigns financial aid proportional to the amount of lost salary. The government is efficiently protecting the region from the high costs of unemployment.
- Until 2018, remote health consultations were not allowed in Germany. Much has changed since then due to the relaxation of these restrictions, and the current crisis accelerates the process of digitization of health services. Telemedicine platforms, bots and IT-systems are being widely used in the region to guarantee medical care remotely, trace contagion routes, identify points of major risk, and allow efficient crisis management. Germany shows a remarkable epidemiological control of the health crisis as a result of its promotion of digital ecosystems for the resolution of conflicts derived from COVID-19. Even without the best-ranked epidemiological system of the selected set of regions, the epidemiological monitoring of Germany has been above average due to this digitization process.
- Germany ranks among the top of the regions included in the analysis in terms of the total number of cases, but a closer look shows that its mortality rate is considerably lower than in the rest of the regions, especially when compared to sites that reported a similar number of cases. The region's continuous efforts and investments in the early monitoring of COVID-19 transmission and its adaptability to integrate new technologies to track infection chains result in its very remarkable degree of regional safety.
- The main threats to safety in the region are two: the pronounced population aging (a very common risk factor among European countries), and the reversal of restrictions on social distancing.