3-2021

Did federalism impact the capacity for public health policy response to COVID-19? The case of Germany

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Citizenship, Rights, and Cultural Belonging

WORKING PAPER SERIES

No. 110 | March 2021

DID FEDERALISM IMPACT THE CAPACITY FOR PUBLIC HEALTH POLICY RESPONSE TO COVID-19? THE CASE OF GERMANY

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Abstract:

Over the course of the pandemic, Germany's strong federal system required explicit coordination and cooperation between the federal and state governments. Before any substantial outbreak struck Germany in March, the German strategy to combat the disease was to contact trace and rely on state and local governments to stop the spread. As cases rose and the country moved into the first wave time period, COVID-19 restrictions primarily came from the national government as consented to by the states. For each new mandate released, the wording was unanimously agreed upon by all 16 federal state leaders and Chancellor Merkel. When cases started to recede and the country moved into the recovery phase, individual states became the main deciding actors for loosening and re-tightening the restrictions.

Keywords: COVID-19, Germany, Bavaria, public health policies, lockdown, federal, sub-national

Did Federalism Impact the Capacity for Public Health Policy Response to COVID-19? The Case of Germany

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1.0 Introduction

From a few isolated cases in Wuhan, China in December 2019 to over 60 million cases in nearly every country as of November 2020, the SARS-CoV-2 virus took the world by surprise. Within a month of the first cases in China, COVID-19 was detected in the United States on January 21st, in Europe on January 24th, and in Africa on February 14th [1]. By January 30th, the World Health Organization (WHO) declared COVID-19 a "Public Health Emergency of International Concern" as the disease spread to 5 WHO regions [2]. Having escaped the critical, early quarantine stage in China, a once obscure, foreign disease suddenly became the top priority of governments around the world. While all countries faced a steep learning curve due to the rapid and unexpected onset of the disease, how each individual nation fared largely came down to leadership and governmental institutions.

In federal political systems, executive and legislative power is vested simultaneously in the federal, sub-national, and local governments. This division of governance raises serious questions in regards to its effectiveness, especially when dealing with public health crises- for instance, would a federation not suffer due to the lack of a coherent national plan to swiftly communicate and distribute aid effectively [3]? While the WHO produces general guidelines, the last before the pandemic being in March 2018 regarding the influenza virus, each country must develop a unique system that works within their own institutional frameworks [4]. For unitary and federal governments alike, this entails finding a balance between enacting nationally homogenous policies from the center and allowing for differentiated policies at the locales [5].

The COVID-19 pandemic particularly places institutional strain on federal societies trying to equilibrate national and sub-national government responsibilities. Before the pandemic, a common flaw highlighted by critics of federalism is how time-consuming and difficult it is to build a consensus among multiple levels of authority, especially in times of crisis [6]. In the face of the unique challenges presented by a virus, skeptics of federalism now also point to the spread of the disease from less stringent jurisdictions to more stringent ones [7]. Unlike common state-delegated responsibilities such as education, infrastructure, and taxes that are confined to the borders of the state that enact them, public health crises, like COVID-19, can spread beyond boundaries. While the federal government can stem the flow of the disease across international boundaries by closing the border, a non-unified response to COVID-19 from individual states can create a cyclic situation where the virus moves from more impacted regions to less impacted regions with fewer restrictions [5].

Proponents of federalism stress that emergencies require specialized responses rather than blanket national government action [6]. The same argument holds during the pandemic, as scholars and political pundits advocate for the ability of regions to weigh the costs and benefits of closing down their local states who may or may not themselves be impacted by the virus.

Overall, the COVID-19 pandemic serves as an excellent stress-test of federal institutions and is the perfect petri dish to observe the merits of the long-standing arguments regarding their effectiveness. In this study, we will specifically look at Germany's federal system. In Germany, states' rights are heavily emphasized in the country's Constitution, with each of the 16 federal states enjoying relatively broad control over different policy areas. Throughout the pandemic, the large degree of autonomy the states have from the federal government has been a defining fact in

the country's COVID-19 response, as meetings between the federal Chancellor, Angela Merkel, and the leaders of each federal state (First Ministers) have been common.

2.0 Methods

Most federal policy as a result of agreements between Chancellor Merkel and the First Ministers were issued during nationwide outbreaks, while different state leaders decided how best to implement federal policy in regards to their own state's infection status when cases began to subside. As such, our analysis will focus on two time periods: the first wave (March 15-April 19), and the recovery period (June 10 – July 12).

To evaluate the effectiveness of Germany's federalism at these different time periods, we will highlight policies and analyze COVID-19 cases and deaths at the national level, as well as in the federal states (Lands) of Bavaria, North Rhine-Westphalia (NRW), and Thuringia. These states were selected because they reflect the heterogeneity of policy responses of the German states. For instance, Bavaria's leader, First Minister Markus Soder, often instituted more strict policy than the federal government. Bavaria also was one of the first states to have a major outbreak of the virus. NRW, which is the largest state by population, mainly followed federal policy agreed at summits between the 16 states and the Chancellor, or policies just recommended by the federal government. Finally, Thuringia, with Minister President Bodo Ramelow as its leader, is a small, rural state in East Germany. Its low population and willingness to break with federal guidelines made it an excellent case-study to compare with the other two selected states. By comparing the number of confirmed cases and deaths on a national and state level following policy enactments by national and subnational political actors, we hope to evaluate whether the division of federal and subnational policy initiatives in the German federal system sufficiently lowered COVID-19 cases and deaths.

Additionally, for the first wave when federal policies were most prevalent, we will compare the deaths caused by COVID-19 in Germany and France. Both Chancellor Merkel and President Macron instituted lockdowns of varying degrees during the two waves. France's unitary system allowed the lockdown policy to originate from the federal government. However, in Germany, the lockdown was the result of negotiations between the 16 federal state leaders and Chancellor Merkel. As a result, Germany's lockdown was less infringing upon citizens' rights and more cognizant of the local concerns of each state. Overall, we hope this comparison will show if German federalism on the national level was more effective in reducing deaths than the lockdown imposed by the unitary government of France.

3.0 Germany's National and State Responses to COVID-19

The First Ministers of each state have had significant power over federal policy regarding the pandemic. In their own states, state governments had unilateral power to respond to any outbreaks or change in situation within their regions. The same cannot be said for the Chancellor of Germany, Angela Merkel, when creating national responses. For each national initiative, unanimous agreement between Chancellor Merkel and all 16 First Ministers was required for any action to be undertaken. The need for total agreement amongst the leaders of every state, no matter their population, degree of urbanization, infection rate, or economic well-being made compromise a necessity throughout the pandemic and can even explain the less-stringent national-level restrictions enacted by Germany when evaluated against comparable European nations like France. As a result, Germany's pandemic response can best be explained by broad, over-arching restrictions during case spikes from agreements reached by the federal and state governments, as well as diverse policies in the individual states.

Prior to the pandemic, existing laws in Germany granted the states decision-making authority regarding health. In the German Constitution, Article 70 declares that lawmaking lies

in the hands of the state unless it is explicitly addressed in the Basic Law of the country. Notably, each federal state controls policies regarding education, policing, cultural policy, construction planning, domestic intelligence, the courts, and notably during the times of COVID-19, health provision [8]. Moreover, data from clinicians and laboratories relating to disease infections primarily go to local authorities [9]. Throughout the country, there are approximately 400 local health authorities who implement infection-control measures, while the state-level public health institutions aid with cross-state initiatives and provide for centralized service within the state. The federal public health institution, the Robert Koch Institute (RKI) within the Ministry of Health, only acts as a support system when necessary [6]. In addition to the broad powers granted by the Constitution, states' supremacy to the federal government in regards to the pandemic stems from the Infection Protection Act (IfSG) passed in 2000. According to the IfSG, states may issue regulations to control communicable diseases, and may specifically use tactics such as quarantines, the prohibition of professional activities, and mandating the use of protective measures including stay-at-home orders and restrictions of public places [10]. As a result of this legal framework, any federal response to the pandemic has been at the mercy of Germany's state leaders.

In the early days of the pandemic following the first reported case of COVID-19 in Germany on January 27th, German states organized containment and treatment measures with the main priorities being to isolate, contact trace, and refrain from interfering with the personal freedoms of those not exposed to the virus [11]. At the national level, the main priority was to contact trace and advice individuals to cancel large scale events of more than 1,000 people [11]. Even while other parts of the world were experiencing rapid infection rates, the German government was hesitant to issue anything as severe as a lockdown. As a result, local authorities,

especially in the earliest impacted states of Bavaria and NRW, acted as the main decision-makers working to slow the spread of the virus.

In the beginning of March, states were the first to take widescale, drastic action to combat the virus. On March 13th, Bavaria's First Minister Markus Soder released the first expansive policy decision related to the pandemic by closing all schools and day-care centers, banning visits to nursing homes and hospitals, and preventing events with more than 100 people across the state effective on March 16th [12]. Other states during the early weeks of March followed suit, with states such as Saarland, Bavaria, Lower Saxony, Bremen, Schleswig-Holstein, Hamburg, Saxony-Anhalt, Rhineland-Palatine, and Mecklenburg-Western Pomerania closing schools and day cares starting March 15th. Other states, such as NRW, Saxony, and Hesse, decided to close schools on March 15th, but allow students to still go to school until March 16th so parents could make childcare arrangements. Finally, some states decided to let schools stay open until a later date in the week, such as Thuringia, Baden-Wurttemberg, and Brandenburg, allowing families to prepare for the uncertainty that lied ahead [13]. The early days of the pandemic in Germany highlight the varying degree of responses in individual states to COVID-19.

As the infection rate increased to reach 1000 cases per day, a national policy was put in place to halt the spread. On March 16th following meetings between the 16 federal state leaders and Chancellor Merkel, the first nation-wide COVID-19 restriction measures were instituted. The guidelines called for non-essential businesses to close, religious gatherings to be prohibited, restaurants to close by 6pm, and banned holiday travel by forbidding overnight accommodations at hotels unless deemed essential [14]. These measures set a foundation for uniform restrictions throughout the country, however, they did not go far enough, as cases continued to increase.

First Minister of Bavaria Markus Soder, along with the city of Freiburg in Baden-Wurttemberg, instituted the first full lockdown and curfew in Germany on March 20th. Soder's policy in Bavaria went beyond the national mandate, and forbid Bavarians from leaving their homes without good reason (except for commuting to work, grocery shopping, visiting the doctor, and providing aid for others), and it closed all restaurants. This came as the state was at approximately 3100 cases and 20 deaths related to COVID-19 [16]. Additionally, First Minister Soder was able to enact these measures due to his disaster declaration on March 16th, which allowed state authorities to push through new restrictions faster and use the German Armed Forces if necessary [17].

Throughout the first wave of the pandemic in Germany, more states followed Bavaria to enact more stringent restrictions than the federal mandate. Saarland, another border state like Bavaria, was the next to follow by instituting a curfew and closing all restaurants. While Bavaria and Saarland instituted lockdowns, other states such as Baden-Wurttemberg, Hesse, Rhine-Palatine, Lower Saxony, and Hamburg kept their restrictions commensurate to the federal mandate by closing restaurants and limiting the number of people who were allowed to meet [18]. As more states began to increase restrictions, the federal mandate was updated by the Chancellor and federal state leaders on March 22nd. The new guidelines focused on mandating social distancing, rather than following the model of strict lockdown as seen in other European countries at this time. The new restrictions specifically called for public gatherings of more than two people to be banned, a 1.5 meter distance to be kept in public at all times, closing gastronomy businesses and service providers where a 2 meter distance could not be maintained (such as hair-dressers), and giving the police and law enforcement the authority to enforce these

measures in ways determined by the state [15]. Overall, the mandate called for people to keep contact to a minimum, and it brought basic, uniform standards across the country.

After Chancellor Merkel extended the lockdown measures from April 5th to April 19th, cases began to diminish, and the country entered the recovery phase [19]. During the recovery phase, the federal and state governments worked together to establish a baseline for lifting the restrictions before power was handed completely back to the states. In the final weeks of April, the Chancellor and First Ministers slowly loosened lockdown requirements, first with small shops being allowed to open on April 20th, playgrounds, museums, and churches being allowed to reopen on May 4th, and finally by creating a broad timeline for schools to begin opening around the weeks of May 4th and 11th [20]. The broad goals were outlined by the federal government but each state opened and implemented the guidelines slightly different from one another. Most notably, mask requirements in and out of school were decided by state governments, with the first states to mandate masks being Saxony, Mecklenburg-Western Pomerania, and Bavaria starting April 17th, while other states like NRW originally decided to make mask wearing voluntary [21]. Eventually, by April 27th, all states made masks mandatory [22].

On May 6th, the federal government announced its last relaxation of guidelines from the first wave before more autonomy was given to the states. This announcement allowed all shops to open as long as social distancing of 1.5 meters was maintained, the German soccer league to restart, religious services to reconvene, people to meet with other households once again, and for schools to reopen in phases [23]. The reopening of cinemas, theaters, restaurants, and daycares was to be decided by the states. Despite ceding power to the states, Chancellor Merkel and the First Ministers agreed to an "emergency brake" on May 10th, which required local authorities to

impose restrictions if cases passed the threshold of 50 per 100,000 people, and the leaders agreed to maintain mandatory social distancing until June 5th [23]. Additionally, the national government opened the border with Schengen Area countries on June 15th, no longer mandating travelers to prove a valid reason for coming into Germany [24]. This withdrawal of powers from the national to subnational level shows the strong belief by the German government that state decision making was best to handle the pandemic.

As summer approached, different states loosened policies depending on local circumstances. For instance, on May 25th, Mecklenburg-Western Pomerania ended its ban on domestic tourism for its Baltic Sea beaches [25]. However, the most prominent example of states usurping the federally-agreed mandates was Thuringia near the end of May. While mandatory social distancing was to remain in place until June 5th, and was even extended from May 26th to June 29th by federal and state leaders, Thuringia planned to end social distancing earlier since they had fewer cases. After first threatening to end the social distancing mandate on May 25th, Minister President Bodo Ramelow lifted restrictions on June 13th, which made social distancing recommended instead of mandated[26].

While Thuringia decided to loosen social distancing guidelines earlier, other state leaders responded to local circumstances differently. In NRW, a large cluster of cases at a slaughterhouse in the districts of Tonnies and Gutersloh on June 23rd made Minister President Armin Laschet enact a lockdown in these districts, thus closing museums, bars, cinemas, gyms, and schools. Certain workers following the outbreak were even ordered to stay home [27]. Because of this outbreak, many individual states, such as Mecklenburg-Western Pomerania, forbade citizens from states with outbreaks from entering their own state. Policies such as this created travel ban patches across the country, and the situation was only rectified by a nationally

agreed upon plan on June 27th which stated that people traveling from a district with a high occurrence of coronavirus infection can only be accommodated in a hotel if a medical certificate confirmed they were not infected [28]. This helped end blanket discrimination against travelers from the heavily infected NRW.

Another key policy development at the state level was the implementation of universal testing in Bavaria. Bavaria, often imposing the most intense COVID-19 restrictions and initiatives, instituted universal free testing on June 28th in its "corona test offensive." Bavaria was the only state to implement a universal testing plan, and as it did so, faced criticisms over the potential of universal testing overwhelming the testing sites and reducing access to testing for higher risk individuals. States like NRW and Baden Wuerttemberg preferred a targeted approach to testing [29].

Finally, throughout the month of July, states deliberated about the opening of schools at the end of the summer and whether masks should be required when attending schools. Like the mask policies between the spring and summer, each state coalesced around similar precautions for the upcoming school year and retained small deviations to accommodate their local circumstances best.

4.0 Data Analysis

Figures 1, 2, 3, and 4 show the number of electronically confirmed cases and deaths reported by the RKI, the preeminent national public health institution in Germany, in their daily situation reports [31]. Data for Figure 5 is derived from the Johns Hopkins COVID-19 dashboard data set for both Germany and France [32]. Johns Hopkins data was used for Figure 5 rather than data from the RKI because the RKI only reports on data from Germany. To compare German states and different countries with one another, data were converted to "per 100,000 population

(per day)". The national population for Germany and France were taken from the World Bank [33], and the population for each German state was reported by the RKI [31].

During the first wave (Figures 1 and 2), Germany's COVID-19 policy was derived from agreements made at the national level between the state and federal governments. National policy as negotiated between the state and federal governments was stricter than most individual state restrictions. The uniform COVID-19 restrictions agreed upon between the 16 federal state leaders and Chancellor Merkel, primarily on March 16th and March 22nd, were the main policy tool that helped Germany withstand the initial barrage of cases and deaths. The data shows that 2-3 weeks after these national policies were enacted, case numbers for COVID-19 decreased or stayed the same nationally and in individual states (Figure 1). While cases decreased or stayed consistent, deaths appear to have increased in all states and nationally (Figure 2). However, the increase in deaths after April 9th are most likely from the earlier peak in cases between March 30th and April 4th.

Beyond nationwide policies, the first wave saw the first full lockdown in Bavaria ordered by First Minister Markus Soder on March 20th, since Bavaria was impacted most at the beginning of the pandemic [16]. In the 2-3 weeks following the lockdown, Bavaria had a significant decrease in cases, after overcoming a peak between March 30th and April 4th (Figure 1). The ability for Bavaria to also enact state policy in conjunction with national policy, to which it also agreed, highlights the benefits of federalism.

Figure 1: First Wave Cases per Day

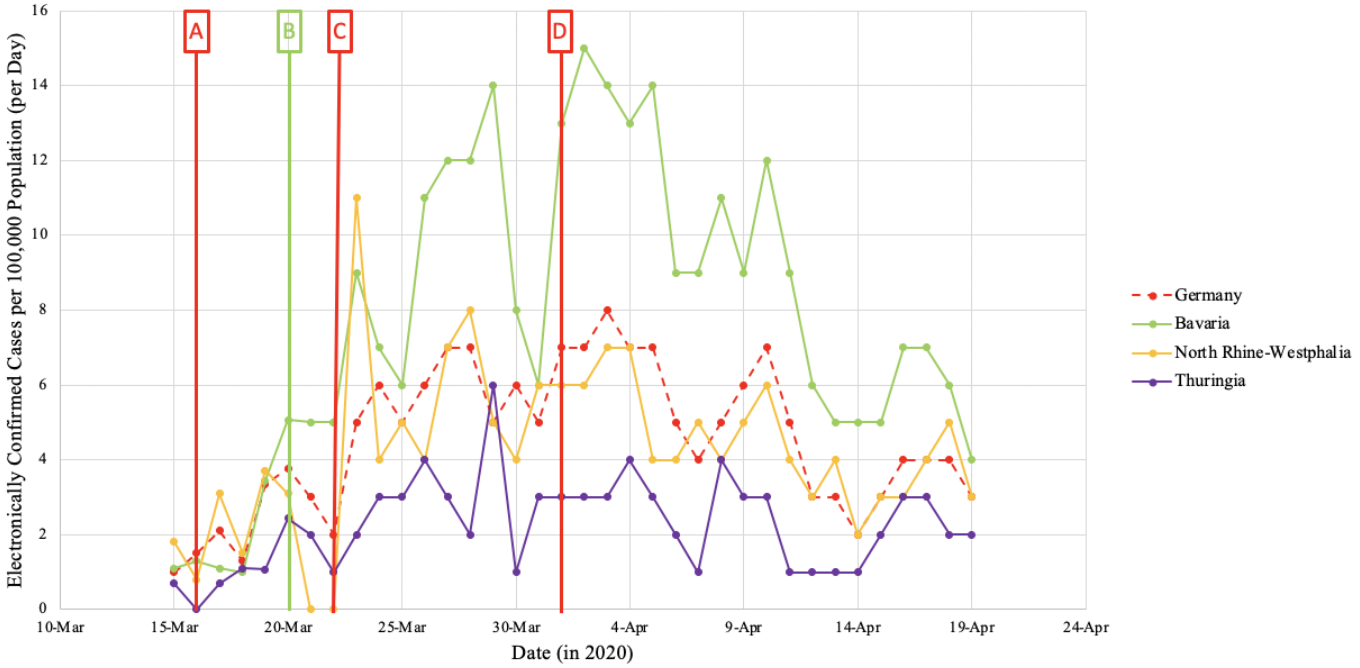
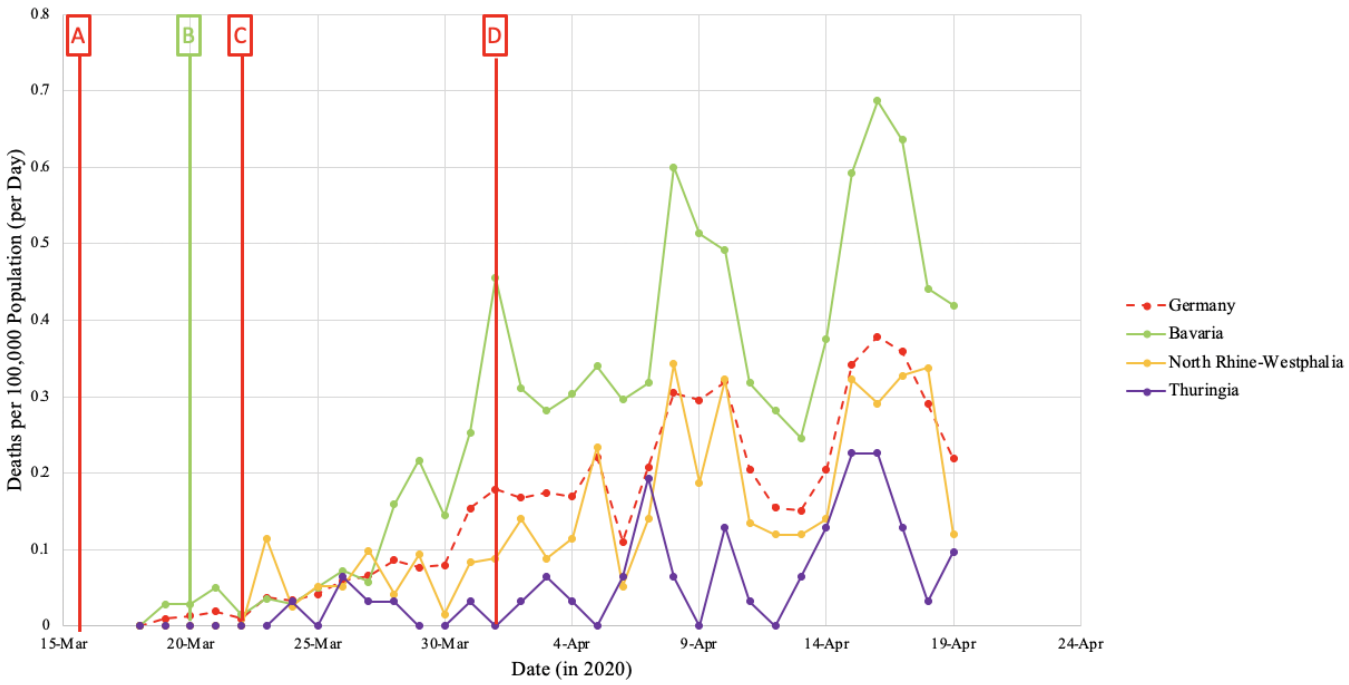


Figure 2: First Wave Deaths per Day



Note for Figures 1 and 2: A = National Policy from March 16th (non-essential business, religious gatherings, and overnight holiday travel all closed or banned. Restaurants ordered to close by 6pm [14]); B = Bavarian Policy from March 20th (first federal state to go into lockdown. Bavarians could not leave their homes, except for activities such as grocery shopping, commuting to work, visiting a doctor, and aiding others, Restaurants were also all closed.

[16]); C = National Policy from March 22nd (public gatherings of more than two people banned, a 1.5 meter distance should be kept at all times, gastronomy and service provider businesses closed, and law enforcement given ability to enforce restrictions [15]); and D = National Policy from April 1st (extended the March 22nd restrictions until at least April 19th [19]). Also, note that Figure 2's data starts on March 18th and Figure 1's data starts on March 15th. This is because death data was not available for the states before March 18th, since very few deaths were recorded.

Figures 3 and 4 focus on the recovery period where states decided when and how to lift restrictions. Each of the three states had policy moves that made them stand out from the rest of the German states. In Thuringia, Minister President Bodo Ramelow decided to end mandatory social distancing on June 13th, earlier than called for by the national guideline, because Thuringia had few cases and deaths [26]. Looking at Figure 3, it appears cases slowly decreased over the study's time period in Thuringia. For deaths (Figure 4), the low number of deaths in Thuringia during this time period made days when deaths were reported stand out. So, Thuringia's policy on June 13th did not have any noticeable effect on the deaths during this time period (Figure 2).

Unlike Thuringia, NRW's situation, specifically the cluster outbreak at a slaughterhouse in the districts of Tonnies and Gutersloh, led to a lockdown on June 23rd imposed by Minister President Armin Laschet. As a result of the lockdown, cases subsided in the next few weeks (Figure 3) and deaths appeared to stay stable, with a small outlier on July 8th (Figure 4). Overall, NRW's COVID-19 response seems to be proportionate to the threat as measured by the new cases that emerged during this recovery period.

Finally Bavaria, after overcoming a major outbreak during the first wave, enacted a "corona testing offensive" -- universal, free testing for anyone who wanted to be tested. This policy went into effect on June 28th, and in the weeks following, the number of cases stayed constant or even slightly decreased, despite performing more tests (Figure 3). In Figure 4, Bavaria's deaths also decreased in the weeks following this policy enactment.

Overall, the states' diverse responses during the recovery period, like the nationally coordinated response during the first wave, were able to keep case numbers low at the state level and throughout the entire country.

Additionally, during the recovery period, national initiatives were not completely absent. In order to consider all of Germany's notable policy initiatives during this time period, Figures 3 and 4 include national-level responses such as the Corona Warn App on June 17th and the homogenization of internal travel rules to be applied by hotels on June 27th [33]. So, while state leaders were able to greatly control the restrictions within their own borders, cooperation on policy between the federal government and the 16 federal state leaders was still ongoing.

Figure 3: Recovery Phase Cases Per Day

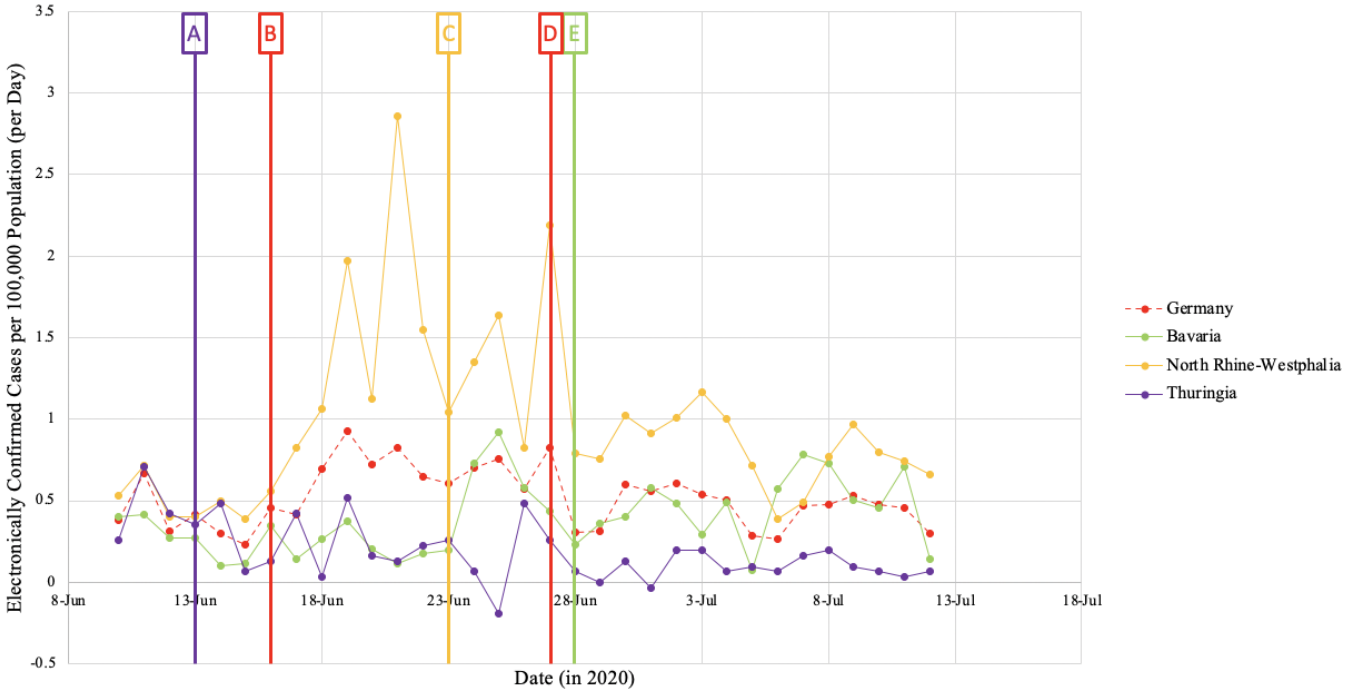
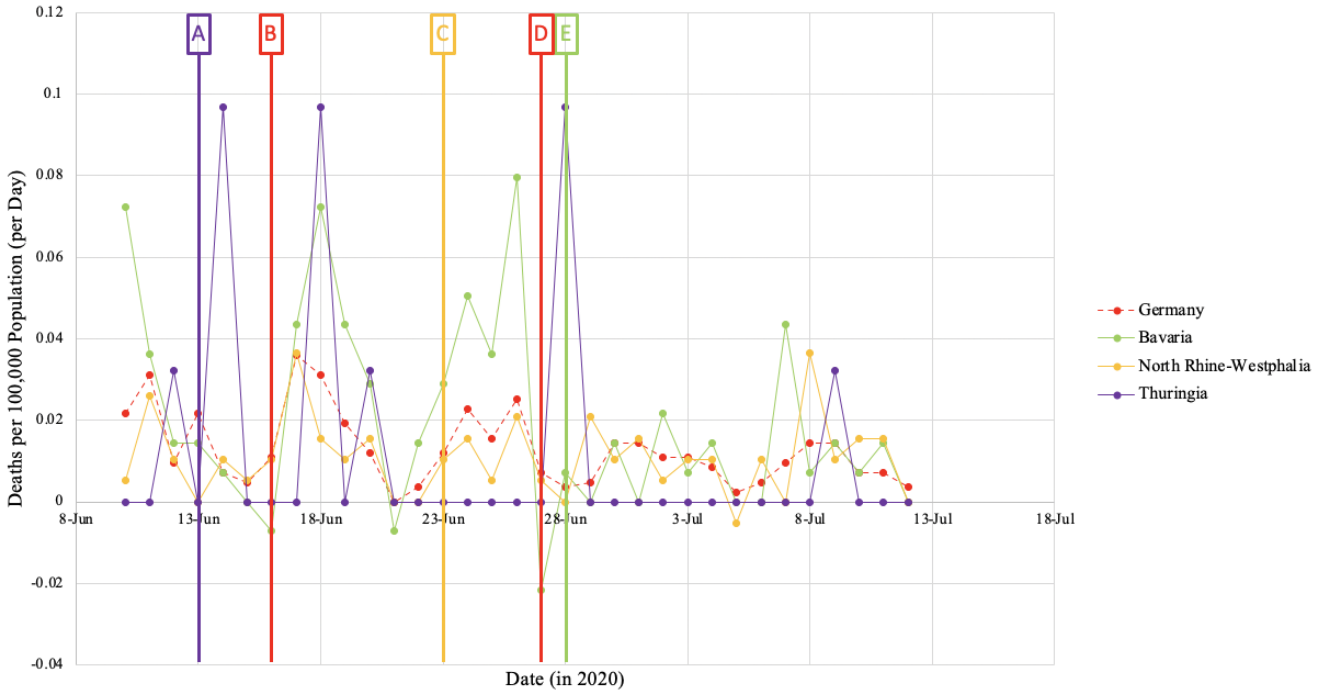


Figure 4: Recovery Phase Deaths per Day

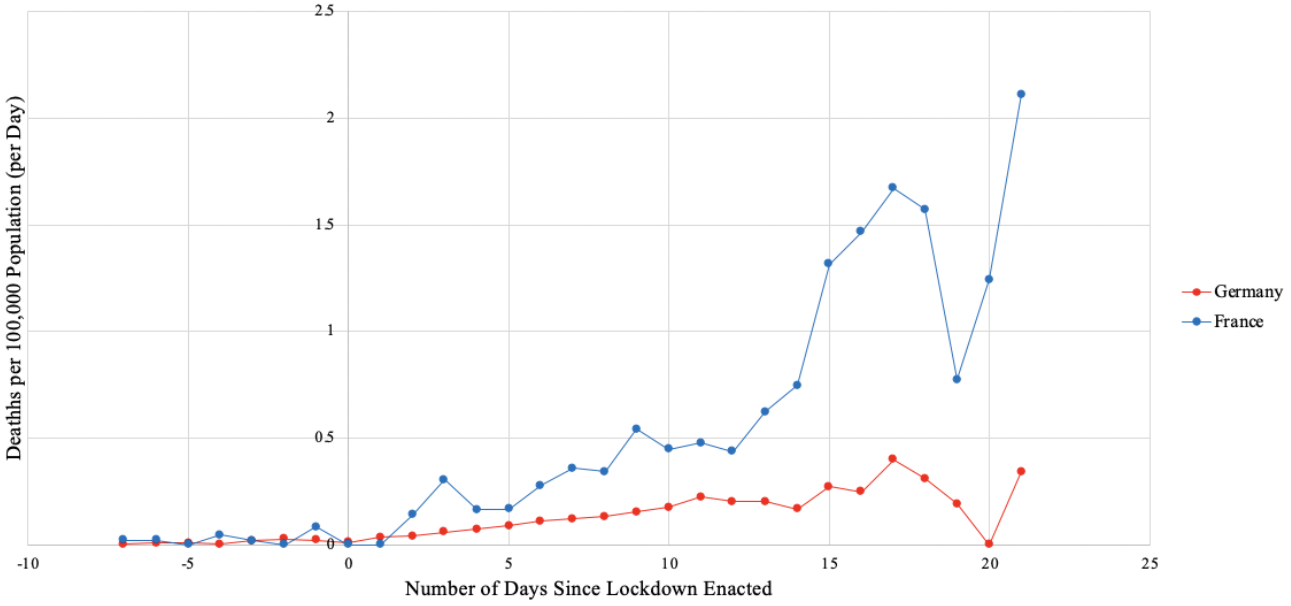


Note for Figures 3 and 4: A = Thuringia Policy from June 13th (mandatory restrictions adopted nationally, such as the mandated social distancing, is lifted in exchange for recommending citizens limit their contacts [26]); B = National Policy from June 16th (Corona-warn app released that notifies users that they have been exposed and can be tested for free [34]); C = North Rhine-Westphalia Policy from June 23rd (imposed a lockdown on the districts of Tonnies and Gutersloh following an outbreak at a slaughterhouse. Mandates that museums, bars, cinemas, gyms, and schools close. Mandatory quarantines are also implemented for workers from the slaughterhouse [27]); D = National Policy from June 27th (people traveling from a district with a high occurrence of coronavirus infection may only be accommodated in a hotel if a medical certificate confirms that they are not infected. The medical certificate must be based on a molecular biological test carried out no later than 48 hours prior to arrival [28]); and E = Bavaria Policy from June 28th (all Bavarian citizens offered the opportunity to have themselves tested by an established contract physician, even without symptoms, for free [29]).

To assess the effectiveness of the state-national policy, Germany's COVID-19 deaths during the first wave were compared with those in France. French President Emmanuel Macron, as head of the country's unitary government, implemented a hard lockdown on March 17th. The lockdown applied to all of France, and required people to stay at home except for essential travel. The mandate even went so far as to require citizens to carry a pass when leaving their homes, obtained by submitting justification for the necessity of their travel. In comparison, Germany had a soft lockdown that reflected the consensus reached between Chancellor Merkel and the leaders

of all of the 16 federal states. As a result, the lockdown criteria on March 16th and 22nd primarily focused on mandating social distancing rather than restricting families to their homes. As reported in Figure 5, Germany had fewer deaths per 100,000 people following the lockdown order, and the number of deaths were increasing at a slower pace than in France. This suggests that the weaker lockdown approach did not result in an adverse epidemiological outcome, possibly because it was supplemented with state-specific measures. Germany's federalism, which required all states to be in agreement for national policy to be implemented, yet taking into account local considerations through state action has allowed the country to fight the virus effectively in comparison to France.

Figure 5: First Wave Deaths per Day in France and Germany After Lockdown



Note for Figure 5: French lockdown started on March 17th (required people from around the country to remain home, except for essential outings such as grocery shopping, walking the dog, or seeking medical help. Anyone outside must carry a signed form stating the reason for them being outside their home. Most shops, restaurants, and tourist sites were also closed [30]). German lockdown started on March 22nd (public gatherings of more than two people banned, a 1.5 meter distance should be kept at all times, gastronomy and service provider businesses closed, and law enforcement given ability to enforce restrictions [15]).

5.0 Discussion and Conclusions

Over the course of the pandemic, Germany's strong federal system required explicit coordination and cooperation between the federal and state governments. Prior to any large German outbreak in March, the German strategy to combat the disease was to contact trace and rely on state and local governments to stop the spread. As cases rose and the country moved into the first wave, COVID-19 restrictions primarily came from the national government as consented to by the states. For each new mandate released, the wording was unanimously agreed upon by all 16 federal state leaders and Chancellor Merkel. When cases started to recede and the country moved into the recovery phase, individual states became the main deciding actors for loosening and re-tightening the restrictions.

The number of cases and deaths following government policies during the first wave and recovery phase support the claim that Germany's federal design was beneficial in combatting and mitigating the effects of COVID-19. During the first wave, the ability for the country to coalesce around common restrictions implemented at the national level helped the three states highlighted in this study, and the country as a whole, to successfully decrease the number of cases. Meanwhile, the ability of the states to act independently of the rest of the country and implement more stringent policy when necessary also helped lower the case load (e.g., Bavaria implementing their own lockdown during the first wave). Germany's national response, which took state considerations into account, reported fewer deaths and a slower death rate throughout the country compared to France. The flexibility of the system was also useful during the recovery phase. Cases and deaths either decreased or stayed the same when individual states were able to choose policies that best served the infection rates based on their own jurisdiction.

Germany's fragmented response due to its federal system led to policies that mitigated the virus, and directly met the needs of individual states, consistent with the established

argument in federalism literature [6]. Future studies should expand upon this analysis by including the country's testing capabilities, hospital beds, and the willingness of the public to comply with the policies issued by the political incumbents. As such, Germany has a strong testing, contact tracing, and quarantine strategy, which public health authorities initially developed from their experience with SARS [9]. Additionally, the country had 33.9 ICU beds per 100,000 inhabitants, which is far greater than many of Germany's neighbors [35]. Future analysis combining these factors with the national and subnational policy responses in a cross-national sample would have the potential to identify the optimal balance between policy-making by governments of different levels for the effectiveness of the COVID-19 pandemic public health response.

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