

**Föderaler Wettbewerb vs. opportunistische
Transgression:
Empirische Evidenz zum Verhalten
der Ministerpräsident:innen während der Covid-
Pandemie.**

Prof. Salvatore Barbaro & Julia M. Rode

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JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



STRUCTURE

- 1 Literature Review
- 2 Yardstick competition
- 3 Data
- 4 Model
- 5 Results
- 6 Conclusion

LITERATURE REVIEW

FEDERALISM

Federalism as political laboratories: Yardstick competition

- Political aspirations fosters policy innovation (Kotsogiannis and Schwager (2006))
- State incumbents act as copycats after evaluating the first-mover states' performance (Strumpf, 2002; Brooks, 2007)
- 'Campfire Tale' (Tyler and Gerken, 2022)

Transgression: Opportunistic behaviour of savvy incumbents (Bednar, 2009, Ch. 3)

- Federalist competition can fail if constituents are tempted to exploit the federal union for their own benefit
- Because competition favours illustrious governments, it makes experimentation and self-responsibility perilous for feeble governments
- Blurred jurisdiction and shared competencies allow incumbents with poor performance to deflect responsibility for errors

Yardstick competition

Application

Low performing prime ministers shift responsibility upon the federal government



Minimise competition in order to mask their bad crisis management



Bad politicians try to increase their chance to succeed in the long run

- Covid-19 pandemic
 - ✓ Symmetric shock for all German states
 - ✓ Public focus on prime ministers
 - ✓ No change of prime ministers/federal government

DATA EMPIRICAL STRATEGY

Variable	Meaning	Variable	Meaning
F_{it}	Federalism Index	C_{it}	Covid-19 indicator
$i \in \{1, \dots, 16\}$	German State	t	Time
fin_i	Financial Strength	v_{it}	Vaccination rate
a_i	General Attitude		

$$\text{logit}[F_{it}] = fin_i + a_i + a_i fin_i + v_{it} + \alpha_{it} C_{it} + \varepsilon_{it}$$

Data

Dependent and independent variable

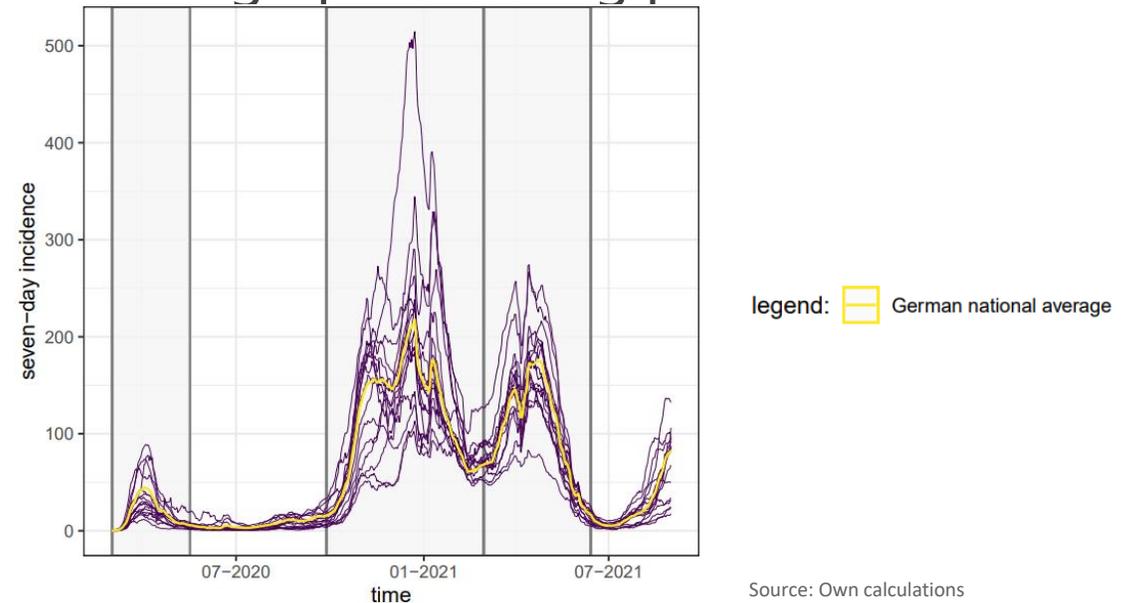
Federalism index

- More than 900 classified statements



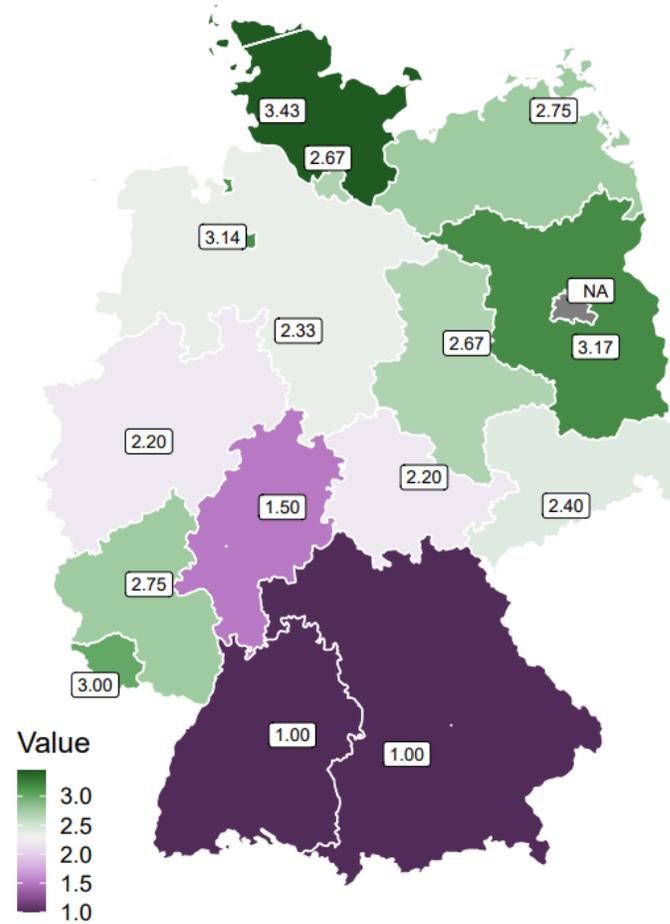
Deviation of the seven-day incidence per state from the national average

- <0: high performing prime minister

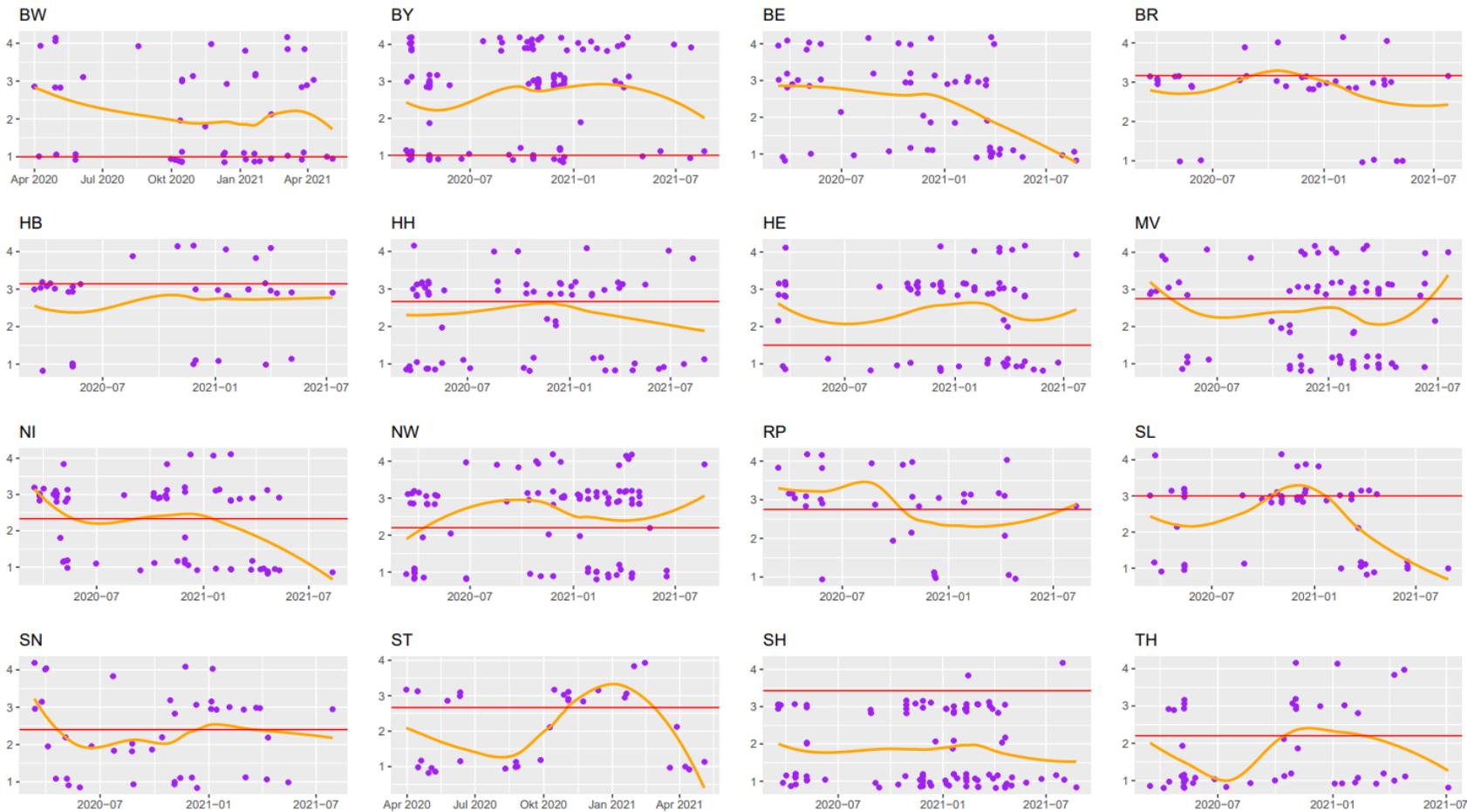


DATA

GENERAL ATTITUDE TOWARDS FEDERALISM



DATA FEDERALISM INDEX VS. GENERAL ATTITUDE



Model

Multinomial logistic regression

Logit regression analysis

- Probability of the outcome variable given the independent variable
 - Increases/decreases continuously
- Non-linear likelihood function
- Logistic distribution represents these characteristics.

$$\ln \frac{\pi(x)}{1 - \pi(x)} = \beta_0 + \beta_1 x$$

Cumulative logit model with proportional odds assumption

- Compare probability of a less or equal outcome of the dependent variable to the probability of a higher outcome
- Identical effect parameter which indicates the log odds

RESULTS

ODDS RATIO

Odds ratio

Wave	First	Second	Third
7dayinc_dev	0.9662	1.0044	1.0086
att_t_fed	1.1718	38.5089	41.6490
vaccination_rate	1.0228	0.8002	0.9414
FKM21	0.9968	1.0767	1.1036
fin_att	3.5802	0.9659	0.9643

Source: Own calculations

Interpretation

- For prime ministers with a 100 point higher 7DI deviation the odds of being in $ai > 1$ instead of $ai = 1$ is 1.5512 times (2nd wave) resp. 2.3545 (3rd) times that of a state with a baseline deviation.
- Baseline deviation: Lowest deviation per wave

RESULTS

POSSIBLE INTERPRETATION

First wave

- Results are in accordance with the findings of Schnabel and Hegele (2021)

Second and third wave

- The Covid19-pandemic has caused politicians with above-average 7DI to support and even claim for more regulation and action on the federal level
- Second and third wave: low performing prime ministers try to shift responsibility

CONCLUSION

The desire for decisive, unequivocal leadership at the top of a unified hierarchy is a well-known response to threats.

In times of uncertainty, policy heterogeneity is required to iteratively achieve sound decisions.

Federal encroaching under the 'coordination' label can be an impediment to policy innovation.

Empirical evidence for strategic transgression by abdication.

Little backing for blurred and obfuscated jurisdictions (German case).

Thank you for your attention!

Salvatore Barbaro[‡] and Julia M. Rode*

[‡], * Johannes-Gutenberg University, GSEM , 55122 Mainz, Germany sbarbaro@uni-mainz.de

*Deutsche Bundesbank, 60431 Frankfurt (HE), Germany

*Johannes-Gutenberg University, Mainz, Germany.

[‡]Institute for Policy Evaluation (IPE), 60594 Frankfurt (HE), Germany

[‡]Interdisciplinary Public Policy, Johannes-Gutenberg University Mainz, Germany

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APPENDIX

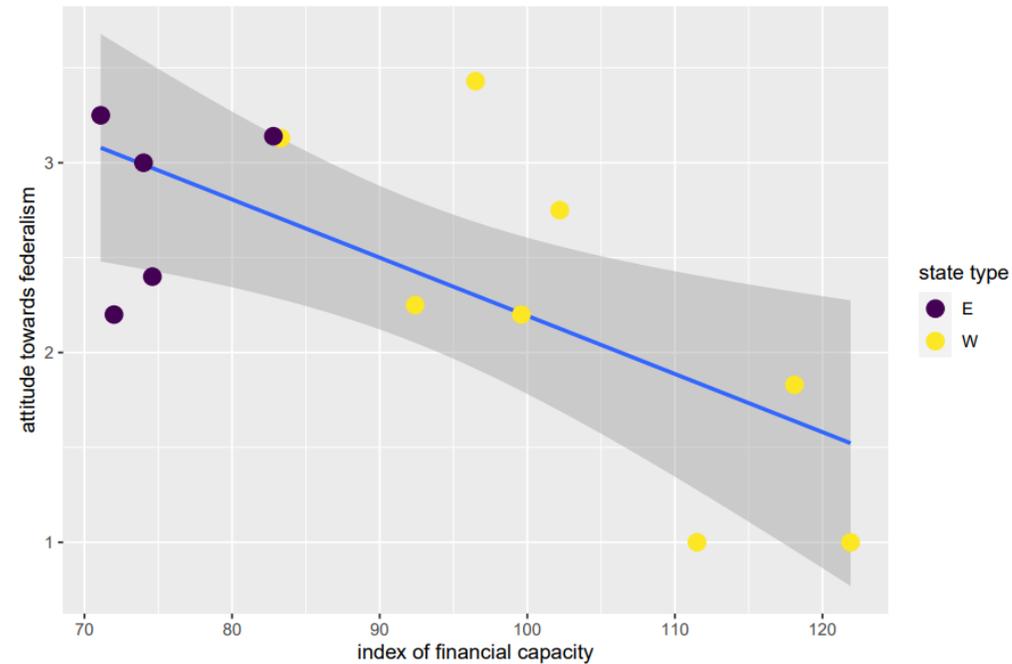
STATEMENTS-EXAMPLE

*„Wir haben uns deshalb hier mit breiter Mehrheit auf unseren MV-Weg verständigt.“
(Manuela Schwesig)*

*„Der Bund steht in der Verantwortung, dies zu verbessern.“
(Markus Söder)*

APPENDIX

CONTROL VARIABLE ATTITUDE TOWARDS FEDERALISM



1: Substantial criticism:
Stronger federalism and more independence

4: Substantial criticism:
Joint decision making and transfer of competences

APPENDIX

OTHER CONTROL VARIABLES

Financial strength

- States enjoy spending and debt autonomy
- States enjoy no tax autonomy
- (Mandatory) financial equalization
- Significant harmonisation
- Index of financial capacity

Economic strength

- Differing living standard and industry structures
- Manufacturing sector is the strongest hit during the pandemic
- Economic support measures > one trillion
- Share of manufacturing sector on the gross value added per state

Vaccination rate

- Included in second and third wave estimation
- Based on cumulative number of people who received all doses prescribed by the vaccination protocol

RESULTS

PROBABILITIES

Probabilities of the conditional effect

First wave

Inter-group-comparison: Prime ministers prefer individual action or support decisions made on the federal level over individual action of others and ask for more regulation

Intra-group-comparison: Good performing prime ministers are more likely to support decisions (jointly) made on the federal level

Second wave

Inter-group-comparison: All prime ministers are most likely to promote joint decision making

Intra-group-comparison: All governments are willing to make joint decisions/transfer competences, bad performing governments are more likely than good performing governments to favour central decision making.

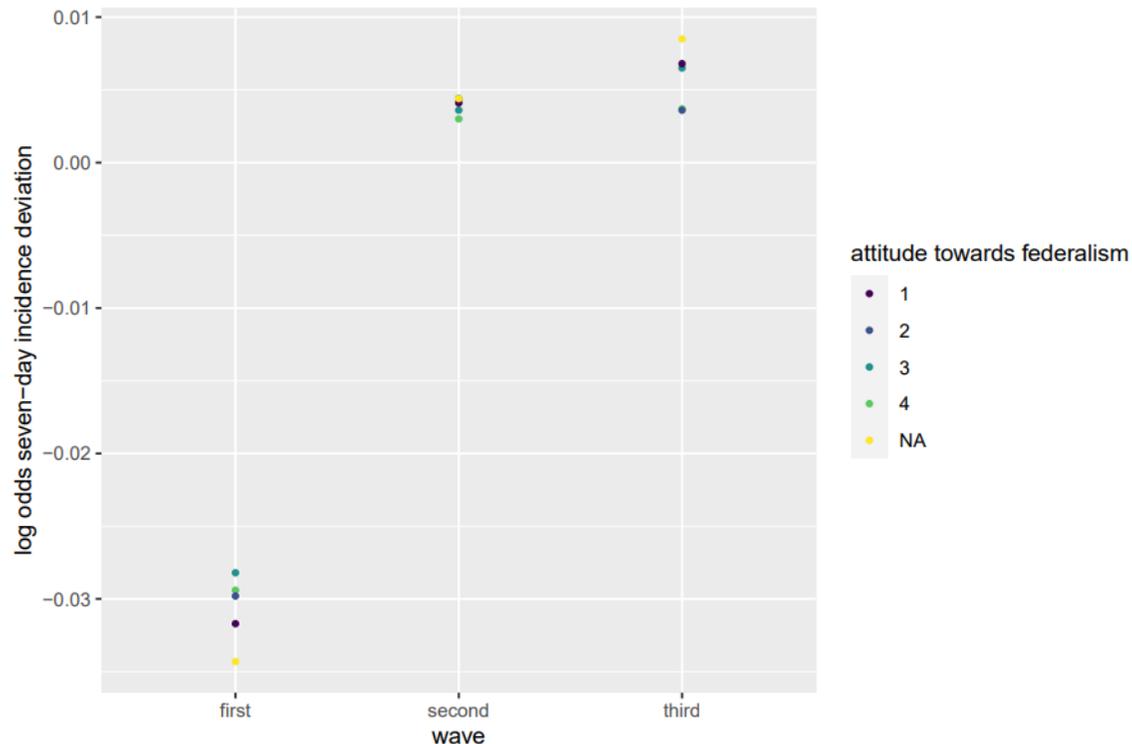
Third wave

Inter-group-comparison: All prime ministers are most likely to promote individual decision making

Intra-group-comparison: Bad performing governments are one percent more likely to prefer individual decision making

APPENDIX INCLUDING BERLIN

BERLIN SPECIFICATION THREE



Source: Own calculations

INTERPRETATION

- Including Berlin does not change the pattern of the results
- Reasonable to assume attitude towards federalism between three and four
- Significance of the estimates decreases the later the wave and the higher the attitude towards federalism

APPENDIX

ADDITIONAL MATERIAL LOG ODDS

wave	First β (SE)	Second β (SE)	Third β (SE)
sevendayincidence_dev	-0.0343 (0.0138)*	0.0044 (0.0021)*	0.0085 (0.0051)
att_t_fed	0.1586 (1.4325)	3.6509 (0.2650)***	3.7293 (0.4142)***
FKM21	0.0225 (0.0324)	0.0739 (0.0029)***	0.0986 (0.0058)***
fin_att	-0.0032 (0.0135)	-0.0347 (0.0037)***	-0.0363 (0.0064)***
1 2	1.2754 (3.6265)	7.2047 (0.1051)***	9.6515 (0.1501)***
2 3	1.4894 (3.6268)	7.5021 (0.1172)***	9.8478 (0.1619)***
3 4	4.2235 (3.6373)	9.9297 (0.1842)***	11.9703 (0.2699)***
vaccination_rate		-0.2229 (0.1467)	-0.0604 (0.0408)
AIC	483.8629	871.4974	434.2166
BIC	507.6501	902.8915	460.2766
Log Likelihood	-234.9315	-427.7487	-209.1083
Deviance	469.8629	855.4974	418.2166
Num. obs.	221	374	192

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Source: Own calculations

APPENDIX

ADDITIONAL MATERIAL PROBABILITIES

incidence group	probability	SE	conf.low	conf.high	response.level	wave
2.00	0.30	3.61	0.00	1.00	1	first
3.00	0.44	3.66	0.00	1.00	1	first
2.00	0.05	3.61	0.00	0.98	2	first
3.00	0.05	3.66	0.00	0.99	2	first
2.00	0.54	3.61	0.00	1.00	3	first
3.00	0.44	3.66	0.00	1.00	3	first
2.00	0.11	3.61	0.00	0.99	4	first
3.00	0.06	3.66	0.00	0.99	4	first

incidence group	probability	SE	conf.low	conf.high	response.level	wave
1.00	0.38	0.22	0.29	0.49	1	second
2.00	0.32	0.14	0.27	0.38	1	second
3.00	0.27	0.21	0.19	0.35	1	second
4.00	0.22	0.36	0.12	0.36	1	second
5.00	0.17	0.51	0.07	0.36	1	second
1.00	0.07	0.22	0.05	0.11	2	second
2.00	0.07	0.14	0.05	0.09	2	second
3.00	0.06	0.21	0.04	0.09	2	second
4.00	0.05	0.36	0.03	0.10	2	second
5.00	0.05	0.51	0.02	0.12	2	second
1.00	0.45	0.22	0.34	0.56	3	second
2.00	0.49	0.14	0.42	0.56	3	second
3.00	0.52	0.21	0.41	0.62	3	second
4.00	0.54	0.36	0.36	0.70	3	second
5.00	0.54	0.51	0.30	0.76	3	second
1.00	0.10	0.22	0.06	0.14	4	second
2.00	0.12	0.14	0.10	0.15	4	second
3.00	0.15	0.21	0.11	0.22	4	second
4.00	0.19	0.36	0.11	0.33	4	second
5.00	0.24	0.51	0.10	0.47	4	second

incidence group	probability	SE	conf.low	conf.high	response.level	wave
2.00	0.44	0.20	0.34	0.53	1	third
3.00	0.45	0.34	0.29	0.62	1	third
2.00	0.05	0.20	0.03	0.07	2	third
3.00	0.05	0.34	0.03	0.09	2	third
2.00	0.40	0.20	0.31	0.50	3	third
3.00	0.39	0.34	0.25	0.56	3	third
2.00	0.11	0.20	0.08	0.16	4	third
3.00	0.11	0.34	0.06	0.19	4	third

Source: Own calculations

APPENDIX

ADDITIONAL MATERIAL CRITERIA

Value	1	2	3	4
Criteria	Decide to act individually, demand less action from federal government	Support individual action of other/ Do not follow joint recommendation	Support jointly made decisions and actions	Ask for more regulation and action from the federal government

Value	1	2	3	4
Criteria	Substantial criticism: Stronger federalism, more independence	Modest criticism: Modest federalism, coordination state level	Modest criticism: Support from/ coordination with federal government	Substantial criticism: Joint decision making and transfer of competences

APPENDIX

ADDITIONAL MATERIAL OLS

OLS SPECIFICATION THREE

	First β (SE)	Second β (SE)	Third β (SE)
(Intercept)	1.5891 (2.0038)	-1.8621 (1.7545)	-3.4987 (3.0699)
sevendayincidence_dev	-0.0173 (0.0073)*	0.0024 (0.0012)*	0.0054 (0.0033)
att_t_fed	-0.0330 (0.7932)	1.9557 (0.7053)**	2.1244 (1.1387)
FKM21	0.0089 (0.0177)	0.0393 (0.0155)*	0.0557 (0.0268)*
fin_att	-0.0003 (0.0074)	-0.0184 (0.0066)**	-0.0204 (0.0103)*
vaccination_rate		-0.1256 (0.0811)	-0.0288 (0.0205)
R ²	0.0329	0.0372	0.0656
Adj. R ²	0.0150	0.0241	0.0405
Num. obs.	221	374	192

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Source: Own calculations

INTERPRETATION

- Results do not contradict the results obtained under the cumulative logit model
- Questionable model fit
- Appropriateness of a linear model is questionable
- Several OLS assumptions are not fulfilled

SOURCES

- Acemoglu, D., Johnson, S., Robinson, J.A., 2001. The colonial origins of comparative development: An empirical investigation. *American Economic Review* 91, 1369–1401. doi:10.1257/aer.91.5.1369.
- Agnew, J., 2022. Failing federalism? US dualist federalism and the 2020–22 pandemic. *Regional Studies, Regional Science* 9, 149–171. doi:10.1080/21681376.2022.2045214.
- Agresti, A., 2007. *An Introduction to Categorical Data Analysis*. John Wiley & Sons, Inc. doi:10.1002/0470114754.
- Agresti, A., 2010. *Analysis of Ordinal Categorical Data*. John Wiley & Sons, Inc. doi:10.1002/9780470594001.
- Alexy, L., Fisahn, A., Hähnchen, S., Musho, T., Trepte, U., 2019. *Das Rechtslexikon. Begriffe, Grundlagen, Zusammenhänge*. J.H.W. Dietz Nachf., Bonn. Lizenzausgabe: Bundeszentrale für politische Bildung.
- Allain-Dupr'e, D., Chatry, I., Kornprobst, A., Michalun, M.V., 2020. The territorial impact of covid-19: Managing the crisis across levels of government.
- Anselin, L., 2003. Spatial econometrics, in: Baltagi, B.H. (Ed.), *A Companion to Theoretical Econometrics*. Blackwell Publishing Ltd. chapter 14, pp. 310–330.
- Ansell, C., Sørensen, E., Torfing, J., 2020. The COVID-19 pandemic as a game changer for public administration and leadership? the need for robust governance responses to turbulent problems. *Public Management Review* 23, 949–960. doi:10.1080/14719037.2020.1820272.
- Audretsch, D.B., Lehmann, E.E., Schenkenhofer, J., 2020. A context-choice model of niche entrepreneurship. *Entrepreneurship Theory and Practice* 45, 1276–1303. doi:10.1177/1042258720936042.
- Baden-Württemberg.de, . Minister-presidents since 1952. URL: <https://www.baden-wuerttemberg.de/en/government/minister-president/minister-presidents-since-1952>. online, accessed 23-03-15.

SOURCES

Bednar, J., 2009. *The robust Federation: Principles of Design. Political Economy of Institutions and Decisions.*, Cambridge University Press, Cambridge.

Benz, A., Sonnicksen, J., 2017. Advancing backwards: Why institutional reform of german federalism reinforced joint decision-making. *Publius: The Journal of Federalism* 48, 134–159. doi:10.1093/publius/pjx055.

Bergman, T., Hanna, B., Johan, H., 2021. Coalition governance in western europe, in: *Coalition Governance in Western Europe.* Oxford University Press, pp. 1–14. doi:10.1093/oso/9780198868484.003.0001.

Berlemann, M., Jahn, V., Lehmann, R., 2018. Auswege aus dem Dilemma der empirischen Mittelstandsforschung. *ifo Schnelldienst* 71, 22–28. URL: <http://hdl.handle.net/10419/198692>.

Berlemann, M., Jahn, V., Lehmann, R., 2019. Wie ist der Mittelstand in Deutschlandverteilt? Eine Analyse mit Befragungsdaten. *ifo Dresden berichtet* 26, 23–28. URL:<http://hdl.handle.net/10419/198629>.

Besley, T., Case, A., 1995. Incumbent behavior: Vote-seeking, tax-setting, and yardstick competition. *The American Economic Review* 85, 25–45. URL: <http://www.jstor.org/stable/2117994>.

Blesse, S., Berger, M., Heinemann, F., Janeba, E., 2017. Föderalismuspräferenzen inder deutschen Bevölkerung. *Perspektiven der Wirtschaftspolitik* 18, 145–158. doi:10.1515/pwp-2017-0007.

Brant, R., 1990. Assessing proportionality in the proportional odds model for ordinal logistic regression. *Biometrics* 46, 1171. doi:10.2307/2532457.

Bräuninger, T., Debus, M., Müuller, J., Stecker, C., 2018. Party competition and government formation in germany: Business as usual or new patterns? *German Politics* 28, 80–100. doi:10.1080/09644008.2018.1538362.

SOURCES

Brooks, S.M., 2007. When does diffusion matter? explaining the spread of structural pension reforms across nations. *The Journal of Politics* 69, 701–715. doi:10.1111/j.1468-2508.2007.00569.x.

Buettner, T., von Schwerin, A., 2016. Yardstick competition and partial coordination: Exploring the empirical distribution of local business tax rates. *Journal of Economic Behavior & Organization* 124, 178–201. doi:10.1016/j.jebo.2015.10.013.

Bundesamt für Verfassungsschutz, 2022. Bundesamt für Verfassungsschutz wins lawsuit before the administrative court in cologne against AfD. URL: <https://www.verfassungsschutz.de/SharedDocs/pressemitteilungen/EN/2022/press-release-2022-1-afd-1.html?jsessionid=501F25DEAE9FB7C691004EE86F950A01.internet281>. online, accessed 22-12-11.

Bundesrat, 2018. Plenarprotokoll 973 Bundesrat Stenographischer Bericht 973. Sitzung. URL: https://www.bundesrat.de/SharedDocs/downloads/DE/plenarprotokolle/2018/Plenarprotokoll-973.pdf?jsessionid=0624455B73A63FD053C46241681B8ACC.1_cid349?__blob=publicationFile&v=3. online, accessed 2023-03-14.

Bundeswahlleiter, D., 2022. Ergebnisse früherer Landtagswahlen.

Burkhart, S., Manow, P., Ziblatt, D., 2008. A more efficient and accountable federalism? An analysis of the consequences of Germany's 2006 constitutional reform. *German Politics* 17, 522-540. doi:10.1080/09644000802501349.

Burret, H.T., Bury, Y., Feld, L.P., 2018. Grenzabschöpfungsraten im deutschen Finanzausgleich. *List Forum für Wirtschafts- und Finanzpolitik* 44, 1–22. doi:10.1007/s41025-018-0100-3.

Bündnis 90/Die Grünen, CDU, 2021. Jetzt für Morgen Der Erneuerungsvertrag für Baden-Württemberg. URL: https://www.baden-wuerttemberg.de/fileadmin/redaktion/dateien/PDF/210506_Koalitionsvertrag_2021-2026.pdf. online, accessed 2023-03-12.

Caliendo, L., Parro, F., 2014. Estimates of the trade and welfare effects of NAFTA. *The Review of Economic Studies* 82, 1-44. doi:10.1093/restud/rdu035.

SOURCES

Corrado, L., Fingleton, B., 2011. Where is the economics an spatial econometrics. *Journal of Regional Science* 52, 210–239. doi:10.1111/j.1467-9787.2011.00726.x.

Cucinotta, D., Vanelli, M., 2020. Who declares covid-19 a pandemic. *Acta Bio MedicaAtenei Parmensis* 91, 157–160. doi:10.23750/abm.v91i1.9397.

Debus, M., Döring, H., Ecker, A., 2021. Germany: From stable coalition camps to newcomplexity, in: *Coalition Governance in Western Europe*. Oxford University Press, pp. 247–283. doi:10.1093/oso/9780198868484.003.0008.

Decker, F., 2021. Brauchen wir eine Amtzeitbegrenzung für Bundeskanzler. *Aus Politikund Zeitgeschichte* 71.

Deutsche Bundesbank, 2020. Annual report .

Dreier, H., 2022. Verfassungsrechtliche Aspekte der Pandemiebekämpfung, in: *Infektionen und Gesellschaft*. Springer Berlin Heidelberg, pp. 124–133. doi:10.1007/978-3-662-66073-7_18.

Falkenhagen, F., 2013. The CSU as an ethno-regional party. *German Politics* 22, 396–420. doi:10.1080/09644008.2013.833190.

Falotico, R., Quatto, P., 2014. Fleiss' kappa statistic without paradoxes. *Quality & Quantity* 49, 463–470. doi:10.1007/s11135-014-0003-1.

Federal Ministry of Economic Affairs and Climate Action. The german mittelstand as a model for success. URL: <https://www.bmwk.de/Redaktion/EN/Dossier/sme-policy.html>. online, accessed 2022-11-18.

Ferraresi, M., Mazzanti, M., Mazzarano, M., Rizzo, L., Secomandi, R., 2021. Political cycles and yardstick competition in the recycling of waste. evidence from italian provinces. *SSRN Electronic Journal* doi:10.2139/ssrn.3785890.

SOURCES

Flach, L., Steininger, M., 2020. Globalisierung nach Covid-19: Die Folgen der Pandemie für die deutsche Wirtschaft. ifo Schnelldienst 73, 17–23. URL: <https://ideas.repec.org/a/ces/ifosdt/v73y2020i07p17-23.html>.

Fleiss, J.L., Levin, B., Paik, M.C., 2003. Statistical Methods for Rates and Proportions. Wiley. doi:10.1002/0471445428.

Gillmann, N., Lehmann, R., Nauerth, J.A., Ragnitz, J., Sonnenburg, J., Weber, M., 2019. Wachstum und Produktivität 2035- Innovations- und Produktivitätslücken auf Ebene der Bundesländer. Working Paper 106. ifo Institut. Munich.

Glen, S., n.d. Shapiro-wilk test: Definition, how to run it in spss. URL: <https://www.statisticshowto.com/shapiro-wilk-test/>. online, accessed 23-03-15.

Grimm, V., 2022. Ökonomische Auswirkungen der Pandemie, in: Infektionen und Gesellschaft. Springer Berlin Heidelberg, pp. 114–123. doi:10.1007/978-3-662-66073-7_17.

Grote, U., Arvand, M., Brinkwirth, S., Brunke, M., Buchholz, U., Eckmanns, T., von Kleist, M., Niebank, M., Ruehe, B., Schulze, K., Stolaroff-Pépin, A., Thanheiser, M., Schaade, L., Said, D., Haas, W., 2021. Maßnahmen zur Bewältigung der COVID-19-Pandemie in Deutschland: nichtpharmakologische und pharmakologische Ansätze. Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz 64, 435–445. doi:10.1007/s00103-021-03306-z.

Guidotti, E., 2022. A worldwide epidemiological database for COVID-19 at fine-grained spatial resolution. Scientific Data 9. doi:10.1038/s41597-022-01245-1.

Heinemann, F., Janeba, E., Moessinger, M.D., Schröder, C., Streif, F., 2014. Föderalismus-Präferenzen in den deutschen Landesparlamenten. Perspektiven der Wirtschaftspolitik 15, 56–74. doi:10.1515/pwp-2014-0003.

Henkel, M., Seidel, T., Suedekum, J., 2021. Fiscal transfers in the spatial economy. American Economic Journal: Economic Policy 13, 433–468. doi:10.1257/pol.20180294.

SOURCES

Hosmer, D.W., Lemeshow, S., Sturdivant, R.X., 2013. Applied Logistic Regression. Wiley. doi:10.1002/9781118548387.

Inman, R.P., Rubinfeld, D.L., 2020. Democratic Federalism. Princeton University Press. doi:10.2307/j.ctvss3znv.

International Monetary Fund, . Policy responses to covid-19. URL: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#G>. online, accessed 23-03-07.

Johann, M.S., Block, J.H., Benz, L., 2021. Financial performance of hidden champions: Evidence from german manufacturing firms. Small Business Economics 59, 873–892. doi:10.1007/s11187-021-00557-7.

Keweloh, H., 2022. Wenn die Luft zum Atmen fehlt. Heilberufe 74, 15–18. doi:10.1007/ s00058-022-2277-3.

Kiehl, W., 2015. RKI-Fachwörterbuch Infektionsschutz und Infektionsepidemiologie.

Kotsogiannis, C., Schwager, R., 2006. On the incentives to experiment in federations. Journal of Urban Economics 60, 484–497. doi:10.1016/j.jue.2006.04.008.

Kropp, S., Behnke, N., 2016. Marble cake dreaming of layer cake: the merits and pitfalls of disentanglement in german federalism reform. Regional & Federal Studies 26, 667–686. doi:10.1080/13597566.2016.1236335.

Lange, S., 2020. Von einem Grenzwert, der keiner ist – Kommentar zur “7-Tage-Inzidenz” auf SARS-Cov-2. Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen 158-159, 28–29. doi:10.1016/j.zefq.2020.11.006. Langenbacher, E., 2021. The German polity. Rowman & Littlefield.

Lenk, T., Glinka, P., 2017. Der neue bundesstaatliche Finanzausgleich — eine Reform und viel Reformaufschub. Wirtschaftsdienst 97, 506–512. doi:10.1007/ s10273-017-2168-4.

Liddo, G.D., Vinella, A., 2021. Asymmetric yardstick competition: traditional procurement versus public-private partnerships. Italian Economic Journal doi:10.1007/ s40797-021-00158-z.

SOURCES

Louca, C., Petrou, A.P., Procopiou, A., 2019. When does the board blame the CEO for poor firm performance? extreme resource reallocation and the board's industry and CEO experience. *British Journal of Management* 31, 505–524. doi:10.1111/1467-8551.12384.

Minter, E.W.W.E.S., 2018. Konnexitätsprinzip. URL: <https://wirtschaftslexikon.gabler.de/definition/konnexitaetsprinzip-40047/version-263442>. online, accessed 2023-01-01.

Mitze, T., Kosfeld, R., Rode, J., Walde, K., 2020. Face masks considerably reduce COVID-19 cases in germany. *Proceedings of the National Academy of Sciences* 117, 32293–32301. doi:10.1073/pnas.2015954117.

Moore, C., Jacoby, W., Gunlicks, A.B., 2008. German federalism in transition? *German Politics* 17, 393–407. doi:10.1080/09644000802490329.

Mueller, S., Fenna, A., 2022. Dual versus administrative federalism: Origins and evolution of two models. *Publius: The Journal of Federalism* 52, 525–552. doi:10.1093/publius/pjac008.

Musgrave, R.M.P., 1984. *Public Finance in Theory and Practice*. 4th ed., McGraw-Hill Book Company.

Münch, U., 2020. Wenn dem Bundesstaat die Stunde der Exekutive schlägt: der deutsche (Exekutiv-)Föderalismus in Zeiten der Coronakrise, in: *Jahrbuch des Föderalismus 2020*. Nomos Verlagsgesellschaft mbH & Co. KG, pp. 207–226. doi:10.5771/9783748910817-207.

North, D., 1992. *Institutions, institutional change and economic performance. The political economy of institutions and decisions*. Cambridge.

Oates, W., 1972. *Fiscal Federalism*. The Harbrace series in business and economics.

OECD, 2009. *Beating the crisis: the role of the oecd and g20*.

SOURCES

OECD, 2017. Gross domestic product (GDP). doi:10.1787/dc2f7aec-en. online, accessed 2022-11-15.

OECD, 2022. Oecd reviews of innovation policy: Germany 2022. doi:10.1787/50b32331-en.

Pöttsch, H., 2009. Bundesrat. Bundeszentrale für Politische Bildung. URL: <https://www.bpb.de/themen/politisches-system/deutsche-demokratie/39348/bundesrat/>. online, assecced 23-03-07.

RDocumentation, . polr: Ordered logistic or probit regression. URL: <https://www.rdocumentation.org/packages/MASS/versions/7.3-58.2/topics/polr>. online, accessed 23-03-17.

Rheinland Pfalz Die Landesregierung, . Die Ministerpräsidenten und die Ministerpräsidentin von Rheinland-Pfalz. URL: <https://www.rlp.de/de/regierung/ministerpraesidentin-malu-dreyer/ministerpraesidenten-von-rheinland-pfalz/>. online, accessed 23-03-15.

Sachsen Anhalt, . Aufgaben des Ministerpräsidenten. URL: <https://www.sachsen-anhalt.de/lj/politik-und-verwaltung/ministerpraesident/amt-des-ministerpraesidenten>. online, accessed 23-03-15.

Schilling, J., Buda, S., Fischer, M., Goerlitz, L., Grote, U., Haas, W., Hamouda, O., Prahm, K., Tolksdorf, K., 2021. Retrospektive Phaseneinteilung der COVID-19- Pandemie in Deutschland bis februar 2021 doi:10.25646/8149.

Schilling, J., Buda, S., Tolksdorf, K., 2022. Zweite Aktualisierung der " Retrospektiven Phaseneinteilung der COVID-19- Pandemie in Deutschland" doi:10.25646/9787.

Schnabel, J., Hegele, Y., 2021. Explaining intergovernmental coordination during the COVID-19 pandemic: Responses in australia, canada, germany, and switzerland. Publius: The Journal of Federalism 51, 537–569. doi:10.1093/publius/pjab011.

Sforza, A., Steininger, M., 2020. Globalization in the Time of Covid-19. CESifo Working Paper Series 8184. CESifo. URL: https://ideas.repec.org/p/ces/ceswps/_8184.html.

SOURCES

Srnka, K.J., Koeszegi, S.T., 2007. From words to numbers: How to transform qualitative data into meaningful quantitative results. *Schmalenbach Business Review* 59, 29–57. doi:10.1007/bf03396741.

Statistisches Bundesamt, . 52111-0005:Rechtliche Einheiten (UnternehmensregisterSystem):Bundesländer, Jahre, Wirtschaftszweige (Abschnitte),Beschäftigtengrößenklassen. Online, accessed 22-12-05.

Statistisches Bundesamt, 2022. Daten über den Finanzkraftausgleich und die Bundesergänzungszuweisungen für das Jahr 2020 und 2021. URL: <https://www.destatis.de/DE/Themen/Staat/Oeffentliche-Finanzen/Ausgaben-Einnahmen/Tabellen/laenderfinanzausgleich.html>. online, assecced 22-12-07.

Statistisches Landesamt Baden-Württemberg, 2022. Bruttoinlandsprodukt, Bruttowertschöpfung in den kreisfreien Städten und Landkreisen der Bundesrepublik Deutschland 1992 und 1994 bis 2020 Reihe 2, Kreisergebnisse Band 1 .

Stock, J.H., Watson, M.W., 2014. *Introduction to Econometrics* (3 Rd Updated Edition).

Strumpf, K.S., 2002. Does government decentralization increase policy innovation? *Journal of Public Economic Theory* 4, 207–241. doi:10.1111/1467-9779.00096.

Taylor, G., 2017. The constitutionality of election thresholds in germany. *International Journal of Constitutional Law* 15, 734–752. doi:10.1093/icon/mox050.

The Federal Returning Officer, . Election to the 20th German Bundestag on 26 September 2021. URL: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=DE>. online, accessed 23-03-12.

The World Bank Group, 2022. Exports of goods and services (bop, currend us\$). URL: <https://databank.worldbank.org/reports.aspx?source=2&series= BX.GSR.GNFS.CD&country=DEU#>. online, accessed 22-12-08.

Turich, E., . *Demokratie in Deutschland*. Bundeszentrale für politische Bildung.

SOURCES

Turner, E., Rowe, C., 2013. Party servants, ideologues or regional representatives? the german l'ander and the reform of federalism. *West European Politics* 36, 382–404. doi:10.1080/01402382.2013.749663. Twitter Inc., . Twitter ads-targeting. URL: <https://business.twitter.com/de/advertising/targeting.html>. online, accessed 23-03-07.

Tyler, C.W., Gerken, H.K., 2022. The myth of the laboratories of democracy. *Columbia Law Review* 122, 2187–2240

Wang, H., Paulson, K.R., Pease, S.A., Watson, S., Comfort, H., Zheng, P., Aravkin, A.Y., Bisignano, C., Barber, R.M., Alam, T., Fuller, J.E., May, E.A., Jones, D.P., Frisch, M.E., Abbafati, C., Adolph, C., Allorant, A., Amlag, J.O., Bang-Jensen, B., Bertolacci, G.J., Bloom, S.S., Carter, A., Castro, E., Chakrabarti, S., Chattopadhyay, J., Cogen, R.M., Collins, J.K., Cooperrider, K., Dai, X., Dangel, W.J., Daoud, F., Dapper, C., Deen, A., Duncan, B.B., Erickson, M., Ewald, S.B., Fedosseeva, T., Ferrari, A.J., Frostad, J.J., Fullman, N., Gallagher, J., Gamkrelidze, A., Guo, G., He, J., Helak, M., Henry, N.J., Hulland, E.N., Huntley, B.M., Kereselidze, M., LazzarAtwood, A., LeGrand, K.E., Lindstrom, A., Linebarger, E., Lotufo, P.A., Lozano, R., Magistro, B., Malta, D.C., M°ansson, J., Herrera, A.M.M., Marinho, F., Mirkuzie, A.H., Misganaw, A.T., Monasta, L., Naik, P., Nomura, S., O'Brien, E.G., O'Halloran, J.K., Olana, L.T., Ostroff, S.M., Penberthy, L., Jr, R.C.R., Reinke, G., Ribeiro, A.L.P., Santomauro, D.F., Schmidt, M.I., Shaw, D.H., Sheena, B.S., Sholokhov, A., Skhvitaridze, N., Sorensen, R.J.D., Spurlock, E.E., Syailendrawati, R., Topor-Madry, R., Troeger, C.E., Walcott, R., Walker, A., Wiysonge, C.S., Worku, N.A., Zigler, B., Pigott, D.M., Naghavi, M., Mokdad, A.H., Lim, S.S., Hay, S.I., Gakidou, E., Murray, C.J.L., 2022. Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21. *The Lancet* 399, 1513– 1536. doi:10.1016/s0140-6736(21)02796-3.

Wei, R., Kanzler, K., Fiesel, R., 2022. Biontechs Steuerbooster und seine Nebenwirkungen auf das Finanzgefge. *Wirtschaftsdienst* 102, 114–122. doi:10.1007/ s10273-022-3115-6.

Wissenschaftliche Dienste, 2021. *Überblick zum Finanzausgleich zwischen Bund und Ländern*

WissenschaftlicherDienst, 2021. *Bund-Länder-Konferenzen zur Corona-Pandemie*

SOURCES

Wooldridge, J.M., 2009. Introductory econometrics : a modern approach. 4. ed. ed., South-Western Cengage Learning, Mason, Ohio u.a

World Health Organization, 2023. Who coronavirus (covid-19) dashboard. URL: <https://covid19.who.int/>. online, accessed 23-02-28.