

Online Appendix

Table A1 Description of Independent Variables and Control Variables

Measure	Data source	Definition
State capacity		
Government effectiveness	World Bank Indicators	Public perceptions of public service quality
Public health expenditures	World Health Organization	Public health expenditures as a percent of GDP, 2014
Pandemic preparedness	NTI (2019)	Country score on pandemic preparedness index, which measures ability to prevent, detect and respond rapidly to disease outbreaks.
Health capacity	NTI (2019)	Country score on index of health care capacity in clinics, hospitals, and community care centers, which incorporates measures of personnel and facilities per capita.
Laboratory system capacity	NTI (2019)	Country score on index of laboratory systems capacity, which incorporates measures of national capacity to conduct laboratory analysis of priority diseases.
Real-time surveillance capacity	NTI (2019)	Country score on index of national surveillance systems, which incorporates measures of indicator and event-based surveillance/reporting systems, interoperable electronic health records, and data transparency.
Decentralization		
Fiscal decentralization	Ivanyna and Shah (2014)	The extent to which subnational governments have autonomy over expenditures, taxation, and are empowered to borrow money.
Administrative decentralization	Ivanyna and Shah (2014)	The extent to which subnational governments have autonomy over policies related to employee hiring and firing, and the share of local government employment as a share of total government employment.

Political decentralization	Ivanyna and Shah (2014)	The extent to which subnational governments have elected legislatures and executives, as well as direct democracy provisions
Democratic Institutions		
Liberal democracy	Varieties of Democracy Institute (2019)	Extent to which the ideal of a liberal democracy is achieved
Free and fair subnational elections	Varieties of Democracy Institute (2019)	Extent to which subnational elections are free and fair
Media independence	Varieties of Democracy Institute (2019)	Extent to which journalists are independent of influence through payments for altering news coverage
Control		
Per capita Gross Domestic Product	World Bank Indicators	Logged measure of per capita Gross Domestic Product

Table A2 Estimates and p-values: Subnational Data Quality Index

	Without Control		With Control	
	Coefficient	P	Coefficient	P
State capacity				
Government effectiveness	0.17	0.001	0.11	0.41
Public health expenditures	0.19	0.000	0.25	0.000
Pandemic preparedness	0.10	0.09	0.03	0.57
Real-time surveillance and reporting	0.18	0.000	0.14	0.000
Health capacity	0.14	0.02	0.07	0.17
Laboratory systems	0.16	0.000	0.12	0.004
Decentralization				
Fiscal decentralization	0.20	0.000	0.21	0.000
Administrative decentralization	0.16	0.002	0.10	0.27
Political decentralization	0.10	0.04	0.03	0.69
Democratic Institutions				
Liberal democracy	0.20	0.000	0.24	0.002
Free and fair subnational elections	0.19	0.000	0.14	0.003
Media independence	0.20	0.000	0.20	0.002

Table A3 Estimates and p-values: Mortality Data Index

	Without Control		With Control	
	Coefficient	P	Coefficient	P
State capacity				
Government effectiveness	0.16	0.001	0.20	0.06
Public health expenditures	0.14	0.002	0.15	0.08
Pandemic preparedness	0.11	0.07	0.07	0.32
Real-time surveillance and reporting	0.14	0.000	0.11	0.002
Health capacity	0.10	0.10	0.04	0.46
Laboratory systems	0.11	0.04	0.08	0.13
Decentralization				
Fiscal decentralization	0.16	0.000	0.16	0.09
Administrative decentralization	0.13	0.01	0.08	0.38
Political decentralization	0.07	0.19	−0.00	0.99
Democratic Institutions				
Liberal democracy	0.15	0.000	0.14	0.11
Free and fair subnational elections	0.15	0.000	0.12	0.001
Media independence	0.13	0.02	0.08	0.47

Table A4 Estimates and p-values: Hospital Data Index

	Without Control		With Control	
	Coefficient	P	Coefficient	P
State capacity				
Government effectiveness	0.11	0.05	0.25	0.09
Public health expenditures	0.09	0.07	0.16	0.13
Pandemic preparedness	0.09	0.08	0.07	0.13
Real-time surveillance and reporting	0.14	0.003	0.13	0.01
Health capacity	0.05	0.27	0.02	0.71
Laboratory systems	0.12	0.003	0.10	0.01
Decentralization				
Fiscal decentralization	0.14	0.01	0.25	0.03
Administrative decentralization	0.08	0.21	0.07	0.47
Political decentralization	-0.004	0.94	-0.06	0.43
Democratic Institutions				
Liberal democracy	0.14	0.01	0.27	0.01
Free and fair subnational elections	0.12	0.005	0.13	0.02
Media independence	0.12	0.03	0.19	0.08

Table A5 Estimates and p-values: Testing Data Index

	Without Control		With Control	
	Coefficient	P	Coefficient	P
State capacity				
Government effectiveness	0.19	0.02	0.17	0.49
Public health expenditures	0.25	0.000	0.45	0.001
Pandemic preparedness	0.09	0.39	−0.00	0.99
Real-time surveillance and reporting	0.26	0.000	0.23	0.001
Health capacity	0.22	0.002	0.18	0.03
Laboratory systems	0.25	0.000	0.21	0.006
Decentralization				
Fiscal decentralization	0.22	0.009	0.22	0.07
Administrative decentralization	0.14	0.15	0.02	0.90
Political decentralization	0.09	0.36	0.00	0.98
Democratic Institutions				
Liberal democracy	0.27	0.000	0.43	0.002
Free and fair subnational elections	0.24	0.000	0.22	0.02
Media independence	0.26	0.000	0.39	0.003

Table A6 Estimates and p-values: Demographic Data Index

	Without Control		With Control	
	Coefficient	P	Coefficient	P
State capacity				
Government effectiveness	0.21	0.02	−0.17	0.28
Public health expenditures	0.30	0.000	0.22	0.04
Pandemic preparedness	0.15	0.14	0.00	0.99
Real-time surveillance and reporting	0.18	0.007	0.08	0.07
Health capacity	0.19	0.05	0.06	0.58
Laboratory systems	0.16	0.04	0.08	0.33
Decentralization				
Fiscal decentralization	0.52	0.000	0.20	0.12
Administrative decentralization	0.29	0.000	0.19	0.16
Political decentralization	0.26	0.000	0.15	0.06
Democratic Institutions				
Liberal democracy	0.27	0.000	0.10	0.27
Free and fair subnational elections	0.23	0.004	0.11	0.14
Media independence	0.28	0.000	0.15	0.06