

# Online Appendix

## Populism and COVID-19:

### *How Populist Governments (Mis)Handle the Pandemic*

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## 1 Deriving reaction functions

In order to characterize strategic behavior we can derive (linear) reaction functions for both sides, obtained by totally differentiating equations (8) and (9) with respect to  $g$  and  $e$ . For the government this is indicated by:

$$\frac{de}{dg/F^G} = \frac{C_{gg} + \pi_{gg}[U_G^H(Y_G^H) - U_G^L(Y_G^L)]}{\pi_{ge}[U_G^L(Y_G^L) - U_G^H(Y_G^H)]} \begin{matrix} > \\ < \end{matrix} 0 \quad \text{if} \quad \pi_{ge} \begin{matrix} > \\ < \end{matrix} 0; \quad (1)$$

And for the public:

$$\frac{de}{dg/F^P} = \frac{\pi_{ge}[U_P^L(Y_P^L) - U_P^H(Y_P^H)]}{E_{ee} + \pi_{ee}[U_P^H(Y_P^H) - U_P^L(Y_P^L)]} \begin{matrix} > \\ < \end{matrix} 0 \quad \text{if} \quad \pi_{ge} \begin{matrix} > \\ < \end{matrix} 0. \quad (2)$$

Note, that  $\pi_{gg}[U_G^H(Y_G^H) - U_G^L(Y_G^L)] > 0$  and  $\pi_{ee}[U_P^H(Y_P^H) - U_P^L(Y_P^L)] > 0$  since  $\pi_{gg} < 0$  and  $\pi_{ee} < 0$  and the utility in the less severe state (L) is higher than in the highly severe state (H) (thus, the expressions in square brackets are negative). Second derivatives of cost functions are positive.

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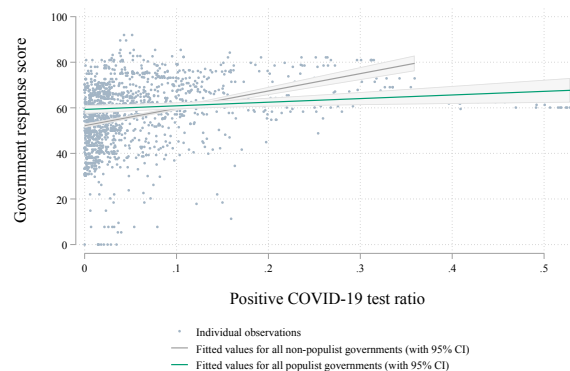
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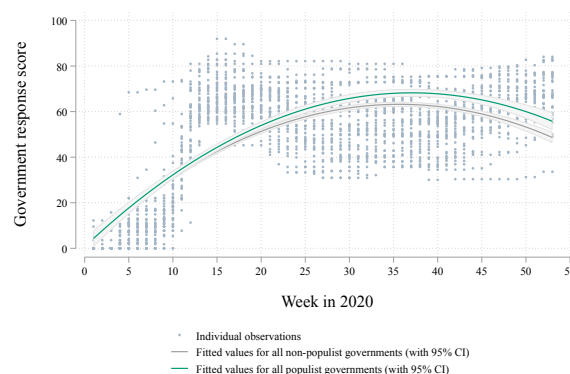
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## 2 Additional descriptive graphs



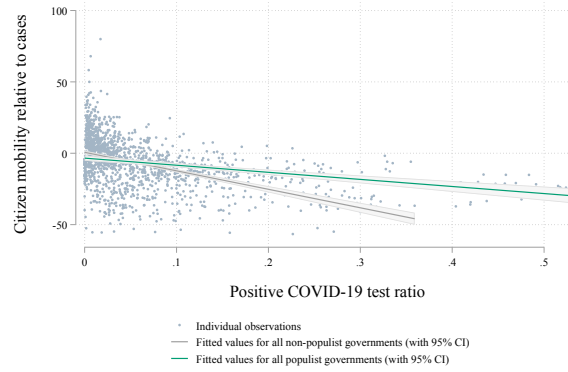
**Figure A1:** Average policy response with fitted values by positive test ratio

**Notes:** The figure shows the average policy response of governments (“Containment and Health” variable from *Oxford COVID-19 Government Response Tracker* (Hale et al., 2021)) in our sample (light blue circles) as well as the linear fitted response aggregated by populist (green) and non-populist governments (grey) with 95% confidence intervals. The policy response is plotted against the positive test ratio retrieved from the *Our World in Data* database (Roser et al., 2020).



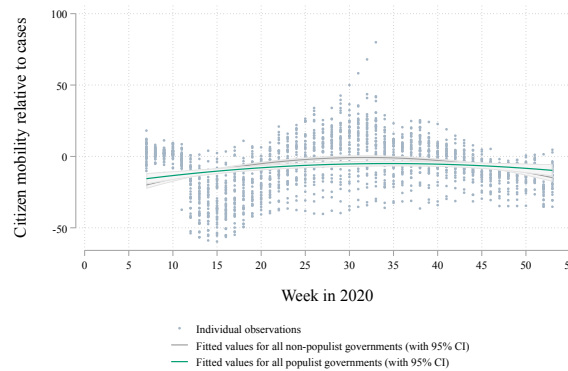
**Figure A2:** Unadjusted average policy response with fitted values by weeks

**Notes:** The figure shows the average policy response of governments (“Containment and Health” variable from *Oxford COVID-19 Government Response Tracker* (Hale et al., 2021)) in our sample (light blue circles) as well as the quadratic fitted response aggregated by populist (green) and non-populist governments (grey) with 95% confidence intervals.



**Figure A3:** Average citizen mobility with fitted values by positive test ratio

**Notes:** The figure shows the average citizen mobility in our sample (light blue circles) as well as the linear fitted response aggregated by populist (green) and non-populist governed countries (grey) with 95% confidence intervals. The mobility data comes from the *Google Mobility Report* (Google, 2021). The mobility is plotted against the positive test ratio retrieved from the *Our World in Data* database (Roser et al., 2020).



**Figure A4:** Unadjusted average mobility during 2020 with fitted values by weeks

**Notes:** The figure shows the average citizen mobility in our sample (light blue circles) as well as the quadratic fitted response aggregated by populist (green) and non-populist governed countries (grey) with 95% confidence intervals. The mobility data comes from the *Google Mobility Report*.

### 3 Coding tables and sources

**Table A1:** Leaders of the 42 sample countries in 2020

Country	Leader	Party	Date	Populist
Australia	Scott Morrison	Liberal Party of Australia	From 01/01/2020	No
Austria	Brigitte Bierlein	Independent	Until 01/07/2020	No
Austria	Sebastian Kurz	Austrian People's Party	From 01/07/2020	No
Belgium	Sophie Wilmès	Reformist Movement	From 01/01/2020	No
Brazil	Jair Bolsonaro	Social Liberal Party	From 01/01/2020	Yes
Canada	Justin Trudeau	Liberal Party of Canada	From 01/01/2020	No
Chile	Sebastián Piñera	Independent	From 01/01/2020	No
China	Xi Jinping	Communist Party of China	From 01/01/2020	No
Colombia	Iván Duque Márquez	Democratic Centre	From 01/01/2020	No
Czech Republic	Andrej Babiš	ANO 2011	From 01/01/2020	Yes
Denmark	Mette Frederiksen	Social Democrats	From 01/01/2020	No
Estonia	Jüri Ratas	Estonian Centre Party	From 01/01/2020	No
Finland	Sanna Marin	Social Democratic Party of Finland	From 01/01/2020	No
France	Emmanuel Macron	The Republic On the Move	From 01/01/2020	No
Germany	Angela Merkel	Christian Democratic Union	From 01/01/2020	No
Greece	Kyriakos Mitsotakis	New Democracy	From 01/01/2020	No
Hungary	Viktor Orbán	Fidesz – Hungarian Civic Alliance	From 01/01/2020	Yes
Iceland	Katrín Jakobsdóttir	Left Movement – Green Candidature	From 01/01/2020	No
India	Narendra Modi	Indian People's Party	From 01/01/2020	Yes
Ireland	Leo Varadkar	Family of the Irish	Until 06/27/2020	No
Ireland	Micheál Martin	Soldiers of Destiny	From 06/27/2020	No
Israel	Benjamin Netanyahu	Likud – National Liberal Movement	From 01/01/2020	Yes
Italy	Giuseppe Conte	Independent	From 01/01/2020	No
Japan	Shinzō Abe	Liberal Democratic Party	From 01/01/2020	No
Latvia	Arturs Kariņš	New Unity	From 01/01/2020	No
Lithuania	Saulius Skvernelis	Independent	From 01/01/2020	No
Luxembourg	Xavier Bettel	Democratic Party	From 01/01/2020	No
Mexico	Andrés López Obrador	National Regeneration Movement	From 01/01/2020	Yes
Netherlands	Mark Rutte	People's Party for Freedom and Democracy	From 01/01/2020	No
New Zealand	Jacinda Ardern	New Zealand Labour Party	From 01/01/2020	No
Norway	Erna Solberg	Conservative Party	From 01/01/2020	No
Poland	Mateusz Morawiecki	Law and Justice	From 01/01/2020	Yes
Portugal	António Costa	Socialist Party	From 01/01/2020	No
Russia	Vladimir Putin	Independent	From 01/01/2020	No
Slovakia	Peter Pellegrini	Voice – Social Democracy	Until 03/20/2020	No
Slovakia	Igor Matovič	Ordinary People	From 03/20/2020	Yes
Slovenia	Marjan Šarec	List of Marjan Šarec	Until 03/13/2020	No
Slovenia	Janez Janša	Slovenian Democratic Party	From 03/13/2020	No
South Africa	Cyril Ramaphosa	African National Congress	From 01/01/2020	No
South Korea	Lee Nak-yeon	Democratic Party of Korea	Until 01/14/2020	No
South Korea	Chung Sye-kyun	Democratic Party of Korea	From 01/14/2020	No
Spain	Pedro Sánchez	Spanish Socialist Workers' Party	From 01/01/2020	No
Sweden	Stefan Löfven	Swedish Social Democratic Party	From 01/01/2020	No
Switzerland	Simonetta Sommaruga	Social Democratic Party	From 01/01/2020	No
Turkey	Recep Tayyip Erdoğan	Justice and Development Party	From 01/01/2020	Yes
United Kingdom	Boris Johnson	Conservative Party	From 01/01/2020	Yes
United States	Donald Trump	Republican Party	From 01/01/2020	Yes

**Notes:** The table shows our coding of populist and non-populists governments in our sample countries over the course of the COVID-19 pandemic. Our sample countries are all OECD member states as well as Brazil, Russia, India, China, and South Africa. The coding of populist leaders is based on the ideational approach to populism and the definition by Cas Mudde (2004) in that populists share anti-establishment orientation (anti-elitism), and claim to speak for the people against the elites (people centrism). The coding is based on the identification by Funke, Schularick, and Trebesch (2020) and Rooduijn et al. (2019).

**Table A2:** Excess mortality data coverage and sources

Country	Weeks Covered	Periodicity	Source
Australia	01.2020-43.2020	Weekly	Human Mortality Database (HMD, 2021)
Austria	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Belgium	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Brazil	01.2020-44.2020	Weekly	Financial Times (FT, 2021)
Canada	01.2020-42.2020	Weekly	Human Mortality Database (HMD, 2021)
Chile	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
China	No data	No data	No data
Colombia	01.2020-44.2020	Weekly	New York Times (NYT, 2021)
Czech Republic	01.2020-01.2021	Weekly	Human Mortality Database (HMD, 2021)
Denmark	01.2020-06.2021	Weekly	Human Mortality Database (HMD, 2021)
Estonia	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Finland	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
France	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Germany	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Greece	01.2020-49.2020	Weekly	Human Mortality Database (HMD, 2021)
Hungary	01.2020-02.2021	Weekly	Human Mortality Database (HMD, 2021)
Iceland	01.2020-53.2020	Weekly	Human Mortality Database (HMD, 2021)
India	No data	No data	No data
Ireland	01.2020-39.2020	Weekly	New York Times (NYT, 2021)
Israel	01.2020-03.2021	Weekly	Human Mortality Database (HMD, 2021)
Italy	01.2020-49.2020	Weekly	Human Mortality Database (HMD, 2021)
Japan	01.2020-44.2020	Monthly	New York Times (NYT, 2021)
Latvia	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Lithuania	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Luxembourg	01.2020-53.2020	Weekly	Human Mortality Database (HMD, 2021)
Mexico	01.2020-41.2020	Weekly	Financial Times (FT, 2021)
Netherlands	01.2020-06.2021	Weekly	Human Mortality Database (HMD, 2021)
New Zealand	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Norway	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Poland	01.2020-06.2021	Weekly	Human Mortality Database (HMD, 2021)
Portugal	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Russia	01.2020-44.2020	Monthly	Financial Times (FT, 2021)
Slovakia	01.2020-02.2021	Weekly	Human Mortality Database (HMD, 2021)
Slovenia	01.2020-52.2020	Weekly	Human Mortality Database (HMD, 2021)
South Africa	01.2020-49.2020	Weekly	Financial Times (FT, 2021)
South Korea	01.2020-53.2020	Weekly	Human Mortality Database (HMD, 2021)
Spain	01.2020-04.2021	Weekly	Human Mortality Database (HMD, 2021)
Sweden	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Switzerland	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
Turkey*	01.2020-52.2020	Weekly	New York Times (NYT, 2021)
United Kingdom	01.2020-05.2021	Weekly	Human Mortality Database (HMD, 2021)
United States	01.2020-02.2021	Weekly	Human Mortality Database (HMD, 2021)

**Notes:** The table shows our data sources for the calculation of the excess mortality rate in our sample countries. If not indicated otherwise. The excess mortality rate is measured weekly and calculated by subtracting the average weekly mortality rate of the previous five years from a given week of the year 2020. In Ireland the average mortality was based on the mortality average of 2012 to 2017. In the Columbia the time between 2015 and 2018 has been used for the calculation of the average. The data from Turkey only refers to excess mortality in Istanbul,

## 4 Robustness regressions and marginal effects

**Table A3:** Populist governments and policy response with control variables

	Dependent Variable: Government Policy Response (RealResponse)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Populist	-7.586*** (0.75)	-8.977*** (0.81)	-8.154*** (1.00)	-5.855*** (0.73)	-5.317*** (0.82)	-6.488** (2.87)	-5.129*** (1.44)
KofGi	-0.014 (0.05)					0.541** (0.26)	0.258* (0.13)
TradeOp	-0.046*** (0.01)					-0.012 (0.02)	-0.020 (0.01)
Polyarchy		-12.346*** (2.27)				-64.215*** (7.46)	-38.517*** (4.45)
GDPperCapitaConstant2010US		0.000 (0.00)				-0.000*** (0.00)	-0.000*** (0.00)
HealthExpenditure			1.902*** (0.20)			-0.398 (1.09)	-0.067 (0.57)
PhysiciansDensityPer1000			-0.449 (0.30)			4.557*** (0.92)	2.330*** (0.51)
NursingMidwiferyPer1000			-1.214*** (0.08)			0.457 (0.38)	0.224 (0.19)
Sptincp50p90				50.569*** (10.12)		90.759*** (29.61)	141.171*** (17.64)
GiniIndex				0.721*** (0.06)		1.276*** (0.15)	1.383*** (0.09)
HealthInequality				1.545*** (0.44)		5.406*** (1.28)	5.272*** (0.65)
PopDensity					-0.003 (0.00)	0.019*** (0.01)	0.016*** (0.00)
PopulationAges65andAboveTotal					0.000*** (0.00)	0.000 (0.00)	0.000*** (0.00)
CardiovascDeathRate					-0.059*** (0.01)	-0.077*** (0.02)	-0.052*** (0.01)
DiabetesPrevalenceRate					-0.170 (0.17)	-0.629 (0.47)	0.270 (0.23)
MaleSmokersRate					0.292*** (0.04)	-0.681*** (0.10)	-0.482*** (0.05)
SecondarySchoolingRate					-0.044* (0.02)	-0.051 (0.07)	-0.080** (0.04)
Constant	7.891** (3.78)	12.256*** (1.78)	-1.435 (1.92)	-46.368*** (5.76)	10.382*** (2.21)	-4.624 (20.25)	-78.287*** (12.13)
Observations	1,743	1,849	1,652	1,796	1,628	1,321	1,321
R-squared	0.747	0.749	0.755	0.768	0.635	0.232	0.761
Week Fixed Effects	Yes	Yes	Yes	Yes	Yes	No	Yes
Robust SE	Yes	Yes	Yes	Yes	Yes	No	Yes

(Robust) standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A4: Populist governments and citizen mobility with control variables**

	Dependent Variable: Citizen Mobility (RelMobility)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Populist	9.293*** (1.30)	9.105*** (1.27)	6.268*** (1.33)	7.187*** (1.14)	5.253*** (1.18)	18.447*** (2.61)	19.545*** (2.89)
KofGi	-0.259*** (0.08)					-1.190*** (0.25)	-1.383*** (0.21)
TradeOp	0.012*** (0.00)					0.107*** (0.02)	0.111*** (0.01)
Polyarchy		8.062*** (2.61)				44.971*** (6.72)	49.682*** (9.14)
GDPperCapitaConstant2010US		-0.000*** (0.00)				-0.000* (0.00)	-0.000*** (0.00)
HealthExpenditure			1.616*** (0.17)			6.271*** (0.87)	6.607*** (0.67)
PhysiciansDensityPer1000			-2.197*** (0.31)			-0.112 (0.66)	-0.315 (0.49)
NursingMidwiferyPer1000			-0.938*** (0.09)			-0.616* (0.34)	-0.525** (0.24)
Sptincp50p90				21.099** (8.87)		12.781 (23.20)	13.908 (15.18)
GiniIndex				0.350*** (0.07)		0.017 (0.14)	0.026 (0.10)
HealthInequality				-1.993*** (0.51)		-3.403*** (1.12)	-3.042*** (0.92)
PopDensity					0.001 (0.00)	0.005 (0.01)	0.006 (0.00)
PopulationAges65andAboveTotal					-0.000*** (0.00)	-0.000*** (0.00)	-0.000*** (0.00)
CardiovascDeathRate					0.003 (0.01)	0.034** (0.02)	0.035*** (0.01)
DiabetesPrevalenceRate					1.743*** (0.27)	1.610*** (0.37)	1.797*** (0.38)
MaleSmokersRate					-0.110*** (0.04)	-0.073 (0.08)	-0.057 (0.06)
SecondarySchoolingRate					0.152*** (0.03)	-0.049 (0.07)	-0.070 (0.06)
Constant	34.202*** (12.84)	8.268 (9.51)	10.238 (8.33)	-5.507 (11.03)	-3.420 (10.29)	7.737 (18.71)	9.272 (22.90)
Observations	1,404	1,527	1,400	1,483	1,527	1,233	1,233
R-squared	0.202	0.208	0.227	0.236	0.228	0.253	0.401
Week Fixed Effects	Yes	Yes	Yes	Yes	Yes	No	Yes
Robust SE	Yes	Yes	Yes	Yes	Yes	No	Yes

(Robust) standard errors in parentheses

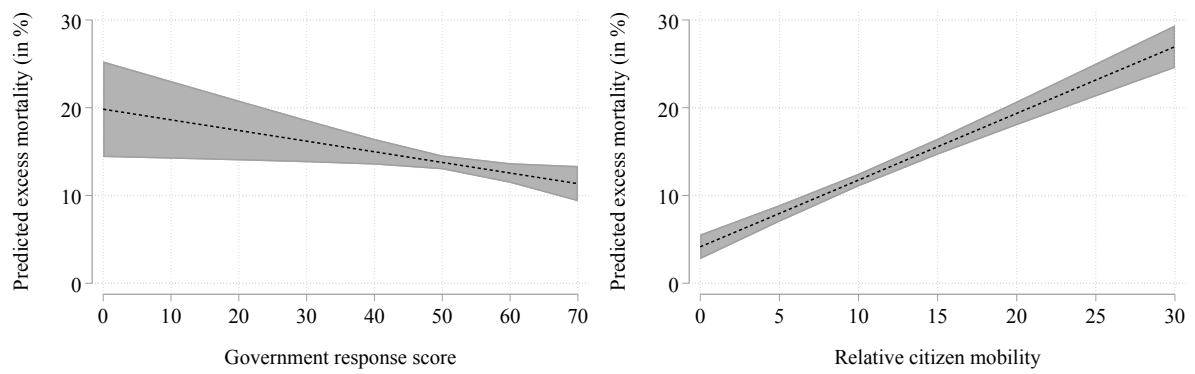
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A5:** Populist governments and excess mortality with control variables

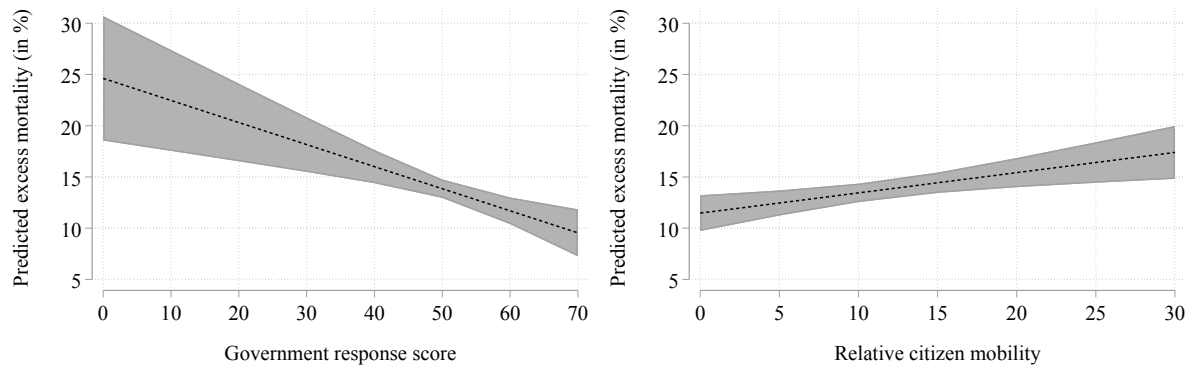
	Dependent Variable: Excess Mortality (ExMort)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Populist	9.214*** (1.18)	7.431*** (1.16)	5.359*** (1.45)	6.703*** (1.10)	6.576*** (1.38)	6.907** (3.12)	7.354** (3.15)
KofGi	-0.216*** (0.07)					0.342 (0.24)	0.179 (0.22)
TradeOp	0.010 (0.01)					0.078*** (0.02)	0.075*** (0.02)
Polyarchy		-4.651 (3.26)				5.968 (9.41)	19.650* (11.16)
GDPperCapitaConstant2010US		-0.000*** (0.00)				-0.000 (0.00)	-0.000 (0.00)
HealthExpenditure			0.563** (0.26)			0.436 (1.13)	0.930 (0.90)
PhysiciansDensityPer1000			-1.134*** (0.39)			-0.041 (0.93)	-0.086 (0.64)
NursingMidwiferyPer1000			-0.818*** (0.12)			-0.827** (0.39)	-1.067*** (0.28)
Sptincp50p90				-9.596 (11.99)		17.394 (32.53)	9.901 (21.38)
GiniIndex				0.104 (0.10)		0.188 (0.21)	0.071 (0.16)
HealthInequality				-1.897*** (0.64)		-1.238 (1.50)	-2.850** (1.26)
PopDensity					0.006 (0.00)	-0.006 (0.01)	-0.001 (0.01)
PopulationAges65andAboveTotal					0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)
CardiovascDeathRate					0.002 (0.01)	-0.063*** (0.02)	-0.046** (0.02)
DiabetesPrevalenceRate					1.608*** (0.31)	1.312*** (0.50)	1.584*** (0.44)
MaleSmokersRate					0.028 (0.06)	-0.065 (0.12)	-0.086 (0.09)
SecondarySchoolingRate					-0.030 (0.04)	0.066 (0.08)	0.044 (0.07)
Constant	11.422* (6.07)	1.791 (2.86)	2.314 (2.90)	-0.707 (8.07)	-27.152*** (3.92)	-31.195 (22.48)	-62.772*** (17.54)
Observations	1,896	2,045	1,804	1,992	1,831	1,437	1,437
R-squared	0.296	0.293	0.298	0.309	0.278	0.107	0.344
Week Fixed Effects	Yes	Yes	Yes	Yes	Yes	No	Yes
Robust SE	Yes	Yes	Yes	Yes	Yes	No	Yes

(Robust) standard errors in parentheses

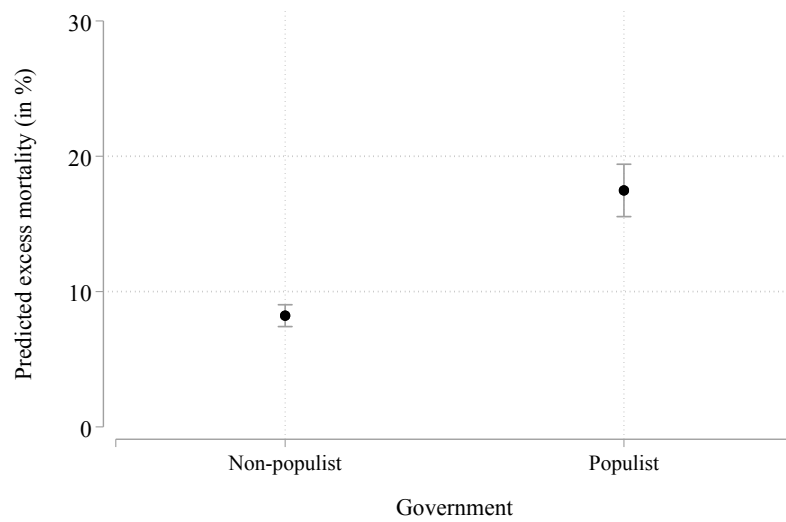
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Figure A5:** Marginal effects for mobility and response



**Figure A6:** Marginal effects for mobility and response



**Figure A7:** Marginal effects for populist governments with control variables