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How populists fuel polarization and fail their response to COVID-19: An empirical analysis

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How well have populist leaders responded to the COVID-19 pandemic? There is a growing literature dedicated to populism and health outcomes. However, the ongoing pandemic provides us with a unique opportunity to study whether populist leaders fared better or worse than their non-populist counterparts by using a much larger sample size. While there has been a fruitful debate over whether populism is responsible for worse health outcomes, much of the focus has centered around the overall effect of having populist parties in power, without testing for different explanatory mechanisms. We argue that populist leaders fuel mass political polarization, which increases the overall level of hostility among the population and reduces their willingness to comply with anti-COVID measures and, more generally, contribute to public good. We test this theory using the expert-coded V-Party Dataset which contains variables for the ideological characteristics for parties around the world, as well as weekly excess mortality from the World Mortality Dataset. In addition to the OLS regression analysis, we employ a causal mediation framework to account for the order of succession of populism and political polarization. Our empirical results corroborate our main hypothesis that populism fuels political polarization, which is, in turn, associated with higher excess mortality during the ongoing pandemic. Our results are robust to alternative model specifications.

KEYWORDS

populism, political polarization, excess mortality, COVID-19, empirical analysis

Introduction

The spread of the novel coronavirus COVID-19—the ongoing global pandemic that has already killed more than 5,310,502 people worldwide (WHO, December 21, 2021)—presents a unique research opportunity as it puts all governments to an exogenous test. Absolute excess mortality in 2020—one of the most reliable measures of the toll of the pandemic—ranges from 420,000 in the USA (by January 3, 2021) to 4,700 in Australia (Karlinsky and Kobak, 2021). What explains such abysmal differences? Drawing conclusions about which countries handle the crisis better is premature, but there are already signs that populist governments have fared poorly. According to Leonhardt and Leatherby (2020), in such countries as Russia, Brazil, the U.S. and Britain, populism is the culprit.

In Brazil, during the pandemic, President Jair Bolsonaro lost two competent health ministers and joined frequent protests against lockdowns. In the U.S., Donald J. Trump first supported the “it’s-just-the-flu” rhetoric. Not only did Donald Trump downplay the seriousness of the virus, but he also promoted pseudo-scientific medical practices for “curing” people of the coronavirus, refused and mocked wearing masks, and promoted protests in Democratic states with the goal of resisting state-imposed lockdowns (Seyis, 2020). Many populist movements have formed or become reoriented toward protesting health measures such as the Re-Open protests in the United States,¹ the *Gilets Jaunes* in France, the *Querdenken* (lateral-thinkers) movement in Germany, and supporters of VOX in Spain (Bynum et al., 2021; Sawyer, 2021).²

Both the U.S. and Britain were late in responding to the pandemic, and the time lost was precious. Countries with populist governments such as the United States, Brazil, Russia, India, and the United Kingdom are responsible for nearly 51% of all cases (27% of the world’s population) (McKee et al., 2020). Some populist-led countries, Hungary and the Philippines, have done relatively well, but are rather exceptions to the more alarming pattern.³ So far, the handling of the pandemic confirms Rinaldi and Bekker (2020) general findings about the negative impact of populist radical right (PRR) parties and populism in general on welfare policies and health.⁴

Several papers have empirically tested the influence of populist forces on handling the pandemic (Kavakli, 2020; Bayerlein et al., 2021; Cepaluni et al., 2021). Strikingly, using different operationalizations of outcomes and populist forces, most papers reach a consensus that populists indeed mishandled the crisis far worse than their non-populist counterparts. However, little work has been done to uncover particular mechanisms of *how* populism can affect COVID-19 outcomes. In this paper we intend to bridge this gap.

1 The animosity between some protesters and the government had risen to such heights that militia members from the Wolverine Watchman had orchestrated a domestic terror plot to capture Michigan Governor Gretchen Whitmer.

2 Some scholars view these so-called anti-hygienic protests as evidence of further normalization of the global far-right populism, which suggests that Covid-19 might spark a new wave of far-right populism (e.g., Vieten, 2020).

3 We acknowledge that there are differences in countries’ transparency about releasing COVID-19 data.

4 A related question for future researchers concerns causality: what if it runs from health to politics? Murray et al. (2013) find a robust association between historical pathogen prevalence and establishment of authoritarian institutions. The tragic 20th-century history answers in the affirmative: Blickle’s (2020) preliminary findings show that, ceteris paribus, the cities in Germany most affected by 1918–1920 influenza pandemic witnessed a greater number of votes for extremists in 1932–1933.

Our first contribution is to demonstrate an important theoretical mechanism concerning why populist leaders tend to fail in times of health-related crisis. We argue that one important explanation, which is mentioned in some studies, but has never been properly tested, is that mass political polarization exacerbated (if not started) by populist leaders increases the overall level of hostility among the population, which reduces their willingness to comply with anti-COVID measures and, more generally, contributes to the public good. Our empirical results corroborate our hypotheses. This is in line with the broader economic findings on the negative association between diversity and public goods provision (see e.g., Alesina et al., 1999; Alesina and La Ferrara, 2000; Algan et al., 2016). It is important to note that we are by no means arguing that our explanation is the only one, however, we do account for alternative channels, and our results are remarkably robust. As a secondary contribution, we measure crisis outcomes as excess mortality rather than government policy responses (Kavakli, 2020) or COVID-19 deaths (Cepaluni et al., 2021). Different scholars seem to have reached the consensus that excess mortality is the “golden standard” measure of death tolls during the COVID-19 pandemic, largely because different nations calculate deaths from COVID-19 differently, which renders them incomparable across countries (Beaney et al., 2020; Leon et al., 2020; Rivera et al., 2020). In addition to the OLS regression analysis, we employ a causal mediation framework to account for the order of succession of populism and political polarization.

The paper is organized as follows. In the next section, we review the recent literature that explains why some governments have responded better to the COVID-19 pandemic, with a focus on the association of political factors, including populism, and COVID-19 outcomes. After that, we present our theory and hypotheses regarding why we expect populist heads of state to fare worse than their non-populist counterparts. In the following section we discuss the method and data sources used in the research design. In the final section, we provide conclusions and identify venues for further research.

Why some governments respond better to the COVID-19 pandemic: what we already know

More than a year has passed since the coronavirus pandemic swept the world, enough to provide answers to the question on many commentators’ minds: Why have some governments responded better to the COVID-19 pandemic and experienced lower excess mortality.

In order to identify factors that are responsible for a more efficient response or successful handling of the pandemic, it is necessary to define what is meant by “success.” Since the pandemic is ongoing at the moment of writing, it is impossible

to evaluate its current implications; final counts of COVID-19-related mortality are unknown, and the number of future waves and new vaccine-resistant strains are unpredictable. To make matters worse, cross-national comparisons are hampered by unreliable data and differences in how countries calculate mortality. However, there are signs that public interventions to battle COVID-19 matter, and the stricter and timelier the measures, the better (Hsiang et al., 2020; Pueyo, 2020; Shvetsova et al., 2020). Many researchers use available data on anti-COVID policy measures as well as excess mortality are now commonly used to make cross-national comparisons (Kavakli, 2020; Bayerlein et al., 2021; Cepaluni et al., 2021). We follow suit and use excess mortality data.

Political institutions and pandemic

Political institutions—the rules of the game that define actors' strategic decision-making and interactions—explain a lot of variation both in different governments' responses to COVID-19 and differences in COVID-19-related deaths (Alon et al., 2020; Cheibub et al., 2020; Frey et al., 2020; Shvetsova et al., 2020; Stasavage, 2020; Cepaluni et al., 2021; Toshkov et al., 2022). Countries with decentralized political institutions, both democratic and federal, responded to COVID-19 more efficiently (Shvetsova et al., 2020). For instance, in contrast to Brazil's populist administration at the federal level, under the presidency of Jair Bolsonaro, who notoriously called COVID-19 “just a flu”, many Brazilian states took serious measures to mitigate the spread of the virus thanks to their federal institutions (VanDusky-Allen et al., 2020; Shvetsova et al., 2021). Collectivist and democratic countries provided a more efficient response to the pandemic in terms of reducing people's mobility (Frey et al., 2020). These findings are in line with the wide consensus that democracies outperform autocracies in numerous health outcomes (e.g., Mackenbach et al., 2013). In contrast, other studies find that democracies were slower in taking strict anti-COVID measures, especially because they interfered with the privacy and freedoms of their citizens (Alon et al., 2020; Cheibub et al., 2020; Stasavage, 2020; Cepaluni et al., 2021). More centralized countries with lower government effectiveness, freedom and societal trust, but with separate ministries of health and health ministers with medical background, acted faster and more decisively (Toshkov et al., 2022).

Social and institutional trust during the pandemic

A separate line of literature concentrates on social and institutional trust rather than political institutions to explain variation in COVID-19 outcomes across nations. Having trust

in governmental authorities, scientists, and other citizens is essential for overcoming large collective action problems such as pandemics (Harring et al., 2021). Considering that effectively responding to a pandemic requires cooperation on a large scale—from agreeing to follow health guidelines, such as social distancing and lockdowns—lower levels of interpersonal trust can exacerbate collective action problems (Parks et al., 1996; Gächter et al., 2004).⁵ Many studies show that higher levels of trust or social capital lead to better outcomes during the pandemic (e.g., Bartscher et al., 2020; Borgonovi and Andrieu, 2020). This seems true for similar episodes from the historical perspective: in Liberia and Congo during the Ebola outbreak in 2014–2016 those citizens who mistrusted their governments were less likely to take precautions against the disease or comply with anti-Ebola policy measures (Blair et al., 2017).

Populism and the pandemic

There is a burgeoning literature involving populism and the COVID-19 pandemic. Initial theoretical studies have demonstrated that overall, populists in power have done worse than non-populist political leaders.⁶ McKee et al. (2020) present a summary of four potential theoretical explanations for this: first, blaming outsiders and victims for their policy failures (for example, Hindu nationalists blaming Muslims),⁷ which exacerbates polarization and animosity between people, who become unwilling to help someone with the opposite political views⁸; second, disrespecting important public health institutions; third, rejecting expert knowledge and science-based evidence in favor of intuitive notions of “common sense”; fourth, framing journalists and the media as enemies.⁹

⁵ Stone et al. (2020) argue that a large-scale typhus epidemic was curtailed in the Warsaw ghetto (1941–42) mainly due to the cooperative efforts of its leadership, doctors and people.

⁶ It was shown that PRR negatively affect health outcomes, not least due to exclusionary policies (Falkenbach and Greer, 2018; Otjes et al., 2018). According to Backhaus et al. (2019), supporters of PRR parties were almost twice as likely to report worse health than conservative electorate.

⁷ Human history is unfortunately no stranger to the situations when other people are blamed for the pandemics. The Nazis used the eradication of the massive typhus outbreak as a pretext for the genocide of Jews (Stone et al., 2020).

⁸ This logic is echoed by welfare chauvinism (see Rinaldi and Bekker, 2020, for review).

⁹ Many populist scholars have noted that there is no one “populist response” to the pandemic (Seyis, 2020; Stavrakakis and Katsambekis, 2020) despite certain disastrous cases, such as with Mexico under AMLO, Brazil under Jair Bolsonaro, and the United States under Donald Trump. To the contrary, a number of populist radical right chief executives, such as Viktor Orban, Narendra Modi, and Robert Duterte took the pandemic rather seriously.

The empirical evidence on whether populist leaders have handled the current crisis worse is mixed. Initially, authoritarian, and right-wing governments (some of which are populist) were faster in imposing anti-COVID-19 measures (Toshkov et al., 2022). Wondreys and Mudde (2020) show that European countries with far-right governments did not underperform in fighting COVID-19, including such measures as cases and deaths per capita, and stringency of measures. Populist-led governments in Poland, Hungary, and India imposed restrictions early following the first confirmed cases in their respective countries (Hale et al., 2020). Bayerlein and Gyöngyösi (2020) show in their analysis of 14 countries that the 6 populist-led countries in their sample were, on average, quicker to impose travel restrictions than non-populist countries. In contrast, Kavakli's (2020) study of response time in imposing health measures from February to March 2020 in 100 different countries shows that populist governments tended to impose fewer health measures, such as contact tracing and mobility restrictions. Cepaluni et al. (2021) find that populist governments lead to higher COVID-19-related deaths per capita, but the effect is weakened in democracies, partially due to democratic institutions serving as bulwarks against nefarious populist forces. On the basis of the econometric analysis of 42 countries, Bayerlein et al. (2021) conclude that excess mortality, all else equal, is much higher in populist-led than conventional countries. Bosancianu et al. (2020) find no association between populist-led governments and COVID-19-related deaths.

Political polarization and the pandemic

Several studies show how political polarization has undermined the response to the current pandemic (Brenan, 2020; Cornelson and Miloucheva, 2020; Milosh et al., 2020; Minder, 2020; Owen, 2020). Cornelson and Miloucheva (2020) demonstrate that in the United States, the compliance rate is lower if the order comes from a governor whose party differs from that of the respondents. Political polarization is, among other factors, behind the refusal of many Republicans in the U.S. to wear a face mask (Brenan, 2020), the "patriotic duty" of conservatives to visit pubs in Britain (Owen, 2020), and the refusal to close bullfighting arenas in Spain (Minder, 2020). Charron et al. (2022) show that variation in excess mortality during the first wave of COVID-19 is explained by high mass polarization, populism, and low social and institutional trust.¹⁰

¹⁰ They measure mass political polarization as the gap in political trust between government and opposition supporters, which is a proxy for the overall satisfaction with the performance of the national institutions. They hypothesize that polarization is a fertile soil for thriving populist forces, but they do not test this proposition in the current version of the paper. Their empirical sample is confined to Europe, although the

Theory: How populists fuel polarization and fail their response to COVID-19

We follow Mudde (2004, p. 543) in conceptualizing populism as "a thin-centered ideology that considers society to be ultimately separated into two homogenous and antagonistic groups... and which argues that politics should be an expression of the general will of the people"—the *volonté générale*.¹¹ Beyond core components of anti-elitism and people-centrism, populists see the world according to a Manichean perspective, wherein opponents are not simply motivated by interests or ideology, but instead are disingenuous, morally bankrupt, or evil, resulting in an uncompromising attitude toward political opponents.

We define mass political polarization as the tendency of the members of an "in-group" to develop favorable attitudes toward their group and hostile attitudes toward members of an "out-group" based on their political, especially, partisan, and other views. This is consistent with scholars' definition of affective polarization (see e.g., Iyengar and Westwood, 2015) and speaks to our concept of populism described above.

We argue that instigating mass political polarization makes populists inefficient at responding to the current pandemic. This is by no means the only possible channel, but we believe it is an important one and should be subject to rigorous empirical testing. Numerous studies find a strong association between populism and political polarization, emphasizing that they can feed off each other (Harteveld et al., 2021). Silva (2018) shows, using the example of the Netherlands, that populist radical right parties can increase polarization in society, mainly due to their divisive rhetoric. De la Torre and Ortiz Lemos (2016) demonstrate that polarization itself provides a fruitful environment for populist movements.

Populist leaders' divisive rhetoric, such as demonizing attacks on opponents, promotes an atmosphere that is not conducive to cooperative politics and attenuates the in-group attachment of supporters against out-groups. Populism exacerbates bimodal polarization, which is arguably the most dangerous form of polarization because it leaves people with only two alternatives—"Us" or "Them" (Esteban and Ray, 1994; Arbatli and Rosenberg, 2021). To apply this logic to the

analysis is performed at the regional level. Our conceptualization and operationalization of political polarization are very different.

¹¹ We choose this conceptualization for several reasons. First, this definition casts the net wide enough to capture the proper political actors for analysis (without resorting to conceptual overreach), while leaving us with an easily operationalizable concept to use for our empirical analysis. Second, this definition allows one to deduce secondary characteristics of populism derived from the core tenants of people-centrism, anti-elitism, and Manicheanism, that are central to our theory—healthcare chauvinism and distrust in science.

pandemic, one is unlikely to comply with anti-COVID measures if they are dictated by someone perceived as an enemy. From the decision-making viewpoint, polarized politics renders coalitions and agreements with other political parties extremely difficult (Mudde and Kaltwasser, 2018), and makes political camps engage in “hardball” politics and illiberal practices (Levitsky and Ziblatt, 2018; Arbatli and Rosenberg, 2021). In systems where “populist polarization” has taken root, rivalries between parties become defined by an appeal to the “opposition between the righteous people and corrupt elites” and a fundamental “distrust of the institutions of compromise” instead of the typical elite conflicts that characterize party politics (Enyedi, 2016).

To make matters worse, since people reason “like lawyers and not scientists” (Martel et al., 2020), they tend to consume information that confirm their pre-existing beliefs and reject information that contradicts them, which further deepens the chasm between in-groups and out-groups. The extremely high information asymmetries inherent between healthcare experts and consumers (Arrow, 2003) renders health outcomes disproportionately vulnerable to misinformation, “common sense” assertions, conspiracy theories and disdain for science—exactly what many populist leaders are infamous for. For example, Jaroslaw Kaczyński, the leader of Poland’s Law and Justice party (a textbook example of right-wing populism) claimed that migrants can bring epidemics because they may have “various parasites and protozoa, which don’t affect their organisms, but which could be dangerous here” (Adekoya, 2015). The result is that society becomes polarized into two (sometimes equally-sized camps), whose supporters become hostile to the other side and their political representatives at the level of routine practices, making citizens less willing to comply with health measures and, as a result, contribute to the public good.

Considering that partisanship directs voters to support “their” party’s positions (Brader and Tucker, 2009, 2012), beliefs by many (but not all) populist politicians who claim that scientists, medical experts, journalists, and establishment politicians providing people with inaccurate information, can be picked up by supporters. This leads supporters to disregard that information with a sleight of hand as they are delegitimized by default, due to their being “disingenuous,” “corrupt,” or “malevolent.” Brennan (2020) shows, for example, that respondents who support the Republican Party are less likely to wear a mask when outside one’s home than supporters of the Democratic Party. Taking climate change denial as a proxy for less faith in science and using phone location data, Brzezinski et al. (2020) show that in areas where individuals have less faith in science, citizens are more likely to violate social distancing measures. Ananyev et al. (2021) show that viewing shows on Fox News reduces compliance with social distancing rules.

With this in mind, while we see populist political actors as the primary mechanism responsible for higher excess mortality,

their effect may also be felt indirectly by the more immediate consequence of polarization. As such, our hypotheses can be formulated as follows:

Hypothesis 1: *All else equal, countries THAT ARE MORE POPULIST are associated with higher excess mortality than less populist countries.*

Hypothesis 2: *All else equal, populist leaders increase the positive association between political polarization and higher excess mortality.*

Research design

Data

Our main dependent variable is excess mortality data. We believe these figures to be superior to other indicators, because countries calculate deaths from COVID-19 very differently, which renders indicators, such as COVID-19 deaths per capita, incomparable across countries (Beane et al., 2020; Leon et al., 2020; Rivera et al., 2020). The data are retrieved from the World Mortality Dataset (Karlinsky and Kobak, 2021). This dataset contains mortality statistics from different countries on either a weekly or a monthly basis. In this analysis, we focus on weekly data due to the greater country coverage. We calculate excess mortality using the following formula:

$$\frac{\text{mortality}_{2020,2021} - \text{average mortality}_{2015:2019}}{100} - 1 \quad (1)$$

Our main independent variable is the incumbent chief executive’s level of populism. In order to measure it, we use the populism measure from the V-Party Project. This indicator represents an answer to the following question: “To what extent do representatives of the party use populist rhetoric...?” (V-Party codebook, p. 19). The measure focuses on two broad features of populist rhetoric: (1) importance of anti-elitist rhetoric and (2) whether “leaders of this party glorify the ordinary people and identify themselves as part of them” (V-Party codebook, p. 24). We identify chief executives—presidents in presidential and semi-presidential systems, and prime ministers in parliamentary systems—and their political parties for the year 2020 based on the most recent data available. We focus on the populism of chief executives’ parties.

Our second main independent variable is political polarization. The concept has many definitions and can be operationalized in different ways. Since we are interested in polarization that divides society into hostile camps, the indicator from the Varieties of Democracy dataset is a valid operationalization of the construct relevant to our theory. This indicator asks coders the following question:

“Is society polarized into antagonistic, political camps?” (V-Dem Codebook, p. 211). The authors clarify further: “Here we refer to the extent to which political differences affect social relationships beyond political discussions. Societies are highly polarized if supporters of opposing political camps are reluctant to engage in friendly interactions, for example, in family functions, civic associations, their free time activities and workplaces.” We use the continuous representation of this measure, and higher numbers imply a higher level of polarization.

We also use the COVID-19 Protective Policy Index (PPI) as a measure of government’s health care policy responses to the pandemic (Shvetsova et al., 2020, 2022). The PPI is a composite index that measures public health government responses to the pandemic at the national and sub-national levels of government on a daily basis. The PPI focuses on government’s COVID-19 policy responses based on the following policy decisions: state of emergencies, school closures, border closures, closure or restriction of businesses and services, mandatory personal protection equipment, social gathering and social distancing limitations, home-bound policies and medical isolation policies. The final PPI measure we use ranges from 0 to 1, where 0 means no policy response and 1 means the most stringent policy response.

Following suit, we control for the usual factors affecting excess mortality: GDP per capita (logged in models), GDP growth, population size (logged in models), the percentage of the population over the age of 65, population density, health expenditures as a percent of GDP (all six indicators are from the World Bank Database), political regime [Varieties of Democracy (V-Dem) Lohrmann et al., 2020], the level of government effectiveness (World Government Indicators). For robustness checks, we take into account the left-right economic stance of the ruling political parties and the parties’ level of anti-immigrant rhetoric. Both indicators come from the Lohrmann et al. (2020). We also control for the level of generalized trust within the society from the World Values Survey: the percentage of people who answered that most people around can be trusted (2020). In Table 1 we present descriptive statistics for all variables.

Method

In order to test our hypotheses, we use OLS regressions with time fixed effects on 43 countries from May 4, 2020 to May 9, 2021, corresponding to weeks 19–52 in 2020, and weeks 1–18 in 2021. For our unit of analysis, we test the hypotheses using panel data organized as country-week observations. During this period, the pandemic had already become widespread in the countries that are included in our analysis, permitting us to better observe significant differences in deaths compared to the previous years.

In order to estimate the effects of populism on excess mortality, we used the following econometric specification for our models:

$$\begin{aligned} Mortality_{c,t} = & \beta_0 + \beta_1 * Populist_c + \beta_2 * w_t \\ & + \beta_3 * Controls_{c,t} + \epsilon_{c,t}, \end{aligned} \quad (2)$$

where $Mortality_{c,t}$ is the excess mortality (in percentages) in country c in week t , $Populist_c$ —a continuous variable indicating how populist the governing party was in country c , w_t —the week-fixed effects (to control for time-specific unobservables), and $Controls_{c,t}$ which is the list of control variables. The full list of control variables has been already presented in the previous section. Some of these variables are logged to make them more normally distributed and simplify interpretations of estimates. Since we do not have enough within-country variation for our main independent variable (Populism Index), we cannot include country fixed effects. Instead, models contain the pool of control variables which should eliminate a possibility of an omitted variable bias.

Empirical results

In Table 2 we test our first hypothesis that a populist chief executive, *ceteris paribus*, is associated with higher excess mortality during the current pandemic. All three models in Table 2—(1) without control variables, (2) with control variables and (3) with control variables and time fixed effects—show that the populism index has a strong positive effect on excess mortality throughout all our models. All else being equal, an increase in populism by 1 point increases excess mortality by 20% points. We visualize this effect in Figure 1: governments with populist chief executives, on average, tend to have higher levels of excess mortality than their non-populist colleagues throughout the entirety of the recorded time-period.

In Model 4, Table 2 we test for the specific mechanism, through which populism affects excess mortality—political polarization. Our hypothesis that populism exacerbates the positive effect of political polarization on excess mortality during the pandemic is corroborated by the model: the interaction term between populism and political polarization is positively signed and statistically significant. Figure 2 represents the marginal effect plot: at higher values of populism, the positive effect of political polarization on excess mortality is stronger.

While typical OLS regression models with interaction terms using the populism index and the level of political polarization can testify to the combined strength of these factors being present in a given country, what they cannot explain is the order of succession of each factor. Given that polarization and populist success are closely related to each other, either one of these factors could plausibly influence the other, and thus increase

TABLE 1 Descriptive statistics.

Statistic	N	Mean	St. dev.	Min	Q1	Q3	Max
Time	2,276	26.989	15.308	1	14	40	53
Excess mortality	2,130	17.022	24.804	-27.660	1.192	25.946	185.842
Populism index	2,276	0.390	0.279	0.047	0.148	0.538	0.979
GDP per capita	2,276	34,407.17	23,572.09	3,317.45	15,694.74	48,771.37	114,685.20
GDP growth, %	2,276	2.349	1.311	-0.055	1.419	3.260	4.996
Population	2,276	28,449,602	53,407,441	360,563	4,979,300	37,593,384	328,239,523
Population 65+, %	2,276	17.228	4.438	4.929	15.192	20.199	23.012
Democracy	2,276	0.786	0.108	0.455	0.710	0.870	0.900
Government effectiveness	2,276	1.000	0.696	-0.677	0.462	1.572	1.952
Health expenditures, %	2,276	8.541	2.161	5.286	6.770	9.997	16.885
Migration stance	2,276	-0.325	1.624	-4.755	-1.531	1.119	3.257
Political polarization	2,011	-0.419	1.274	-2.842	-1.221	0.553	2.123
Density	2,276	160.996	252.988	3.298	35.893	154.946	1,575.194
Economic right-left	2,276	0.451	1.261	-1.699	-0.770	1.516	3.094
Social trust, %	792	23.880	17.746	4.500	8.400	44.600	56.600

TABLE 2 Relationship between populism, polarization, and excess mortality.

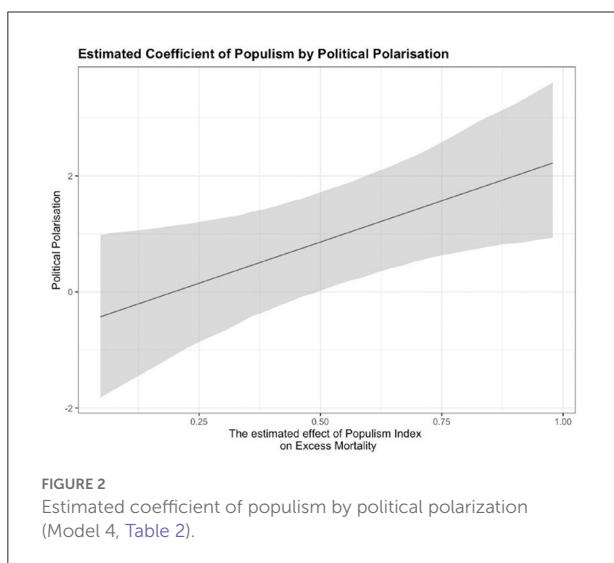
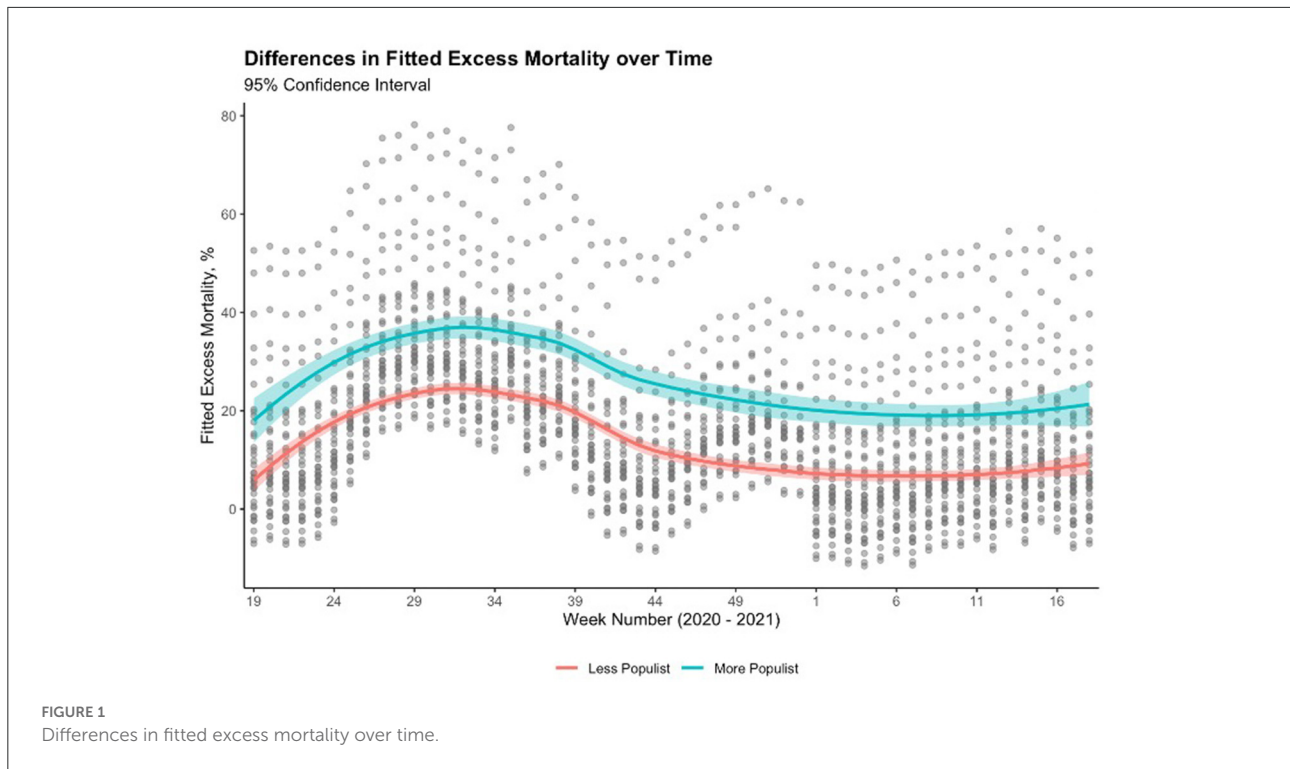
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Populism index	22.321*** (2.673)	22.423*** (2.382)	20.320*** (2.122)	20.058*** (2.163)	18.856*** (2.196)	18.289*** (2.175)	17.775*** (2.183)	18.508*** (2.239)	19.341*** (2.440)
Political polarization	4.626*** (0.814)	-2.486** (0.860)	-3.933*** (0.870)	-3.898*** (0.874)	-4.141*** (0.864)	-5.195*** (0.995)	-5.228*** (0.992)	-5.708*** (0.964)	-5.848*** (0.951)
PPI	38.144*** (7.566)	0.733 (6.918)	-14.627* (6.878)	-14.801* (6.913)	-11.236+ (6.772)	-6.765 (6.245)	-10.648 (6.985)	-11.228 (7.003)	-14.080* (6.180)
Populism index * political polarization	0.513 (1.557)	2.965* (1.451)	5.831*** (1.473)	5.630*** (1.521)	5.660*** (1.505)	5.766*** (1.505)	5.970*** (1.513)	6.259*** (1.496)	6.619*** (1.544)
Observations	1,440	1,440	1,440	1,440	1,440	1,440	1,440	1,440	1,440
R2	0.283	0.442	0.503	0.503	0.511	0.513	0.515	0.515	0.516
R2 adj.	0.254	0.419	0.482	0.482	0.490	0.492	0.493	0.493	0.493
R2 within	0.204	0.381	0.449	0.449	0.458	0.460	0.461	0.462	0.463

Excess mortality is a dependent variable. All standard errors are heteroskedasticity-robust. All models contain time fixed effects. A more detailed table with control variables can be found in Table A2. Also, in Table A3, we present models where we add control variables in a subsequent manner, to show that our results are robust to adding control variables one by one. +p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

excess mortality. Thus, there is a need to further investigate the possible indirect influence that a populist chief executive may have on levels of excess mortality by increasing levels of political polarization in the population at large. For this, we refer to a causal mediation framework.

Mediation analysis is a helpful methodological tool for parsing out the chains in a causal sequence and can provide evidence for the existence of any mediating variables that may be responsible for the main relationship between the independent and dependent variables (MacKinnon, 2008). This is accomplished by finding the strength of the Total Effect (the effect of X on Y, both indirectly through M, and without), the Direct Effect (ADE = the effect of X on Y when controlling

for M), and the Average Causal Mediation Effect (ACME = the effect of X on M multiplied by the effect of M on Y). The proposed mediation effect is calculated by dividing the coefficient of the ACME by the Total Effect. If there is mediation, we should, thus, expect to observe a strong, statistically significant ACME coefficient that makes up a significant amount of the Total Effect. ACME coefficients that are larger in size than the Direct Effect imply mediation effects that are stronger than the simple relationship between X and Y. It is important to note that ultimately, this model cannot provide full evidence of a causal relationship as it is not based on an experimental design. That said, the causal mediation framework is still useful for identifying important variables along a causal chain, and



providing evidence for the directionality of relationships in ways that other analyses of observational data have trouble accounting for. Experimental approaches, while of interest, are impractical for our purposes.

For our model, we take our Populist Index as the independent variable, political polarization as the mediator, and excess mortality as the dependent variable and calculate the aforementioned estimates using the R package Mediation (Tingley et al., 2014). As our tests demonstrate (Table 3), a statistically significant positive relationship is observed for the

Average Causal Mediation Effect (ACME), when compared to both the Direct Effect (ADE) and the Total Effect. The ACME coefficient, making up a large proportion of the Total Effect coefficient, indicates that the effect on excess mortality is almost completely through the mediating variable polarization. The estimation for the proposed mediation is strong and statistically significant, implying that populism’s effect on excess mortality is almost entirely affected by its increase in political polarization. These effects can be observed in Figure 3 shown below.

The size and significance of the ACME estimate, when compared to the Total Effect, as well as the statistically insignificant Direct Effect estimate, implies a very strong mediation effect where much of the positive relationship between populists in power and excess mortality can be attributed to populists’ influence on the level of political polarization in a given country. In addition, these results corroborate those from the previous set of tests pointing to a strong effect of the Populist Index and levels of political polarization as an interaction term on excess mortality.

Robustness checks

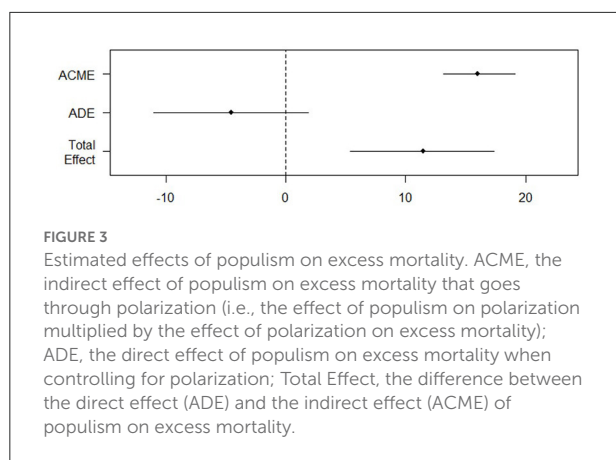
Anti-immigrant rhetoric—Healthcare chauvinism?

By dividing the polity between “the people” and “the elite”, and “othering” specific non-elite populations, populists create simplistic categories based on explicit moral criteria. These

TABLE 3 Causal mediation analysis: effect of populism, mediated by polarization, on excess mortality.

	Estimate	Lower 95% CI	Upper 95% CI	p-value
ACME	16.018	13.170	19.10	<2e-16***
ADE	-4.524	-10.978	1.88	0.16
Total effect	11.494	5.365	17.34	<2e-16***
Prop. mediated	1.400	0.883	3.02	<2e-16***
Sample size used	1,943			
Simulations	1,000			

ACME, the indirect effect of populism on excess mortality that goes through polarization (i.e., the effect of populism on polarization multiplied by the effect of polarization on excess mortality); ADE, the direct effect of populism on excess mortality when controlling for polarization; Total Effect, the difference between the direct effect (ADE) and the indirect effect (ACME) of populism on excess mortality. Prop. Mediated, the proportion of the effect of populism on excess mortality that goes through the mediator (ACME/total effect). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.



categories often become extended to debates over social policy, and used to justify the criteria for inclusion based on groups that are deemed to be “deserving”, such as the native population, the hard-working, and the common man, and exclusion based on which groups are deemed to be “undeserving”, such as the “free riders”, the minority population, or the foreigners. Among the populist radical right, “welfare chauvinism” has been a common addition to election manifestos in countries with strong welfare state programs (Mudde, 2009; Banting, 2010; Keskinen et al., 2016). Whereas, neoliberal-oriented populists tend to cast the poor as “undeserving” due to the fact that they accept the government “handouts” paid for by taxpayers, the European populist radical right parties, inhabit positions ranging from pro-liberal to pro-worker with regards to social policy benefits [e.g., *Rassemblement National* in France and *Prawo i Sprawiedliwość* (PiS) in Poland], yet all argue that foreigners should be excluded from state-provided benefits based on economic nationalist grounds. In practice, this kind of “healthcare” chauvinism often translates into scaling back welfare programs. There is mounting evidence that many populist leaders use COVID-19 to further inflame xenophobic and anti-immigrant sentiments. Matteo Salvini, the leader of

Italy’s far-right party League (Lega), called for more checks on people arriving from China; the country subsequently faced spikes in xenophobic incidents against Asian people (Giuffrida and Willsher, 2020). Via a pre-registered online experiment in Haderup Larsen and Schaeffer (2021) find support for welfare chauvinism effect during the COVID-19 pandemic against recent migrants.

To account for this plausible explanation, in Model 2, Table 4, we include the level of anti-immigrant rhetoric of the party in power of the country leader’s party. The variable comes from Löhrmann et al. (2020). Experts are asked about the party’s attitude toward immigration into the country. Answers range from “strongly opposes” to “strongly supports”. We utilize the continuous representation of this measure, and higher numbers imply a higher level of support. Curiously, the coefficient for the anti-immigrant rhetoric variable is statistically significant, but unexpectedly signed: countries, whose leaders come from a party that strongly supports immigration, show higher excess mortality. This could be simply a result of multicollinearity, because attitude toward immigration is often part of populist ideology (Seyis and Heller, 2021). Most importantly, the coefficient for the interaction term between polarization and populism stay intact. However, the association between stance on immigration and excess deaths during the pandemic should be studied further.

Left-right dimension

Since there are some possible alternative channels through which populism can affect excess mortality, we decided to check robustness by controlling for additional variables. Because populism is a thin ideology, and there is no one “populist response” to the pandemic (Stavrakakis and Katsambekis, 2020), it is necessary to account for other important ideological divisions between political leaders. Model 3 in Table 4 includes the distinction between right-wing and left-wing economic views. We account for this by including an economic left-right stance of the ruling political party (Löhrmann et al.,

TABLE 4 Robustness checks for a regression relationship between populism, polarization, and excess mortality.

	Model 1	Model 2	Model 3	Model 4
Populism index	19.565*** (2.058)	20.344*** (2.074)	18.623*** (2.023)	15.492** (5.121)
Political polarization	-0.609 (0.714)	0.005 (0.700)	-0.168 (0.709)	-10.417*** (3.582)
Populism index × political polarization	2.938** (1.316)	2.578** (1.291)	2.213* (1.281)	24.092*** (5.951)
Immigration stance		1.157*** (0.297)		
Left-right economic stance			-0.570 (0.377)	
Most people can be trusted				-0.699*** (0.160)
Observations	1,891	1,891	1,891	520
R2 adj.	0.401	0.405	0.401	0.606
R2 within	0.331	0.335	0.331	0.624
Time FE	Yes	Yes	Yes	Yes

Excess mortality is a dependent variable. All standard errors are heteroskedasticity-robust. A more detailed table with control variables can be found in **Table A4**. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

2020). Experts are asked to locate the party according to its ideological position on the economic issues. The answer choices range from far-left to far-right. We employ the continuous representation of this measure, and higher numbers imply a more conservative stance on economic issues. “Parties on the economic left want government to play an active role in the economy. This includes higher taxes, more regulation and government spending and a more generous welfare state. Parties on the economic right emphasize a reduced economic role for government: privatization, lower taxes, less regulation, less government spending, and a leaner welfare state” (Löhrmann et al., 2020, p. 28–29). We see that left-right economic policy does not have a significant effect on excess mortality, while other estimates retain their significance.

Generalized trust

The Model 4 in **Table 4** controls for another variable—the level of generalized trust within the society—that has been argued to affect COVID-19 outcomes. It is measured as the percentage of respondents who answered that most people can be trusted (Almakaeva, 2014) to the following question from the Haerpfer et al. (2020): “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” (World Values Survey Codebook, p. 7). The results show that higher level of generalized trust have a negative association with the excess mortality indicator, as expected. The increased magnitude of the coefficient for the

interaction term between populism and polarization is due to the reduced sample size. Importantly, the interaction term itself remains positive and statistically significant.

Conclusion

In this study, we have sought to investigate the relationship between populist governments around the world and their response to the ongoing COVID-19 pandemic. From both theoretical notions of the populist ideology and anecdotal cases around the world, we hypothesize that those governments with populists in the position of the chief executive of their respective countries would be less apt to responding to the necessities of the pandemic. We suggest that one important channel for how populism may affect the crisis is by instigating mass political polarization. The emergence of populist actors, especially to the highest office of the land, is often a very polarizing phenomenon as populists deride the “establishment” as “enemies of the people”, break informal (and sometimes formal) political norms, and bring “bad manners” to the political sphere (Moffitt, 2019) seen by many as desecrating the integrity of the office. In such circumstances, people become less willing to comply with anti-COVID restrictions and contribute to public good.

From the decision-makers’ viewpoint, the response to the pandemic can become complicated by both sides of the party system that seek to prevent political opponents from succeeding in the political area, even at the expense of the populace at large. Similarly, after casting political opponents as being corrupt, immoral, disingenuous, or evil, the populist leader is then forced

to deal with these same opponents once coming to power, which can render compromise on the matter of pandemic response to be all but impossible (Levitsky and Ziblatt, 2018).

We utilize excess mortality from 2020 to 2021 as our dependent variable. The results of our tests point to a significant divergence in excess mortality rates based on whether the chief executive of a given country is populist or not. Governments headed by populist chief executives are strongly correlated with higher excess mortality in a rather robust fashion. Further testing has demonstrated that apart from the direct effect, political polarization mediates the relationship between populism and excess mortality, testifying to one possible cause for this general relationship. In countries headed by populist leaders, this relationship is stronger: higher polarization is more likely to be associated with greater excess mortality.

There are certain limitations in our research. First, we identify the association between populism and COVID-19 outcomes rather than causation. However, the fact that the populist wave has swept the world long before the pandemic mitigates this problem. Second, there are certainly other important factors that explain high variation in excess mortality during the COVID-19 crisis across nations. We account for this possibility by controlling for all the usual factors, such as the overall level of economic development, political regime and others. Third, our major variable of interest, populism, can affect COVID-19 outcomes *via* multiple channels. In the robustness checks section, we take into account differences between left and right-wing ideologies and the usage of anti-immigrant rhetoric by populist parties that can contribute to healthcare chauvinism, the restriction of healthcare access and benefits to migrants and minorities not belonging to “the people”. Our results did not change appreciably.

We should note that while each of the aforementioned mechanisms are believed to be relevant factors that limit countries with populist chief executives’ response to the pandemic, they have not been able to be explored in depth. That said, we would note that the tests performed in our study take the first step in this direction and provide important evidence as to the empirical implications of our theory that point to this general relationship between populists, political polarization and higher excess mortality generally holding true. Further testing should be performed to fully understand the extent that these alternatives, but not necessarily mutually exclusive, mechanisms explain this overall relationship.

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Data availability statement

Publicly available datasets were analyzed in this study. This data can be found here: <https://www.v-dem.net/vpartyds.html>; https://github.com/akarlinsky/world_mortality; <https://github.com/COVID-policy-response-lab/PPI-data>; <https://data.worldbank.org/>.

Author contributions

DR was the initiator of this research project. Together with TN, PS, and DS, she discussed and proposed the methodological approach. DR and DS were actively engaged in writing the literature review and theoretical framework as well as collecting part of the dataset. TN and PS conducted the empirical analysis. PS reviewed the article and contributed to the literature review. DS, PS, and TN revised the article. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpos.2022.948137/full#supplementary-material>

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