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Making Sense of Messy Data: Analyzing Government Response to COVID-19

Final Paper

20 May 2022

The Effect of the Executive Party's Anti-Immigrant Polarization on COVID-19 External Border Restrictions

Introduction

In the 2020 US Presidential Debates, President Donald J. Trump bragged that his "early" closing of the US' borders "saved thousands of lives" (Sanford, 2020). In fact, many executives put external border restrictions in place during the first phase of the pandemic. In the presence of an exogenous shock to the political system such as COVID-19, wherein there were no established political responses to fall along party lines, one might expect executives to look to expert public health recommendations. One such organization providing such recommendations worldwide was the World Health Organization. Interestingly enough, from its first report on January 10, 2020 and in every subsequent direction given by the organization that year, WHO recommended against external border restrictions. According to the organization, "Evidence has shown that restricting the movement of people and goods during public health emergencies may be ineffective, and may interrupt vital aid and technical support, disrupt businesses, and have a negative impact on the economies of affected countries and their trading partners" (World Health Organization, 2020).

Where, then, did executives look to inform their decision to implement external border restrictions? The theory in this research is that – particularly for executives whose parties are more highly-polarized – they look to the biases of their electorate for cues as to how to respond in ways that might situate along party lines. In countries led by executives whose parties have a higher degree of anti-immigrant orientation, this could mean implementing more anti-immigrant policies during COVID-19, including more and more severe external border restrictions.

In this vein, my research question is this: what is the impact of party polarization, particularly as it relates to the issue of migration, on the severity of executives' COVID-19 policy in the form of external border restrictions?

Theory and Research Design

Polarization in many parts of the world have risen in recent years (Doherty et al., 2019). There are several theories as to why this may be, including a greater degree of homogenization among political parties (Farina, 2015); the effects of social media-contrived echo chambers (Bauman et al, 2019); and even the emergence of more polarizing and norm-breaking executive leaders (Kilgore, 2019). However, the focal polarization component of this research is governmental structure: Congress' delegation of power to "administrative agencies controlled by the party of the elected President" (McGinnis, 2021). Changes in governmental structure as they relate to derogation of power to the executive means that regulations put into place by the executive are not subject to the compromise of various legislators and political parties. The executive, beholden to their political party and voter base as opposed to the nation as a whole, represents the middle of just their side of an issue (McGinnis, 2021). However, one might expect an exogenous shock to result in the emergence of a new political issue which executives must address. This issue would not yet be subject to politicization and polarization along party lines,

allowing executives an opportunity to make a decision as to how they will respond. The exogenous shock in question in this case is COVID-19. Now, the pandemic is seen as a highly politicized and polarized issue. At its onset, however, there was no established party-line response for executives to fall back on when making initial policy decisions. My theory here is that there are two routes an executive could take in decision-making:

1) If an executive's party is less polarized, the executive is less beholden to its base, and their electorate is more ideologically diverse. In this case, we would expect that the executive would have less of a necessity to look to the biases of its base in decision-making, and instead they could form a less-biased judgement on the policies that should be put in place. In the case of COVID-19 external border restrictions, the external factor one might expect executives to look to for unbiased judgement on what COVID-19 related policies should be put in place would be public health recommendations. On a global scale, this could mean looking toward the recommendations of the World Health Organization for guidance.

2) If an executive's party is more polarized, the executive is more beholden to its base, and their electorate is less ideologically diverse. In this case, we would expect the executive would be more obliged to look to the biases of its base in decision-making and might form a more biased judgement on policies that should be put in place. In the case of COVID-19 external border restrictions, this could mean that an executive's party being more anti-immigrant and more prone to restrictive migration and border laws at the outset might be more inclined to implement stricter COVID-19 external border restrictions. In the same vein, an executive's party being more pro-

immigrant and less prone to restrictive migration and border laws in the past might be

less inclined to implement stricter COVID-19 external border restrictions.

These two possible approaches to decision-making hinge on a single factor: the degree to

which an executive's party is polarized, especially as it relates to the issue of migration.

Research Design

This brings us to the research design choice of regression discontinuity design, or RDD,

to identify the effect of an executive's party taking on an anti-immigrant orientation on the

severity of COVID-19 external border restrictions. Identification relies on the continuity of

potential outcomes across the treatment threshold (de la Cuesta and Imai, 2016). In this context,

this means that any difference in the severity of COVID-19 external border restrictions among

countries must be due to their treatment status rather than any other factor. It is expected that an

executive of a political party only just polarized to the left toward a pro-immigrant orientation

versus a party only just polarized to the right toward an anti-immigrant orientation would still be

very similar in their approaches compared to political parties at the extremes, holding up the

continuity assumption. Another essential assumption is the stable unit treatment value

assumption (SUTVA), which asks that potential outcomes for each individual are unrelated to

the treatment status of others. COVID-19 external border restrictions in one country aren't able

to change the executive's party in another country or its anti-immigrant orientation, so SUTVA

should hold in our case. The requirements of exclusion restriction and first stage are both taken
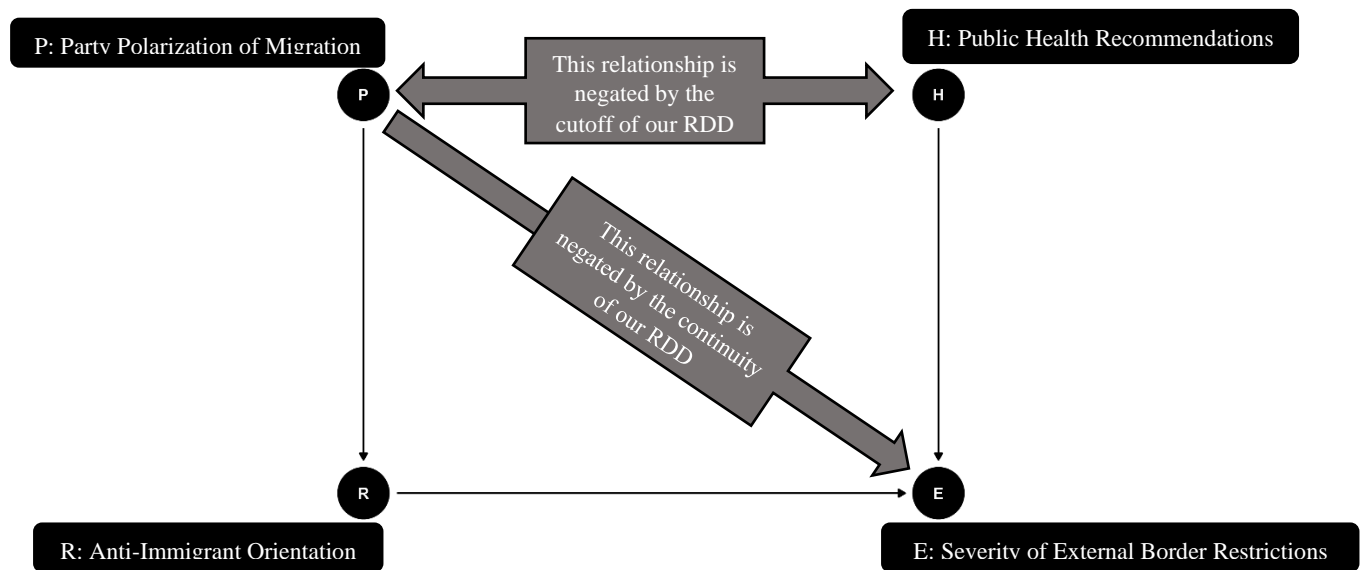
care of by the structure of our RDD.

P: Party Polarization of Migration

H: Public Health Recommendations

P

H

This relationship is negated by the cutoff of our RDD

This relationship is negated by the continuity of our RDD

R

E

R: Anti-Immigrant Orientation

E: Severity of External Border Restrictions

Figure 1: Research Design DAG

Data

To perform this analysis, I had to collect data on COVID-19 external border restrictions and their severity, the executive and their political party in each country, and each represented political party's left/right and anti-immigrant orientation.

For the COVID-19 policy data, I used CoronaNet's database, which records this data for countries around the world. I narrowed the dataset to only policies which were implemented during the first wave of the pandemic, from January to August 2020. I used the count of COVID-19 external border restrictions to form this metric. While the CoronaNet data is vast country-wise, it is not entirely comprehensive; the number and detail of policies collected is greater for some countries than for others. Therefore, I moved forward with the dataset recognizing its shortcomings in data collection. Additionally, the pure number of external border restriction policies might be an imperfect indicator of the strictness of those policies. To account for this, I consulted the typology constructed by Michelle L. O'Brien and Maureen A. Edger in their article for International Migration Review entitled, "Suppression, Spikes, and Stigma: How COVID-19 Will Shape International Migration and Hostilities toward It." In it, they categorized Australia,

Canada, Germany, Denmark, Spain, Greece, Latvia, Norway, New Zealand, Poland, and Turkey as having strong border restrictions. According to their definition, strong border restrictions means, "borders are closed with few exceptions, which may include citizens and legal permanent residents of country and one immediate neighbor" as of April 11, 2020. According to this

typology, I was able to additionally categorize Azerbaijan, Bosnia and Herzegovina, Bulgaria, Cyprus, Georgia, Malta, North Macedonia, and South Africa as having strong border restrictions (as these countries weren't included in their dataset). Utilizing this typology, I created a dummy variable for whether a country is characterized as having strong external border restrictions to temper the raw count of external border restriction policies in place wherein one indicates strong COVID-19 external border restrictions.

For a comprehensive list of world executives and their respective political parties, I consulted the Manifesto Project database (Burst 2021). From there, I paired each political party with its corresponding record in the Global Leaders Ideologies database (Herre 2021). This is a cross-country ideology dataset which records parties' ideological orientation on a right-left scale called the RILE index as well as coding other information such as parties' orientation on certain topic areas (Volkens, 2020). Utilizing the typology established in creating the RILE index, I was able to create a variable which I call the anti-immigrant index. To do so, I took data from the Manifesto Project and pulled variables related to parties' views on immigration. The chosen variables are related directly to immigration or migrants as indicated by the qualitative description of each variable from the Manifesto Project. The variables and their assignment to a pro- or anti-immigrant orientation are listed in the table below:

Pro-Immigrant	Anti-Immigrant
Per107 - Internationalism: Positive	Per109 – Internationalism: Negative
Per503 – Equality: Positive	Per201 – Freedom and Human Rights

Per607 – Multiculturalism: Positive	Per608 – Multiculturalism: Negative
Per705 – Underprivileged Minority Groups	Per605 – Law and Order: Positive
Per2023 – Lax Citizenship: Positive	Per2022 – Restrictive Citizenship: Positive
Per7062 – Refugees: Positive	Per6013 – National Security: Positive
Per602_2 – National Way of Life: Immigration: Positive	Per601_2 – National Way of Life: Immigration: Negative
Per607_1 – Multiculturalism General: Positive	Per608_1 – Multiculturalism General: Negative
Per607_2 – Multiculturalism: Immigrants Diversity	Per608_2 – Multiculturalism: Immigrants Assimilation

I added each of the columns according to their respective variables to for pro- and anti-immigrant measures, which I used to compute an Anti-Immigrant index. The equation for the Anti-Immigrant index is:

$$Pro\text{-}Immigrant - Anti\text{-}Immigrant = Anti\text{-}Immigrant\ index$$

Herein, a lower negative number represents a high degree of pro-immigrant orientation, and a higher positive number represents a higher degree of anti-immigrant orientation. However, data for these selected variables is incomplete; only four countries had data recorded for any of the listed variables. To compensate for this missing data, I decided to combine the Anti-Immigrant index with the RILE index to form a proxy for a country's anti-immigrant orientation. The formula for the RILE-Immigrant index is:

$$RILE\ index + Anti\text{-}Immigrant\ index = RILE\text{-}Immigrant\ index$$

The RILE-Immigrant index comprises the running variable of the RDD. The cutoff in the design is where RILE-Immigrant index = 0. Beyond that point into the positive numbers, countries are placed in the treatment, which is an executive's party's anti-immigrant orientation. RILE-Immigrant dummy, the treatment dummy variable, distinguishes which countries are

treated, where one indicates anti-immigrant orientation. It is a function of the forcing variable

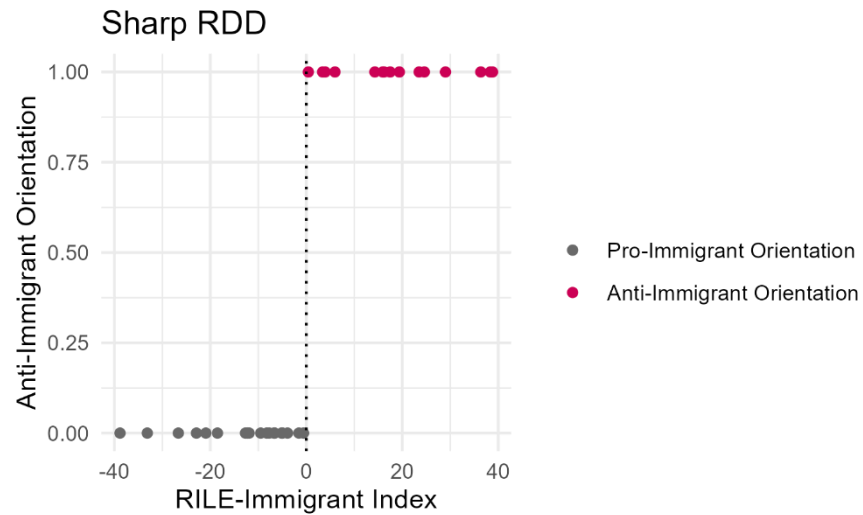since it is coded one where the RILE-Immigrant index is positive and zero where it is negative.

Figure 2: Demonstrating Sharp RDD

Analysis

Upon visualization, a trend can already begin to be discerned. Most of the data seems to

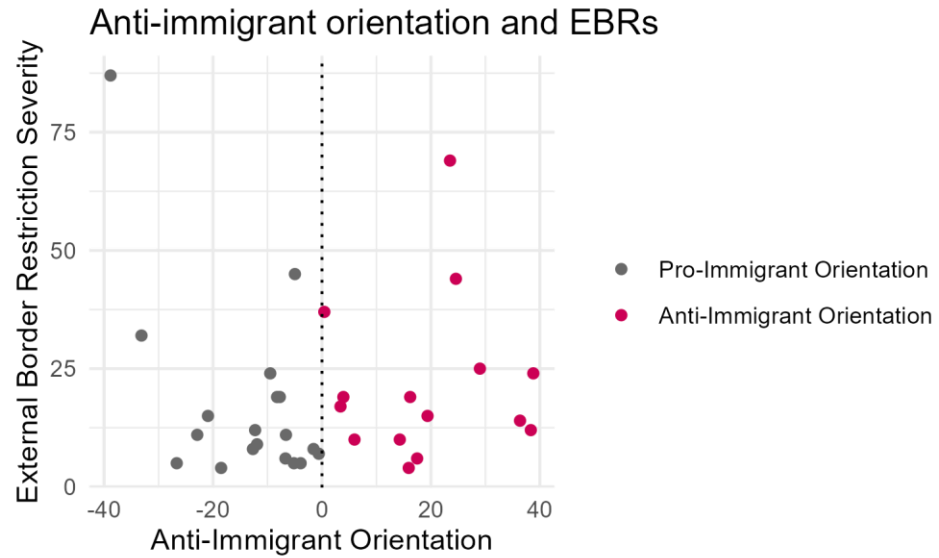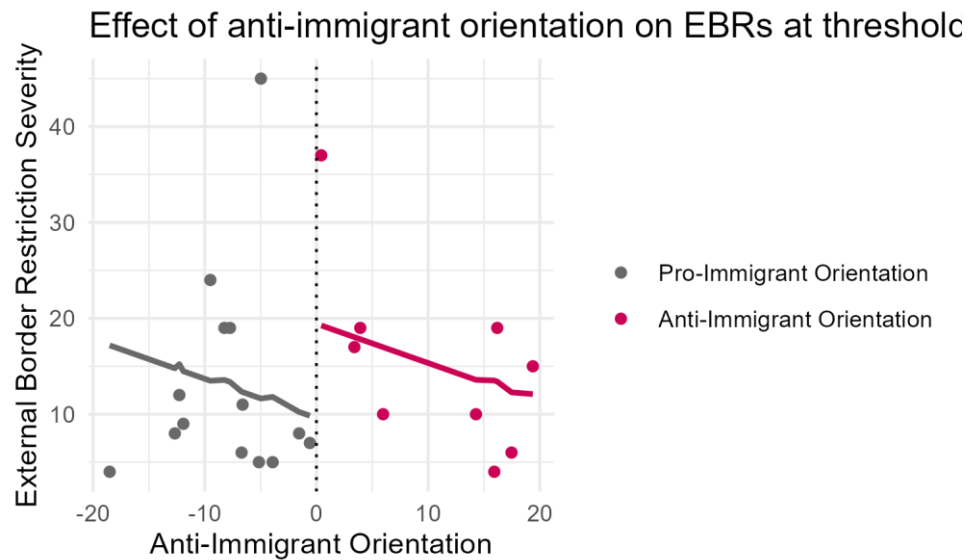have a slightly positive slope except for the single outlier.

Figure 3: Visualizing the data

After combining all three datasets and keeping only the overlapping countries for which all three datasets had data, there are 34 observations, a large proportion of which are close to the threshold. Almost 68% of the observations are within 20 points of the threshold.


Model 1: Estimating the LATE within 20 points of the threshold

	Dependent variable:
	count_external_border_restrictions
rile_immigrant_index	−0.409
	(0.426)
rile_immigrant_dummy	9.831
	(9.137)
strong_policy_dummy	−0.600
	(5.188)
Constant	10.202*
	(5.063)
Observations	23
R^2	0.059
Adjusted R^2	−0.090
Residual Std. Error	10.858 (df = 19)
F Statistic	0.397 (df = 3; 19)
Note:	*$p<0.1$; **$p<0.05$; ***$p<0.01$

Model 1 depicts the discontinuity in the severity of COVID-19 external border restrictions for low-polarized countries. For countries with executives' parties whose orientation leans just anti-immigrant versus those whose orientation leans just pro-immigrant, there is a visual jump in the severity of external border restrictions. However, according to the coefficient in Table 1, a one point increase in the RILE-Immigrant index would result in a -0.4 point drop in external border restriction severity. This shows a negative relationship between the two. However, the result is not statistically significant regardless.
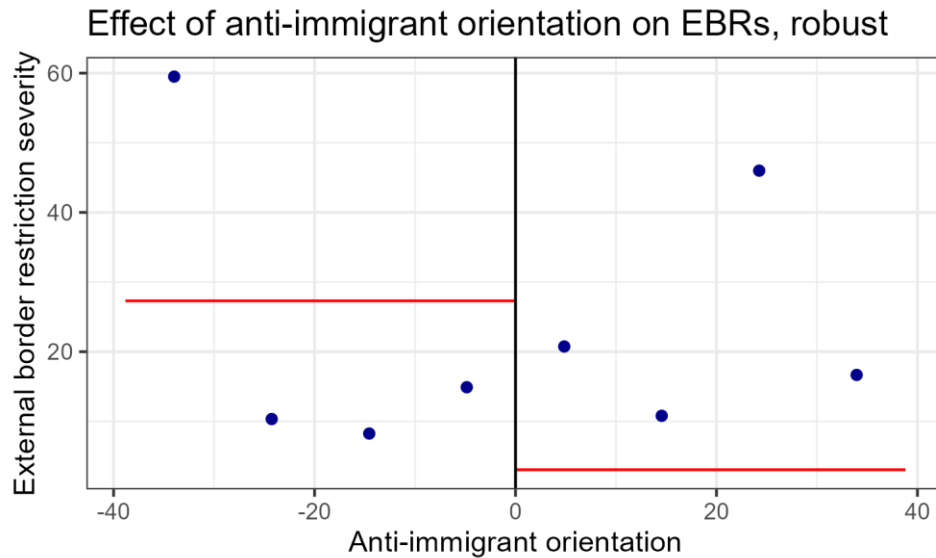
Model 2: Estimating the LATE robustly

Table 2: Results of Model 2

Call: rdrobust

Number of Obs. 34 BW type mserd Kernel Triangular VCE method NN

Number of Obs. 19 15 Eff. Number of Obs. 10 4 Order est. (p) 1 1 Order bias (q) 2 2 BW est. (h) 11.520 11.520 BW bias (b) 18.347 18.347 rho (h/b) 0.628 0.628 Unique Obs. 19 15

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Method Coef. Std. Err. z P>|z| [95% C.I.]

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Conventional -7.667 20.060 -0.382 0.702 [-46.983 , 31.650]
Robust - - -0.526 0.599 [-53.270 , 30.716]

===

Model 2 uses an optimal bandwidth calculation procedure, which suggests a bandwidth of 11.520. The associated estimates are -7.667 points in external border restriction severity for every additional point on the RILE-Immigrant index. This also insinuates a negative relationship between them. However, this result is likewise not statistically significant.

Effect of anti-immigrant orientation on EBRs, quadratic
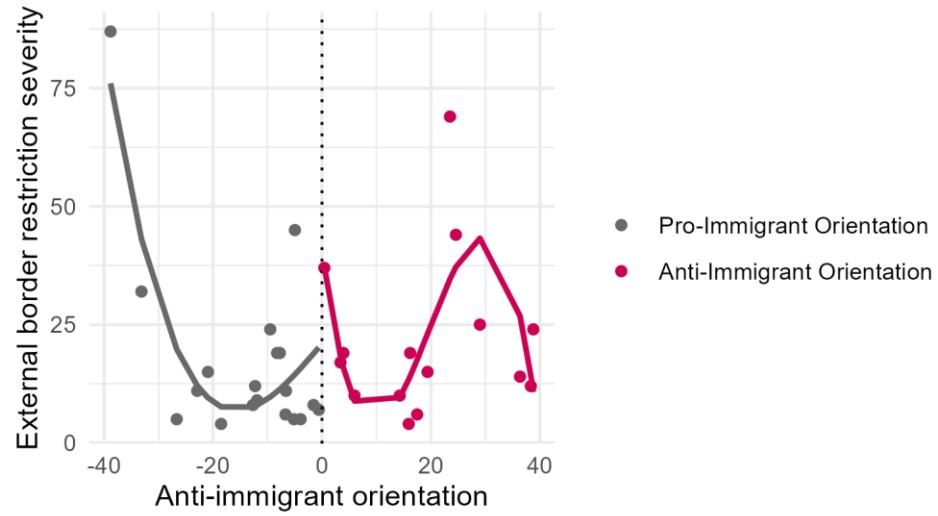
Model 3: Estimating the LATE from the equation

Table 3: Results of Model 3

	Dependent variable:
	count_external_border_restrictions
rile_immigrant_dummy	19.885
	(12.860)
rile_immigrant_index	1.351**
	(0.650)
I(rile_immigrant_dummy *rile_immigrant_index)	−9.836***
	(2.981)
I(rile_immigrant_dummy^2)	
I(rile_immigrant_dummy *(rile_immigrant_index^2))	0.582***
	(0.183)
I(rile_immigrant_index^3)	−0.002***
	(0.0005)
I(rile_immigrant_dummy *(rile_immigrant_index^3))	−0.008**
	(0.003)
Constant	20.962***
	(6.372)
Observations	34
R^2	0.597
Adjusted R^2	0.508
Residual Std. Error	12.988 (df = 27)
F Statistic	6.676*** (df = 6; 27)
Note:	*p<0.1; **p<0.05; ***p<0.01

Model 3 estimates the treatment effect using a cubic polynomial equation with interactions between the forcing and treatment variables. Equation 1:

$$EBR\ Severity = \beta_0 + \beta_1 Anti\text{-}Immigrant + \beta_2 Polarization + \beta_2 Anti\text{-}Immigrant \times Polarization +$$

$$\beta_4 Polarization^2 + \beta_5 Anti\text{-}Immigrant \times Polarization^2 + \beta_6 Polarization^3 + \beta_7 Anti\text{-}Immigrant \times$$

$$Polarization^3 + \varepsilon$$

The discontinuity estimate is 19.885, meaning that for every point increase in the RILE-Immigrant index, there is a 19.885 increase in external border restriction severity. This indicates a positive relationship. However, it is also not statistically significant.

Shortcomings and Conclusion

None of the results of my statistical analyses were ultimately statistically significant. This could have to do with the lack of the expected relationship between the variables; perhaps polarization on the issue of migration is related to other variables which impact the severity of COVID-19 external border restrictions but were not taken care of by the RDD structure. However, one certain and glaring issue with this analysis is the data available for use.

On one hand, the CoronaNet data, as discussed previously, does not give equal attention to all countries. Some countries are recorded more comprehensively and therefore have a higher number of external border restriction policies just by virtue of their record in the database. This firstly could skew the results in of itself.

The Manifesto Project database is a very interesting concept: measuring the polarization of political parties. However, the lack of data available to comprise the Anti-Immigrant index led me to utilize the RILE-Immigrant index in my calculation. This could be a sizable problem for my assumptions and calculations simply by virtue of being a crude proxy; not all right-leaning

parties are necessarily anti-immigrant, and not all left-leaning parties are necessarily pro-immigrant, especially in countries which have robust multi-party systems like several of the countries in my analysis. The presence of better data collection for countries in the immigrant-related variables in the dataset would allow me to construct a more accurate measure of pro- and anti-immigration polarization among countries, which would allow the models to run better.

One other weakness lies in my application of RDD knowledge. This is the first time I have tried to construct an RDD project on my own, and therefore I am a little uncertain of the strength of its components. For example, I had some doubts as to whether a measure of polarization as a running variable determining anti-immigrant treatment is a valid mechanism. However, I remain very interested in the theory that executives whose political parties have low levels of polarization are less likely to be beholden to their base when making policy decisions and therefore may implement less extreme policies, especially regarding an issue propelled by an exogenous shock, whereas executives whose political parties have high levels of polarization are more likely to be beholden to their base and look to more extreme biases in making the same decisions.

The foundation of the research itself likewise remains interesting: if the World Health Organization recommended explicitly against external border restrictions during COVID-19, with consistent messaging on the subject from the beginning, then why did executives make the decision to close borders? Was it a different source of public health recommendations or lack of trust in the World Health Organization or another entity, or was it driven not by anti-immigrant orientation but by another bias among their electorate? I am still leaving the door open to the possibility that anti-immigrant orientation contributed to the decision-making process. However, this research design will need to be re-run when better data becomes available.

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