

International Competition and the Onset of Civil War*

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Abstract

Expectations over external intervention can disrupt domestic bargaining and cause the onset of civil war. The risk of civil war depends on a country's international environment, because it determines whether the government, the rebels, or both get support if fighting breaks out. I hypothesize two pathways to civil war. Politically moderate countries are at higher risk of experiencing civil war in politically heterogenous neighborhoods than homogenous ones, because these countries are trapped in the middle of competing factions willing to support the rebels. In homogenous neighborhoods, outliers are at higher risk of conflict than politically moderate countries, because the dominating states seek to homogenize the area by ousting the outlier's government. I estimate several empirical models using spatial regression techniques and find robust evidence for my hypotheses. The results are robust to alternative specifications, including binning and kernel estimators.

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1 Introduction

How does a country's international environment affect its risk of civil war? At least 75% percent of civil conflicts between 1976 and 2011 experienced intervention on the side of the government, the rebels, or both (Högbladh, Pettersson and Themnér 2011). If domestic actors have expectations about intervention, then international factors will affect the prospects for conflict. To answer this question, we need theories of 1) why countries intervene in each other's civil wars; and 2) domestic bargaining in the shadow of intervention. First, political actors compete over the design of state institutions (Owen IV 2010, Wagner 2007, McDonald 2015, Gunitsky 2017). Second, potential intervention by a third party can affect domestic bargaining. Expectations of rebel support can increase the risk of civil war (Cetinyan 2002, Thyne 2006, Ku perman 2008), while expectations of government support can decrease it (Cunningham 2016).

Because civil wars are struggles over domestic political arrangements, interventions offer an alternative short of interstate war for states wishing to maintain or spread their political preferences to others. The political distance between two countries determines whether one country would support the government or the rebels in the other's civil war. However, because most countries have more than one neighbor, the level of international competition amongst the neighbors determines whether there are potential government or rebel supporters, or both.

I hypothesize two patterns of civil war onset caused by potential intervention. First, when neighborhoods are heterogeneous, countries of opposing ideologies compete for dominance. Countries in the middle are at higher risk of rebel-sided intervention, and thus civil war, than political outliers because competing factions support rebels in case of war. Outliers, on the other hand, can expect government-sided intervention because these countries are close to

one of the competing factions, which deters rebellion. In the late 1960s, Pakistan was a mixed regime, with autocratic Afghanistan and democratic India both supporting rebel groups in the country. Second, when neighborhoods are homogenous, political outliers are at heightened risk of civil war because the dominant states seek to impose their political preferences on the rest. Turkey was the target of frequent rebel-sided intervention in the mid-1980s, as the authoritarian regimes in Syria and Iran provided aid to the Kurdish rebel group PKK.

I test these hypotheses using spatial data of regime type and ideology to measure a state's political distance to its neighbors and the political heterogeneity of its neighborhood. I find consistent and robust support for my hypotheses. In homogenous neighborhoods, political distance is associated with an increased risk of civil war. Similarly, for politically moderate countries, increased heterogeneity increases the risk of war. The results are robust to tests for false discovery rates, violations of the linear interaction effect and common support assumptions, and alternative estimators. Furthermore, I find that measures of disagreements on specific policy issues are not associated with the risk of civil war onset, which suggests that conflict is driven by ideology.

My results imply that empirical models of civil war should account for structural factors such as the distribution of political preferences, because otherwise we risk biased estimates of monadic or dyadic predictors of civil war. Third-party intervention can affect the duration of conflict (Regan 1996, Balch-Lindsay and Enterline 2000, Regan 2002, Balch-Lindsay, Enterline and Joyce 2008, Gent 2008, Cunningham 2010, Sullivan and Karreth 2014, e.g.), but this paper shows that the onset of civil war depends on expectations of external support. The role of neighborhood heterogeneity also suggests an underappreciated risk of domestic political shocks. When countries suddenly shift political preferences, through coups or revolutions, these shocks

skew the international distribution of political preferences. If a new regime promotes its preferences abroad, it can cause ripple effects throughout the region. For instance, the Russian Revolution helped set off a wave of civil wars across Europe (Payne 2011). Domestic conflicts thus affect other states' security because they spur international competition.

2 The international dimensions of civil wars

A country's international environment can affect its domestic politics in several ways. Hostile neighbors can weaken domestic governments (Lee 2018), and conflicts can spread across borders (Buhaug and Gleditsch 2008). For weak states, the risk of contagion is even higher (Braithwaite 2010, Maves and Braithwaite 2013). Uncertainty about what external actors might do can thus disrupt bargaining between governments and opposition groups (Wagner 2007, pp. 229-230). Potential rebel-sided intervention can increase the risk of civil war (Cetinyan 2002, Thyne 2006, Kuperman 2008, Poast 2015), and in some instances the opposition actively seeks foreign support (Huang 2016).¹ While expected rebel support increases the risk of civil war, expectations of government-sided intervention have a pacifying effect (Thyne 2006, Cunningham 2016) because it tells opposition groups that the costs of fighting will outweigh the chances of winning.

States support rebels for a variety of reasons. Outsourcing war-fighting to rebels can be cheaper than direct military confrontation (Salehyan 2010, Salehyan, Gleditsch and Cunningham 2011), or it can work a screening device for assessing an opponent's resolve (Rapport 2015). The specific goals of the interventions vary. States sometimes intervene to ensure access to eco-

¹The theoretical model in Cetinyan (2002) requires additional assumptions, such as private information, for intervention to cause domestic bargaining breakdown. Otherwise, intervention only affects demands made in equilibrium, not the risk of war.

nomic markets (Aydin 2012), while U.S. humanitarian interventions are driven by liberal ideals rather than strict national interests (Choi 2013). Territorial contiguity is a consistent predictor of intervention into civil war, but potential interveners also care about regional politics. States are more likely to intervene in civil wars if they might spread to other countries they value (Kathman 2011), which helps explain when and why some states intervene in civil wars that are not next door.

Supporting rebels is also costly. Interventions can cause counter-interventions or even interstate war (Gleditsch, Salehyan and Schultz 2008, Schultz 2010, Maoz and San-Akca 2012). The decision to intervene might then hinge on what (or who) is at stake. Ethnic ties between rebel groups and third parties can explain intervention, because they draw neighbors into the conflict to help or save brethren (Saideman 2001, 2002, Gleditsch 2007). Sometimes the decision to intervene is based not on who the rebels are, but who they are fighting. States are more likely to intervene on the side of rebels if the government or one of its allies is an enduring rival (Findley and Teo 2006, Maoz and San-Akca 2012). These state-centric relationships can thus offer a more general explanation for intervention, even if ethnic ties are stronger predictors for a subset of cases.

The emergence of conflict, however, cannot be explained by rivalry, because most definitions of rivalry, including enduring rivalry, are based on prior conflict (Goertz and Diehl 1993, pp. 156-60). Instead, we should consider competing political preferences as causing or perpetuating rivalry. Wagner (2007, ch. 6) argues that variations in domestic bargains imply different incentives for revisionist policies, because institutions or domestic coalitions can more or less restrain leaders from pursuing private gains. While some states are territorially satisfied, and some might be able to offer each other guarantees of mutual security, others have more revi-

sionist preferences. Some leaders can also leverage race, religion, ethnicity, or ideology to create political mass mobilization, which in turn reduces executive predation (Wagner 2007, pp. 202-203). In a world of heterogenous states, leaders have an incentive to remake others' domestic political arrangements because reducing the political differences between states can reduce the risk of conflict.

Thus, interventions and counter-interventions are the product of multilateral political competition. Transnational ideological networks and elite polarization drives competition over ideas and political preferences, which explains why states promote regime change in others (Owen IV 2010). The United States and the Soviet Union intervened in numerous third-world countries, often on opposing sides, to spread their preferences and build international order (Westad 2005), and such competition affects the global pattern of civil wars (Kalyvas and Balcells 2010). Similarly, Europe in the first half of the 20th century saw a wave of civil wars brought about by revolutionary sentiment and aided by Revolutionary Russia (Payne 2011). Domestic institutions also change after war is over, as post-war settlements establish a new political order that influences the regime type of new and old states (McDonald 2015, Gunitsky 2017). The spatial distribution of domestic political arrangements should therefore be seen as the product of international processes, and intervention into civil wars is one manifestation. However, these arguments have not been applied to the risk of civil war, which I do below.

3 Intervention and international competition

In this section I lay out the first principles of foreign intervention into civil wars. My theory focuses on when and what type of intervention is more or less likely and how those expectations

affect the likelihood of civil war.² I argue that the risk of civil war is increasing in the likelihood of rebel-sided intervention, but decreasing in the likelihood of government-sided intervention.³

The political arrangements of a country can be renegotiated. If bargaining breaks down, a government and some armed group(s) fight over control of the entire state or some portion of it. Whether rebels hope to topple the government or merely secede, fighting is an attempt to remake the status quo. Because rebel groups are usually less powerful than the government, external support can be desirable. Some rebels might prefer autonomy over support, but I assume that most groups prefer support because it gives them a fighting chance.⁴ We have numerous examples of opposition groups even lobbying third parties for support in civil wars. For instance, members of the Afghan Mujahideen made several public trips to the United States to lobby for support during the 1980s, while the Front de Libération Nationale in the Algerian War of Independence played off opposing sides during the Cold War to help it achieve international recognition (Connelly 2002).

The decision to intervene and whom to support in a civil war depends on the third party's satisfaction with the status quo, and the likelihood of intervention depends on the depth of disagreement. States might disagree on the particulars of trade policies, or they might disagree on fundamental issues of political arrangements. If it is the latter, the disagreement is more likely to cut across a wide range of issues, which gives the actors a stake in each other's domestic

²Several mechanisms might explain the outbreak of war. Expectations about intervention can cause civil war by lowering the expected costs of rebellion and increasing the rebels' expected likelihood of victory (Kuperman 2008), but factors such as private information or commitment problems must be present (Cetinyan 2002). I assume that information and commitment problems will not cause war absent disagreement, so my theory is measuring the necessary conditions for war and when disagreement is more or less likely.

³The presence of a third party might have a pacifying effect, if the government can buy off rebels that would otherwise fight. If so, then my empirical model is a conservative test of my theory.

⁴If opposition groups prefer peace to fighting with external support, then the likelihood of civil war should decrease in the likelihood of rebel-sided intervention. If groups with strict preferences for independent fighting exist, then my research design should be a conservative test of my hypotheses.

politics. Institutions matter in this regard because they can be remade, unlike other sources of preferences such as factor endowments. Furthermore, institutions aggregate preferences, and hence determine policy choices. Disagreeing states will therefore seek to change the other's institutions, because it will lessen bargaining friction between them. States also fight over smaller issues, but fundamental disagreements over political arrangements should explain more conflicts for two reasons. First, even parochial disagreements can stem from deep-seated disagreements. Second, states are more willing to remaking another country's political arrangements if the disagreements are fundamental rather than narrow, because attempting regime change over smaller issues is an inefficient use of resources and risks overturning policies the two states already agree on.

While rebel support is costly, it offers a state the opportunity to remake another's domestic political arrangements without direct military confrontation. Sending money or guns improves the rebels' chances of winning, and even if the rebels cannot win, prolonged fighting can weaken the target government and give the intervener advantages in interstate bargaining.⁵ A recent example would be Russian support for separatists in Ukraine. Instead of sending in tanks, Russia sent arms and advisors, which weakened the central government while preventing the conflict from expanding beyond Ukraine. The implication of using civil wars to address interstate disagreements is that countries who are politically different from their surroundings are at greater risk of rebel-sided intervention. Opposition groups observe these disagreements, and the greater the chance of support, the more attractive fighting becomes.

In contrast, government-sided intervention is about preserving the status quo. States with

⁵Target governments can take steps to prevent intervention, but there are several obstacles to a peaceful interstate settlement. A third party might not be able to credibly commit *ex ante* not to intervene once a civil war starts, and commitment problems between governments and rebels prevent domestic agreements (Walter 1997), which could be a prerequisite for an interstate agreement.

similar interests will collude to prevent the entry of new actors into the state system, because competition reduces revenue (Acharya and Lee 2018). Furthermore, regime change can cause commitment problems leading to war (Wolford 2012), or the new regime might form a coalition with rebels in the other state. In general, the threat of intervention on the side of the government should deter rebellion because it raises the expected costs of fighting. Historically, external government supporters have often been regional or global powers that can provide substantial aid.⁶ Opposition groups are therefore less willing to fight when facing a potentially strengthened government relative to one with no powerful friends.

4 Expecting intervention and predicting civil war

In this section I specify a theory of when states are at an increased risk of civil war onset because of potential intervention. I focus on two specific factors: How far a country's political preferences are from its neighbors' preferences (political distance), and the distribution of political preferences amongst the neighbors (neighborhood heterogeneity). Political distance and neighborhood heterogeneity interact to produce several processes, and I will illustrate these using hypothetical countries *A*, *B*, and *C*, with the former being the potential civil war country and the latter two being the potential interveners. *B* and *C* can intervene on the rebels' or the government's side, and their decisions depend solely on their proximity to *A*. The closer a neighbor is to *A* politically, the more likely it is to support the government if fighting starts. The further away a neighbor is, the more likely it is to support the rebels. I assume the risk of civil war is increasing in the likelihood of rebel-sided intervention and decreasing in the likelihood of

⁶Of the 122 conflicts where the government received external support in the period 1976-2009, in 82 of those at least one of the supporters was a major power, which does not include regional powers who have intervened in civil wars frequently, such as Iran and South Africa.

government-sided intervention. If both sides expect to receive support, potential government support ameliorates the war-inducing effect of potential rebel support.

Country A 's risk of civil war depends on political distance and neighborhood heterogeneity. To explain the interaction, consider the distribution of political ideal points on a single dimension, where μ denotes the average political preference of the neighbors and political distance is the absolute distance between that point and A 's preference.⁷ Political distance increases the risk of civil war onset when a neighborhood is homogeneous (**Figure 1**). If a country's political distance is small (i.e. it is close to the mean), a homogeneous neighborhood means it is close to everyone. There is little disagreement amongst the states, so these neighbors are most likely to support the government in the event of a civil war, which in turn deters rebellion. But if a country is far away from the rest, then the risk of rebel-sided intervention increases. The dominating states B and C will intervene in the outlier to homogenize the region, because all else being equal they will prefer A to be closer in terms of political preferences.

Hypothesis 1 *In homogenous neighborhoods, political outliers are at higher risk of civil war than politically moderate countries.*

When a neighborhood is heterogeneous, the risks are different. If a country is politically moderate, it is stuck in the middle of potentially competing factions, because B and C are on opposite ends of the political spectrum (**Figure 2**). For instance, a mixed regime might face threats from both autocracies and democracies seeking to bring it over to their respective sides. But if A is an outlier, it is far from B , but close to C . The opposition is then less willing to fight than if the government is not expecting support. Government support deterring rebellion

⁷While it is simplification to think of foreign policy preferences along a single dimension, studies suggest it is a fairly accurate simplification (Bailey, Strezhnev and Voeten 2017).

Figure 1: The varying risk to A in a homogenous neighborhood

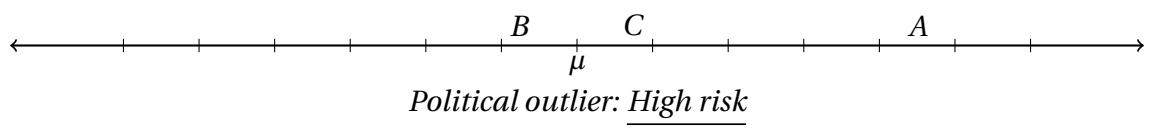
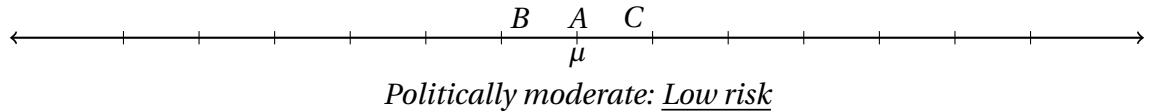
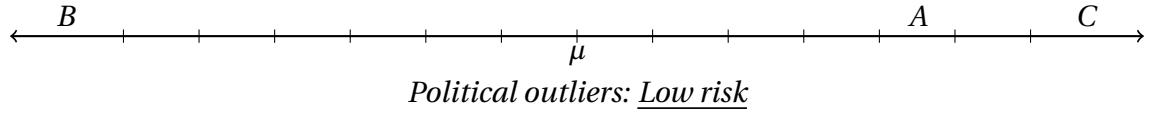
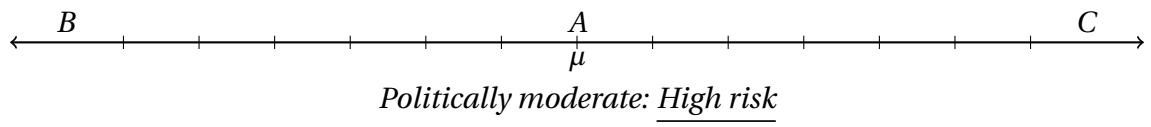


Figure 2: The varying risk to A in a heterogenous neighborhood



might explain why we saw more intervention in Global South countries than intervention in the superpowers' spheres of influence in Europe during the Cold War.

Hypothesis 2 *Politically moderate countries are at a higher risk of civil war in heterogeneous neighborhoods than homogenous neighborhoods.*

The interaction between political distance and neighborhood heterogeneity produces clear expectations under some conditions, but not under others. **Hypothesis 1** shows the relationship between the risk of civil war onset and political distance when the neighborhood is homogenous, and **Hypothesis 2** shows the relationships between civil war and neighborhood heterogeneity when political distance is minimal. But when there is neither political moderation nor neighborhood homogeneity, the relationship between civil war and these factors are non-linear or in some cases indeterminate.

First, the relationship between political distance and the risk of civil war is conditional on level of international competition. As **Figure 3** illustrates, if an initially politically moderate country *A* in a moderately heterogenous neighborhood becomes politically extreme, it will move from the middle point towards either *B* or *C*. Increased political distance reduces the risk of civil war onset, because *A* is more likely to receive government support from whichever country it is moving towards, but at some point *A* will move past this other country, thus moving further away from both neighbors. The relationship between political distance and civil war therefore depends on international competition: under complete homogeneity, the risk of civil war is strictly increasing in political distance, because *A* is always moving away from the others; under moderate heterogeneity, political distance has an indeterminate relationship with the risk of civil war; and under complete heterogeneity, the risk of civil war is always decreasing in

Figure 3: The varying relationship between political distance and the risk of civil war to A in a moderately heterogenous neighborhood

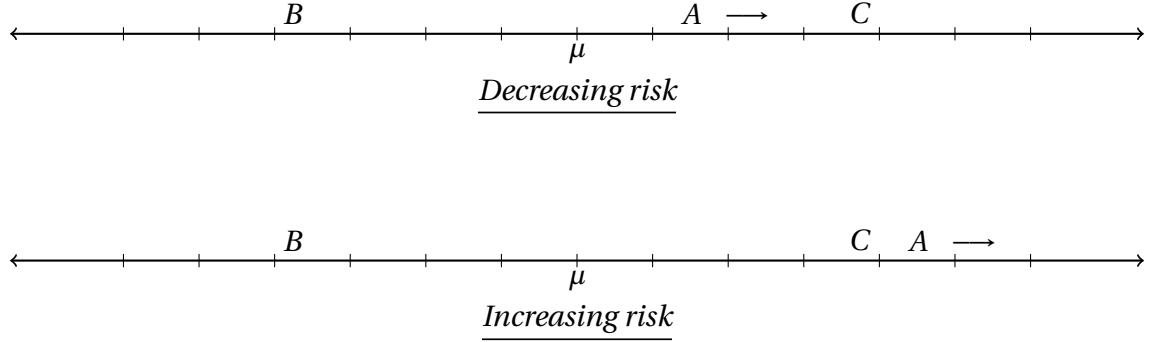


Table 1: Relative risk of civil war

	Heterogenous neighborhood	Homogenous neighborhood
High distance	Low	Moderate
Low distance	High	Lowest

political distance because A is by definition moving closer to one other state.

Similarly, **Hypothesis 2** does not imply that the risk of civil war is strictly increasing in neighborhood heterogeneity. The relationship between heterogeneity and war is conditional on where A is relative to its neighbors and how the neighbors are moving away from each other. Because of these indeterminate relationships when neither variables are at their minimum values, I only test **Hypotheses 1 2**, and I discuss these countervailing relationships more in-depth in the appendix.

My theory does not make predictions on whether the domination or the competition process should be more common. However, if we consider the wide range of tools available to states, we should expect to see civil wars start because of competition more often than domination (**Table 1**). States in homogenous regions might intervene in outliers, but they might also coordinate on other policies, such as sanctions. In competitive regions, however, coordination

is harder because there are more adversaries and fewer potential allies, so we should expect to see states turn to violence more often than dominating factions.

Lastly, it is worth considering the difference between the two on-diagonal cases: politically moderate countries in homogenous neighborhoods and political outliers in heterogenous neighborhoods. In both cases, the risk of civil war is lower than in the off-diagonal cases, but one has a higher risk than the other. In the former, rebel-sided intervention is unlikely, because all the nearby states are similar in their political preferences, and any intervention in the event of civil war is likely to be on the government's side, thus depressing the risk of civil war. In the latter case, however, the pacifying effect of government-sided intervention is ameliorated by the risk of rebel-sided intervention. We should therefore expect the risk of civil war to be moderately high in cases of political outliers in heterogenous neighborhoods.

5 Modeling civil war onset

In this section I specify several logit models of the risk of civil war with country-clustered robust standard errors . The unit of analysis is country-year, and the sample covers all countries in the system in the period 1946-2000 (Hegre and Sambanis 2006). Using Sambanis' definition, a civil war is defined as having caused more than 1,000 deaths in total, including battle deaths and civilian deaths, and lasted for at least three years.

The dependent variable is coded 0 for all country-years with no war, 1 for the year the war started, and missing for periods of ongoing war. While this causes some wars started during another war to be dropped from the sample, the alternative would be problematic because countries with ongoing wars might have systematically different risk of a new war starting. As Hegre

Table 2: Descriptive statistics

	mean	sd	min	max
Polity2 distance	4.504595	3.996208	.0000907	17.20913
Polity2 neigh. heterogeneity	6.197021	1.947941	0	13.43503
Polity2 neigh. count	17.72933	11.97122	2	61
Liberal component index	.4852089	.2743802	.0336004	.9788051
Liberal distance	.193069	.1626001	.0000265	.8754029
Liberal neigh. heterogeneity	.222683	.0625896	.019139	.4731299
Liberal neigh. count	17.72933	11.97122	2	61
<i>N</i>	5530			

and Sambanis (2006, p. 523) note, this would necessitate additional controls and consideration of how ongoing wars affect the existing explanatory variables. In the full sample, there are 119 cases of civil war onset, which is 1.93% of the total number of observations in the dataset (6,151), but the number is smaller when the model is estimated due to missing data (**Table 2**).

In order to capture disagreements between states (political distance) and the level of international competition (neighborhood heterogeneity), I start with a measure of a country's political position. Because I theorize that states form disagreements over fundamental issues of political arrangements rather than specific policy issues, I use measures of a country's deep-seated political preferences as represented by regime type or ideology. I focus on two measures to estimate two sets of models. First, Polity2 is a continuous measure of a country's level of democracy based on five subcomponents that capture various aspects of autocracies and democracies, with a higher score meaning a country is more democratic and vice-versa. Second, because Polity2 is largely based on institutional features, I also construct another variable using the Liberal component index from the Varieties of Democracy project (Coppedge et al. 2016, pp. 46-7).⁸ The continuous measure captures the extent to which liberal principles of

⁸I refer to the two models interchangeably as the Polity2 or Institutional model and the Ideological or Liberal model.

democracy are achieved, with a higher score meaning a country is more liberal. The two measures distinguish between the institutions of the state and the ideological content of its policies and laws.⁹ The two variables are highly correlated (0.836), but differ for certain countries and periods. For instance, El Salvador is rated as having a moderately high level of democracy in 1992 (7 on Polity2), but below average on the Liberal component index (0.412). Jordan in 1999, on the other hand, is considered a mixed regime (-2 on Polity2), but is above average on the Liberal component index (0.535).

For each of these variables, I construct a continuous measure of the absolute political distance between a given country's value and the average of other countries as weighted by the inverse minimum distance, defined as an inverse distance-weights matrix W (Buhaug and Gleditsch 2008):

$$W_{ij} = \frac{\frac{1}{d_{ij}}}{\sum_{j=1}^n \frac{1}{d_{ij}}}, \quad (1)$$

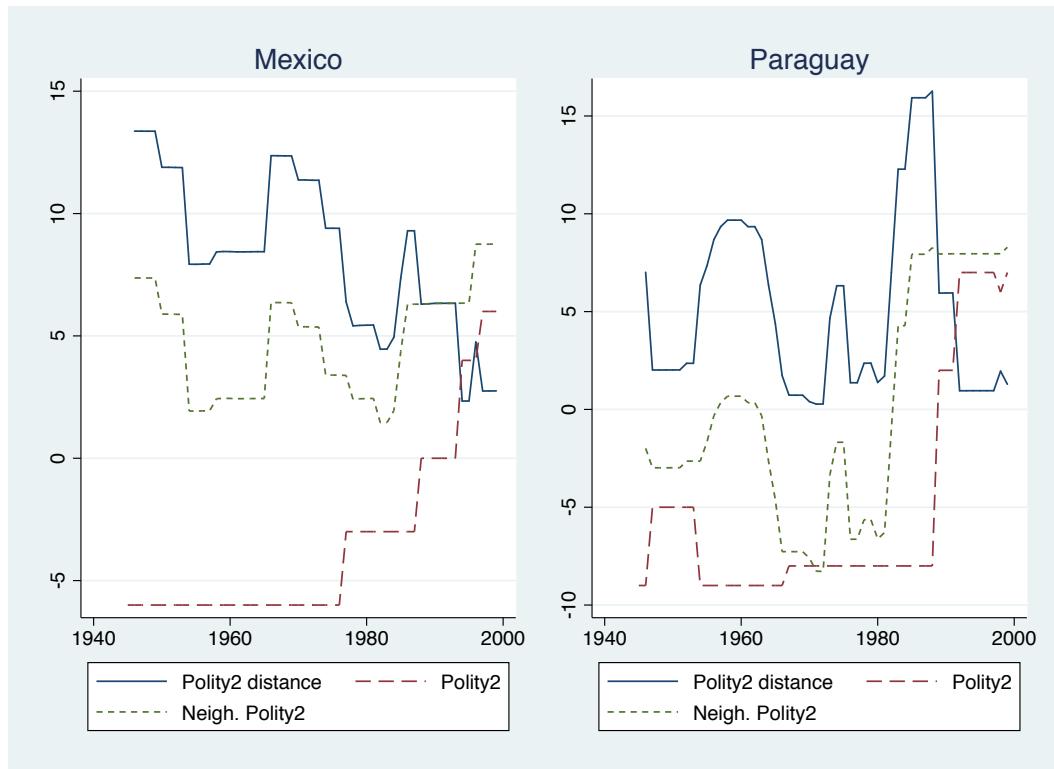
where i and j denote country pairs and d is the minimum distance between them.¹⁰ The W matrix produces a measure of the inverse distance between two countries which is normalized by the sum of the inverse distance between country i and all other countries j . Countries closer to i are weighted more than more distant ones, and contiguous neighbors are weighted particularly high. *Polity2 distance* and *Liberal distance* therefore capture the institutional and ideological distance, respectively, between a country and its neighbors, and both measures exhibit

⁹Neither measure captures all forms of international conflict and competition. For instance, it cannot distinguish between China and the Soviet Union during the Cold War. Nor can it capture differences between Sunni and Shia countries. However, measures that would capture these dynamics would then be bound by region or to some specific subsample, rather than a broad sample of countries.

¹⁰To facilitate the transformation of cells of contiguous neighbors, I add 1 kilometer to every off-diagonal cell in the matrices.

substantial variation across units and over time. For instance, between 1990 and 1999, Mexico's distance to its neighbors went from 6.33 to 2.75 (Polity2 distance) as its neighbors democratized (see **Figure 4**). For others, the distance is affected by both a country's change and its neighbors' change. Paraguay's political distance has ebbed and flowed as South America has gone through waves of regime change, but the distance sharply decreased once Paraguay democratized after 1989.

Figure 4: Changes in Mexico's and Paraguay's political positions.



Next, I construct two continuous measures of the level of heterogeneity of the surrounding countries (within 2500km), operationalized as the variance of their level of democracy and their liberalism.¹¹ The more heterogeneous the region, the higher the value. For instance, Malaysia's

¹¹The specific width of a band is inherently arbitrary, but I use a relatively wide band to avoid too much missing data in the sample. If it is too narrow, too many countries have too few neighbors to obtain values for the heterogeneity and count variables. If it is too wide, then we risk including irrelevant neighbors in the construction of the

region has been particularly heterogenous in terms of liberalism, consistently over 0.42 in the period 1975-1997.

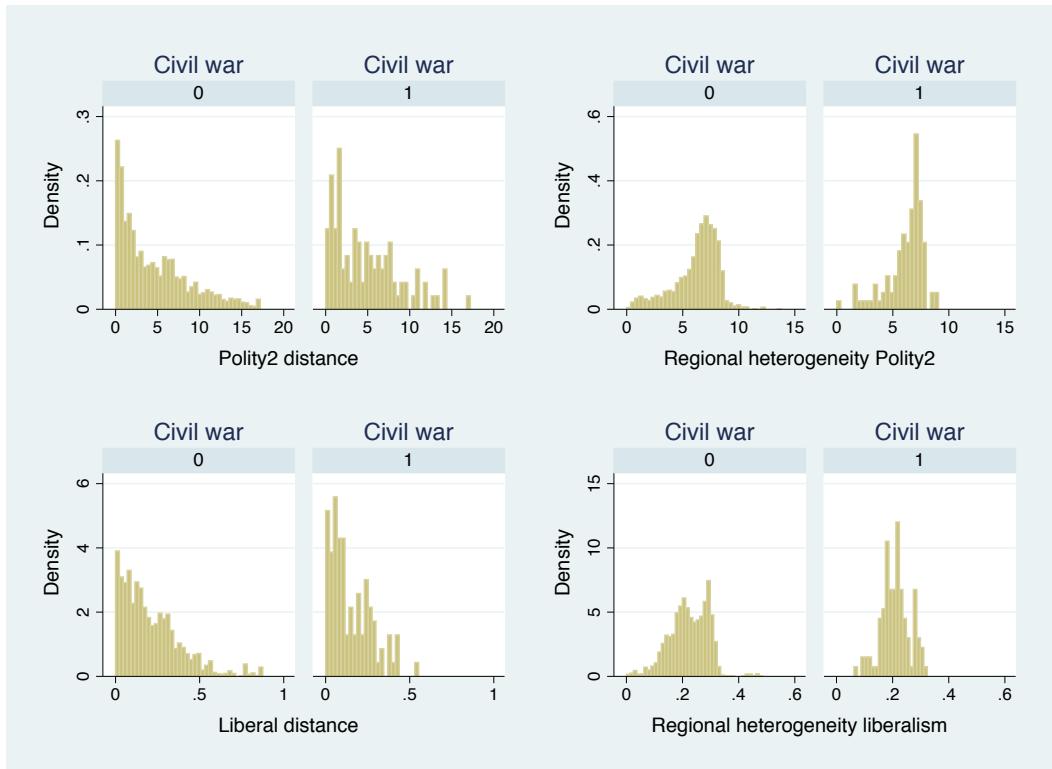
I define a country's neighborhood as every state within 2500km for two reasons. First, nearby states are frequent interveners. Of the 122 conflicts with outside intervention in the period 1976-2009 (according to the UCDP External Support dataset), 66 conflicts experienced intervention from at least one state within 2,500km of the border. Not all of these are contiguous neighbors. Almost half (31) included nearby, non-contiguous neighbors intervening. While major powers frequently intervene in civil wars, they rarely do so alone. 92 conflicts in the period included the involvement of at least one major power. 73 conflicts involved intervention from both major power(s) and other state(s), and 47 of those saw intervention from non-major power states within 2500km, in addition to major power(s). Relatedly, neighbors rarely intervene when major powers are not involved. 8 conflicts saw intervention from contiguous neighbors but not major powers, while 9 had intervention from non-contiguous neighbors but not major powers.

Second, neighbors are often necessary partners for intervention, because they have local contacts or other resources. For instance, the Afghan Civil War was driven by superpower rivalry. However, the United States was dependent on Pakistan to serve as a quartermaster to the Afghan Mujahideen. Smaller, regional powers also rely on proxies. Iran uses Hezbollah in Lebanon to intervene in the Israel-Palestine conflict. As such, these out-of-neighborhood powers might encourage conflict, but neighborhood competition offers a necessary condition for competition between major powers.

The distributions of both political distance variables are skewed with a long right tail (**Figure** measures. The results are robust to at least a 2,000km band. I also estimate the model with a heterogeneity measure that also includes the major powers in the sampling. The results, which are reported in the appendix section, conform with my hypotheses.

5). Furthermore, when divided into subsamples with and without civil war occurring, we see that the former group tends towards higher political distance and neighborhood heterogeneity. The distributions of the heterogeneity variables are less skewed, but observations with onset has high spikes in density above the mean for both *Polity2 neighborhood heterogeneity* and *Liberal neighborhood heterogeneity*. There are numerous cases of civil war onset with above-mean values for the distance and heterogeneity variables, including Israel in 1987 (*Polity2* distance = 11.98), Lebanon in 1958 (*Polity2* *neigh. het.* = 8.86), Zaire in 1996 (*Liberal distance* = .43), and Russia in 1999 (*Liberal neigh. het.* = .31).

Figure 5: Distribution of the explanatory variables of the model.



Because my theory specifies an interaction between a country's political distance to its neighbors and the neighborhood's heterogeneity, I include an interaction term in both the Polity2 model and the Liberal model. I also include control variables that predict civil war and can af-

fect domestic politics either in the observed country or neighbors.¹² I construct a measure of the number of states within the 2,500km band (capital-to-capital distance) of a given country (*Polity2 neigh. count* and *Liberal neigh. count*), because the number of states in a neighborhood increases the number of potential interveners and affects the heterogeneity of a neighborhood.¹³ Domestic institutions affect the risk of civil war while also functioning as senders or receivers of ideological diffusion, affecting both political distance and neighborhood heterogeneity, so I include level of democracy (*Polity2*), degree of liberalism (*Liberal component index*), and executive constraint (*Exec. constraint*) (Marshall, Jaggers and Gurr 2002). Furthermore, a country that experienced regime change in the last three years is at increased risk of civil war (Hegre and Sambanis 2006). If the change were the result of cross-border conflict, it can also affect a country's political distance, so I include measures of instability (*Instability*) (Fearon and Laitin 2003) and how long the regime has existed (*Age of Regime*). Rough terrain makes insurgencies more likely (Fearon and Laitin 2003), and it might also affect political distance by preventing policy diffusion or other interactions across the border (*Rough terrain*). Larger and poorer countries are more likely to experience civil war, and potential interveners are likely to consider size, wealth, and economic growth when deciding to intervene in a country. I therefore include log-transformed population (*ln(Population)*), log-transformed gross domestic product per capita (*ln(GDP per capita)*), and GDP growth (ΔGDP) as control variables. Lastly, because countries might arm themselves to fight civil wars and interstate wars, I include military power (*CINC*) as a RHS variable (Singer, Bremer and Stuckey 1972, Singer 1988).

¹²Unit-level characteristics such as political institutions, economic development, and demographics predict civil war (Hegre and Sambanis 2006, e.g.), but they might also be correlated with interstate conflict and intervention. Countries make decisions on war based on the relative strength and prosperity of its target (Bennett and Stam III 2009, ch. 5).

¹³Countries in the sample vary greatly in their number of neighbors. Fiji had one neighbor until 1990, while several European countries have over 50 neighbors, and more so following the end of the Cold War.

5.1 Temporal and spatial dependencies

Modeling the onset of civil war poses several challenges. First, time is important because younger states can be less stable, the risk of civil war recurrence decreases over time, and time-series-cross-sectional observations are likely to violate the independence assumption of ordinary logit (Beck, Katz and Tucker 1998). I employ several logit-model techniques to account for temporal dependencies. In the main models, I include a decay function of time at peace to account for the risk of civil war over time (Hegre and Sambanis 2006). In the robustness section and the appendix I also estimate models using year-fixed effects, which approximates the baseline hazard function (Beck, Katz and Tucker 1998), and Carter and Signorino (2010)'s time-cubed procedure. The results are substantively the same. In the main models I also include a dummy variable for whether the observation year was during the Cold War, because the structural break after 1991 affected patterns of civil war (Kalyvas and Balcells 2010).

Second, I employ spatial regression techniques because conflicts and regime types are spatially clustered. I include a dummy variable for whether a neighbor is experiencing a civil war (*Neigh. war*) (Buhaug and Gleditsch 2008), a spatially weighted average of the neighbors' level of democracy (*Neigh. Polity2*), and dummy variables for each region of the world. Following the main analysis, I also run robustness checks with alternative estimators and other techniques to account for heterogeneity. The results are substantively similar.

6 Analysis

In this section I estimate two statistical models of civil war onset, one using the Polity2 measures of political distance and heterogeneity and the other using the Liberal measures. The results

Table 3: External causes of civil war

	Polity2		Liberal	
	(1)	(2)	(3)	(4)
Polity2 distance	0.999 (-0.04)	1.506** (3.23)		
Polity2 neigh. heterogeneity	1.114 (1.04)	1.666** (3.00)		
P2 dist. × P2 het.		0.934*** (-3.50)		
Polity2 neigh. count	1.055** (3.11)	1.067*** (3.37)		
Liberal distance			0.305 (-1.22)	496.2** (2.60)
Liberal neigh. heterogeneity			32.49 (1.25)	57854.4** (2.97)
Lib. dist. × Lib. het.				1.10e-16*** (-3.39)
Liberal neigh. count			1.047* (2.57)	1.054** (2.67)
Polity2	1.011 (0.26)	1.002 (0.06)		
Liberal component index			0.179 (-1.49)	0.184 (-1.48)
Exec. constraint	1.005 (0.04)	1.014 (0.11)	1.175 (1.50)	1.162 (1.36)
Instability	2.832*** (3.68)	2.864*** (3.72)	2.716*** (3.70)	2.843*** (3.81)
Age of regime	0.998 (-0.35)	0.998 (-0.41)	0.996 (-0.84)	0.996 (-0.78)
Rough terrain	1.230 (1.64)	1.185 (1.39)	1.224 (1.45)	1.193 (1.33)
ln(Population)	1.358** (3.18)	1.404** (3.27)	1.301** (2.64)	1.282** (2.60)
ln(GDP per capita)	0.957 (-0.25)	0.908 (-0.54)	0.938 (-0.34)	0.874 (-0.73)
Δ GDP	0.000511** (-2.85)	0.000361** (-2.93)	0.000569** (-2.65)	0.000612** (-2.59)
CINC score	0.00566 (-0.72)	0.00224 (-0.87)	0.00253 (-0.77)	0.00124 (-0.89)
Cold war	1.471 (1.00)	1.549 (1.07)	1.337 (0.77)	1.412 (0.89)
Neigh. war	1.156 (0.53)	1.147 (0.50)	1.148 (0.47)	1.101 (0.34)
Neigh. Polity2	1.009 (0.26)	1.016 (0.47)	1.008 (0.22)	1.014 (0.38)
Observations	4240	4240	4113	4113

Exponentiated coefficients; *t* statistics in parentheses

Time variables and geography dummies omitted

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

offer support for my hypotheses and suggest that political outliers in homogenous neighborhoods are at a higher risk of war than politically moderate countries in a similar neighborhood (domination) and politically moderate countries in highly heterogenous neighborhoods are at increased risk compared to outliers in similar neighborhoods (competition).

Both interaction models produce statistically significant coefficients for my explanatory variables (see **Table 3**). The coefficients for *Polity2 distance* and *Polity2 neighborhood heterogeneity* are positive, while the interaction term coefficient is negative (2). The lower-term coefficients are statistically significant at the 0.01 level, while the interaction term coefficient is statistically significant at the 0.001 level. The results for the Liberal model (4) are similar. *Liberal distance* and *Liberal neighborhood heterogeneity* are positively associated with the likelihood of civil war onset, and the interaction term coefficient is negative.

These results suggest there is some relationship between the onset of civil war and my explanatory variables, but interpreting the coefficients of a binary dependent variable interaction model directly can be misleading (Berry, DeMeritt and Esarey 2010). In the case of the Liberal model, the problem is exacerbated because interpreting the lower-term coefficients only makes sense when there are observations with meaningful zero values (Braumoeller 2004), but both *Liberal distance* and *Liberal neighborhood heterogeneity* are bound above zero.

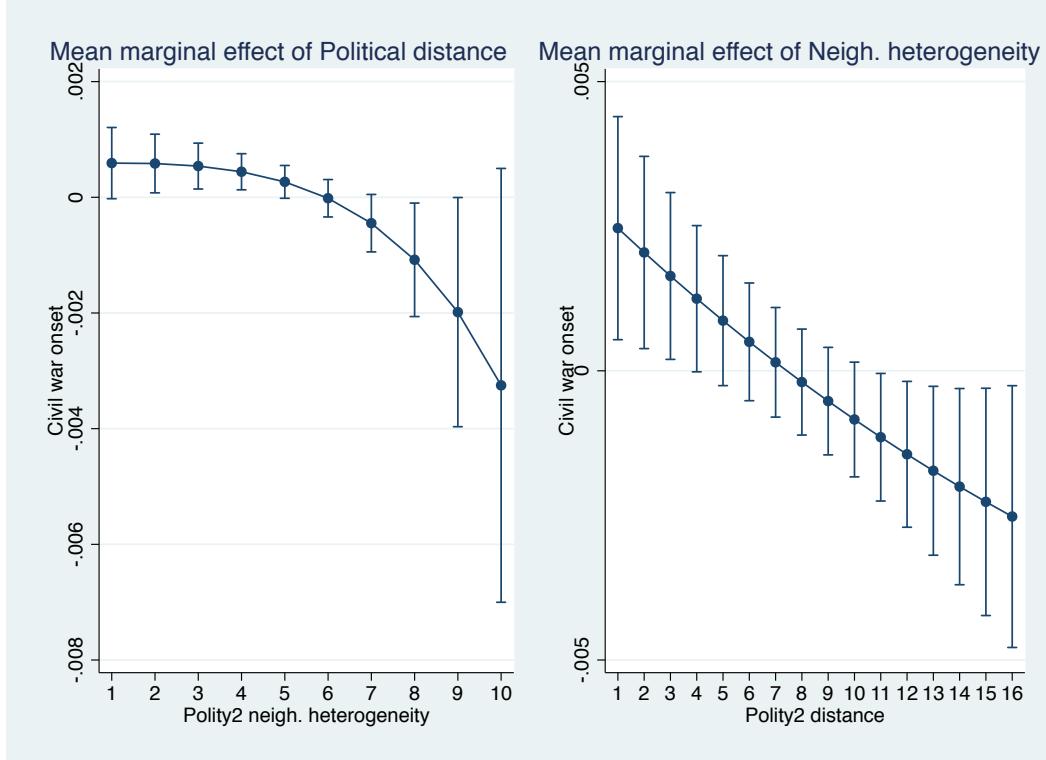
6.1 Diagnostics and interpretation

I leverage several different ways of diagnosing and interpreting the coefficients of the Polity2 model. I start by calculating the marginal effects of each lower term (Brambor, Clark and Golder 2006, p. 73), and plot the average marginal effect of each in **Model 2** conditional on the value

of the other (**Figure 6**).¹⁴ Both graphs show a clear negative interaction, offering support for both the domination and competition pathways. When *Neighborhood heterogeneity* is fairly homogenous (around 2), increased *Political distance* is associated with an increase in the risk of civil war. The confidence intervals are too wide at the higher end of the scale to make any inferences about the relationship between political distance and civil war in heterogeneous neighborhoods, but it suggests there are countervailing mechanisms present. In the second graph, when distance is low, increased heterogeneity is associated with an increase in the risk of civil war. For outliers, increased heterogeneity is associated with a decrease in the risk of civil war.

The results thus offer stronger support for **Hypothesis 2** than **Hypothesis 1**.

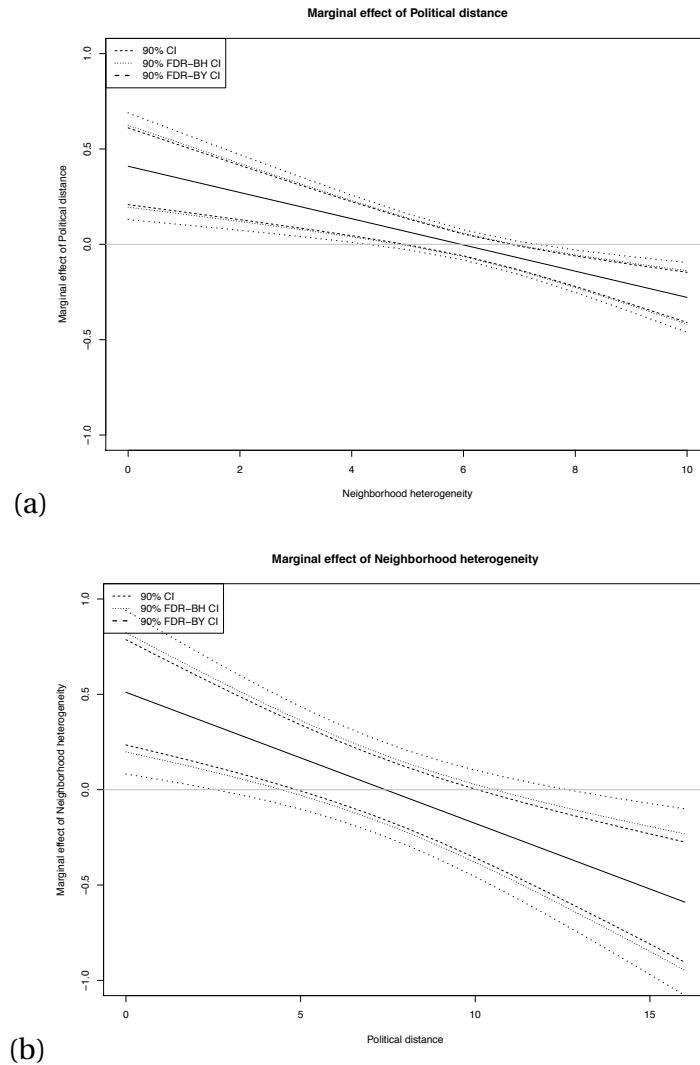
Figure 6: Marginal effects in Model 2.



¹⁴Because there are so few observations at the high end of each variable, I only plot observations at and below 16 and 10 for *Political distance* and *Neighborhood heterogeneity*, respectively, which correspond with their 99th percentiles.

Given the wide and overlapping confidence intervals, the statistical significance of the regression coefficient could be due to false positives, which is a particular problem with these kinds of models (Esarey and Sumner 2018). I therefore calculate the critical t-statistic for the Polity2 model interaction and compare the original confidence intervals to the false discovery-corrected confidence intervals (at the 90th percentile) (**Figure 7**). The confidence intervals do not overlap with zero on either end, suggesting that my results are not driven by false positives.

Figure 7: Marginal effects of political distance (a) and neighborhood heterogeneity (b), with original and false discovery-corrected confidence intervals, using the Benjamini-Hochberg (B-H) and the more conservative Benjamini-Yekutieli (B-Y) corrections.

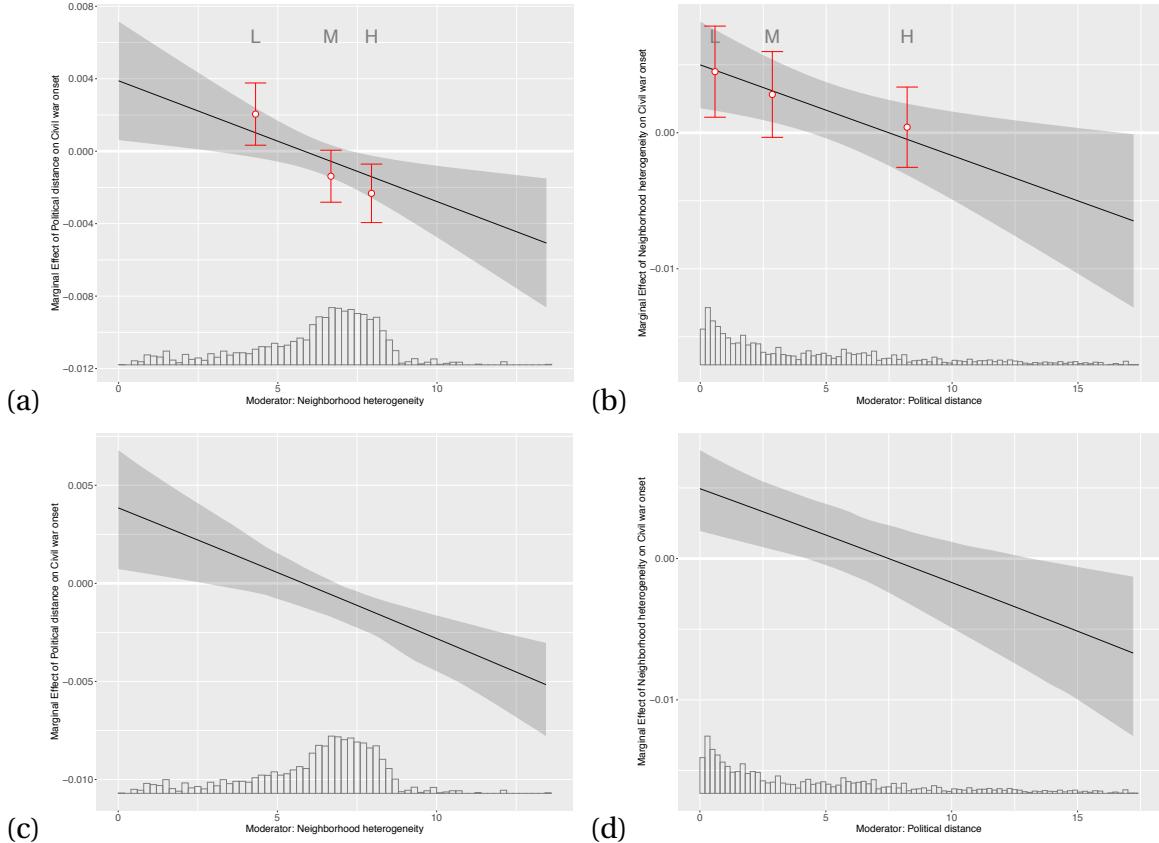


Next I check to see if the Polity2 model violates the linear interaction effect (LIE) and common support assumptions. Violating these are a common problem with interaction models (Hainmueller, Mummolo and Xu 2018). If political distance and neighborhood heterogeneity are interacting in non-linear ways, and if there are not sufficient observations for certain values of the variables, marginal effects estimates might be based on extrapolation or interpolation (Hainmueller, Mummolo and Xu 2018, p. 165). I calculate binning and kernel estimators alternating the two explanatory variables as treatments and moderators. The binning estimators divide the sample into three equally sized bins and interact each bin's dummy variable with the other, continuous lower term. The results are shown on the top plots in **Figure 8** and suggest that the interaction effect is linear. The semi-parametric kernel estimator uses cross-validation to select the appropriate bandwidth for the Gaussian kernels. The results on the bottom two plots show a linear and statistically significant interaction effect for both political distance and neighborhood heterogeneity, despite there being relatively few observations of the moderators at extreme values, especially for low values of heterogeneity. Taken together, these tests suggest that the Polity2 model is not violating these key assumptions and offer further support for my domination and competition hypotheses.¹⁵

To assess the magnitude of these conditional relationships, I calculate the predicted probabilities of **Model 2**. I change the value of one explanatory variable while holding the other at the 10th percentile value, while keeping covariates at their mean. The results suggest the magnitudes of the relationships are large (**Table 4**). Keeping heterogeneity low, the risk of civil war increases more than five-fold as distance increases from the 10th percentile to the 90th percentile. However, the confidence intervals are overlapping, so the magnitude is uncertain. The

¹⁵Further diagnostics of the interaction effect are included in the appendix.

Figure 8: Binning and kernel estimations for the risk of civil war using the Polity2 variables. Clockwise from top left: (a) Binning estimation with political distance as treatment and neighborhood heterogeneity as moderator (Domination); (b) binning estimation with heterogeneity as treatment and distance as moderator (Competition); (c) kernel estimation with distance as treatment and heterogeneity as moderator (Domination); and (d) kernel estimation with heterogeneity as treatment and distance as moderator (Competition).



relationship between civil war and heterogeneity is less uncertain. Keeping distance low, the risk of war doubles as heterogeneity goes from the 10th percentile to the 70th percentile, and the confidence intervals for these estimates do not overlap. If the neighborhood is especially heterogeneous (90th percentile), the risk of civil war increases more than nine-fold. These results suggest that neighborhood heterogeneity and the competition pathway are substantively important for understanding the outbreak of civil war.

These results offer support for my hypotheses for how a country's international neighbor-

Table 4: Predicted probabilities of civil war

Polity2 model		
Pol. distance percentile	Prob. of war	95% CI
10th	.0016268	[.0003505, .0048241]
20th	.0017315	[.0004012, .004984]
30th	.0019387	[.000509, .0053239]
40th	.0021751	[.0006288, .005642]
50th	.0026125	[.0008882, .0059036]
60th	.0033257	[.0013639, .0066418]
70th	.0041907	[.0019294, .0077373]
80th	.0054222	[.0027639, .0099575]
90th	.0094664	[.0044767, .0182963]

Neigh. heterogeneity		
Neigh. heterogeneity	Prob. of war	95% CI
10th	.0016268	[.0003505, .0048241]
20th	.00309	[.0011488, .0067889]
30th	.0045054	[.0020516, .0083844]
40th	.0019547	[.0029459, .0103867]
50th	.0022545	[.0036469, .0122087]
60th	.0026603	[.0042501, .0145127]
70th	.0032987	[.0050751, .0174898]
80th	.0042788	[.0057603, .0216189]
90th	.0152744	[.006672, .0286085]

Note: Holding other interaction variable at 10th percentile value and rest of the variables at their mean.

hood and its relationships with its neighbors affect the likelihood of experiencing domestic conflict. I find the most robust evidence for the competition pathway. One example of this pathway is Pakistan in the late 1960s and early 1970s. The country was a mixed regime, but in an above-average heterogeneous neighborhood. Afghanistan, to the north, was autocratic, while India, to the east, was highly democratic. Both countries have a long history of supporting rebel groups in Pakistan. In 1971, separatists in East Pakistan started a civil war, and as fighting intensified and the Pakistani government started a violent crackdown, India intervened on the side of the separatists. The intervention forced the Pakistani government to withdraw, creating the independent state of Bangladesh.¹⁶

¹⁶Pakistan's Polity2 neighborhood heterogeneity is quite stable in the years preceding the war, but its institutional distance (Polity2) shrank, going from 3.878 in 1966 to 2.873 in 1971. As such, it came increasingly vulnerable to the Competition dynamic.

I also find consistent support for the hypothesized domination pathway. One example of this is Turkey. In 1984, after years of planning, the Kurdish Workers' Party (PKK) launched its first major attacks against the Turkish government, ushering in a civil war that is still ongoing. At the time, Turkey was in a relatively homogenous neighborhood, but a political outlier (its *Polity2 distance* was 13.98 in 1984, well above the mean). Two of the principal supporters of the PKK were Syria and Iran, which were both highly autocratic at the time. As such, this case shows how politically dominating countries intervene on the side of the rebels against political outliers.

One important thing to note is to distinguish between absolute levels and changes in political distance, neighborhood heterogeneity, or both. My hypotheses focus on absolute levels of comparison because changes over time can produce countervailing effects. For instance, when the First Intifada started in Israel in December 1987, Israel was a political outlier in a homogeneous neighborhood. Many countries, including its autocratic rivals, supported the Palestine Liberation Organization, suggesting a Domination process. However, in the years leading up to the Intifada, Israel's political distance to its neighbors decreased while the neighborhood became increasingly heterogeneous.¹⁷

6.2 Robustness

I perform a wide range of robustness checks using different estimators and other techniques (all results reported in the appendix). My results are robust to models using rare-events logit, country-fixed effects, year-fixed effects, and random effects. I also estimate my models

¹⁷Israel's *Polity2 distance* went from 14.26 in 1977 to 11.98 in 1987. The *Polity2 neighborhood heterogeneity*, however, went from 1.65 to 2.15 in the same period, and in the year after the Intifada started, heterogeneity jumped to 5.53.

while dropping outliers, and the results are substantively the same.

To check whether the results hinge on the construction of the explanatory variables, I generate alternative variables, changing either the sampling procedure or the input variables. Including the major powers in the neighborhood heterogeneity produces similar results as the main model, but restricting the construction of both political distance and neighborhood heterogeneity to politically relevant dyads does not yield statistically significant results. These null results show that considering major powers and contiguous neighbors only as relevant countries is overly restrictive for predicting civil war onset. It is akin to saying that Iran is not relevant to the Syrian Civil War.

I also estimate models with two alternative sets of explanatory variables using measures of country ideal points and trade openness (reported in appendix). Neither models produce statistically significant results, which suggest that ideology rather than policy differences drive international competition and generate expectations over civil war intervention.

7 Conclusion

In this paper I theorized how international politics affect the likelihood of civil war. I hypothesized two ways in which expectations over external support increase the chances of fighting breaking out in the first place. Countries who are political outliers in otherwise homogenous neighborhoods are at higher risk of rebel-sided intervention than politically moderate countries in similar neighborhoods, because the dominating states want to homogenize the area. Therefore, the opposition is more likely to start a civil war in the former than the latter. Similarly, politically moderate countries in heterogeneous neighborhoods are more likely to experience

civil war than outliers in similar areas, because in the former, opposing international factions are both trying to bring the moderate country to their side by overthrowing the sitting government. Outliers' risk of civil war is blunted by the fact that they are closer to one competing faction which will support the government in the event of a civil war, which makes the opposition hesitant to fight.

I test the domination and competition hypotheses through a wide range of statistical models and various diagnostic techniques and robustness checks. I find consistent and robust support for the hypotheses. In homogenous neighborhoods, increased political distance between a given country and its neighbors increases the risk of civil war. For politically moderate countries, increased neighborhood heterogeneity increases the risk of civil war. Both findings are robust to tests for false discovery rates, violations of the linear interaction effect and common support assumptions, and alternative estimators.

There are several implications of these results. They suggest the need for models of civil war onset that condition on a country's relationship with its neighbors, but also more theoretical development on the structural causes of civil war. While the Cold War was perhaps the high mark of global rivalries driving domestic conflict, the phenomenon has not gone away. The rise of regional rivalries in both the Middle East and East Asia could mean a resurgence of proxy wars, as competing powers promote domestic instability in other countries.

The results also highlight an underappreciated aspect of civil wars in an international context. If sudden shifts in neighborhood heterogeneity affect political competition, then domestic shocks, such as coups and revolutions, can reverberate abroad and across regions. Countries that undergo significant political change can become the target of intervention, but if they become more extreme than their neighbors, then they might seek to spread their new political

preferences abroad. For instance, revolutionary states such as Iran have intervened extensively in other countries' civil wars, but the risks of such domestic shocks might be broader. With many countries going through democratic reversal, this change can increase international competition and thus the risk of conflict.

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Appendix for "International Competition and the Onset of Civil War"

April 16, 2020

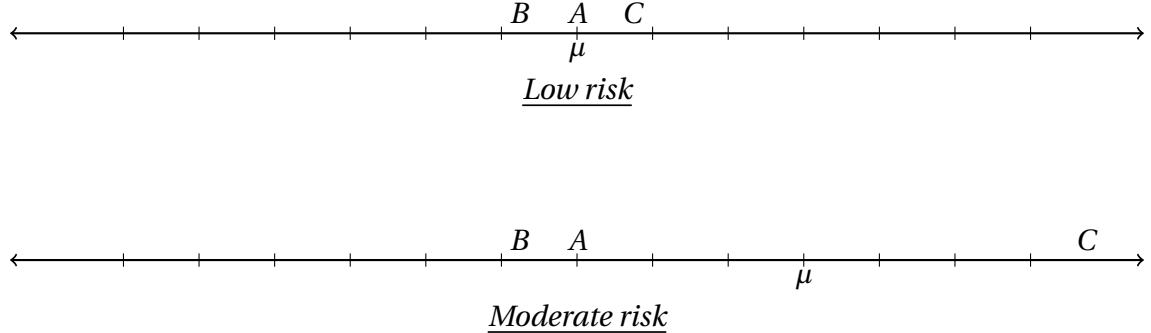
1 Theory and expectations

As I discuss in the theory section, the interaction between political distance and neighborhood heterogeneity is indeterminate when neither variable is at low values. As discussed above, the relationship between political distance and the risk of civil war depends on the level of international competition. Specifically, I showed how distance and civil war are positively associated under conditions of homogeneity, but the relationship becomes increasingly negative as heterogeneity increases, producing the following hypothesis:

Hypothesis 1 *The risk of civil war is increasing in political distance under neighborhood homogeneity, but as the level of international competition increases, the average effect of distance on war decreases and eventually reduces the risk of war.*

Similarly, the relationship between heterogeneity and civil war onset changes depending on distance. First, when A is politically moderate, the risk of civil war depends on whether the

Figure 1: The effect of asymmetric polarization on a politically moderate A .

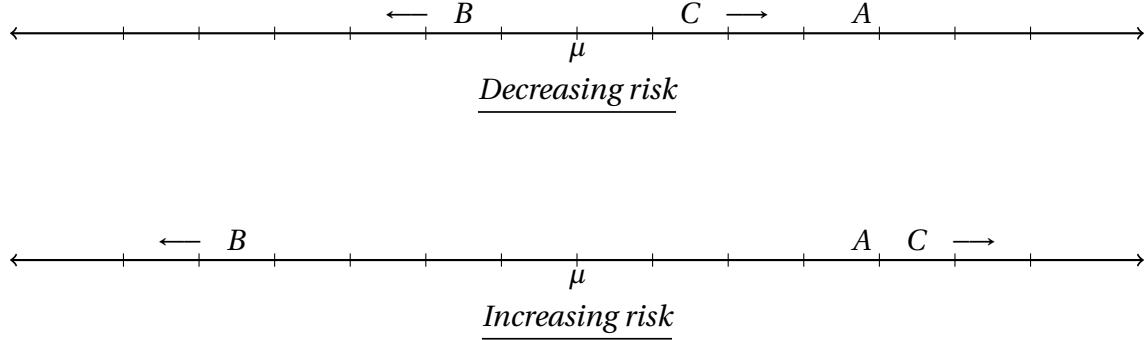


neighbors are symmetrically polarizing (i.e. the Competition process) or not. If one neighbor is moving further away from a politically moderate A than the other (**Figure 1**), politically moderate A is at an increased risk of civil war because it is now further away from one neighbor, while staying close to another. However, the risk is lower than if both B and C are moving away from each other (symmetric polarization). Because asymmetrical polarization means that the radicalizing neighbor shifts the mean ideal point, we should observe the risk of civil war in a politically moderate country increasing as both heterogeneity and distance increase.

Hypothesis 2 *If only one neighbor becomes more radical, a politically moderate country is at moderately increasing risk of civil war as both its political distance and the level of competition increases.*

Second, when A is a political outlier, the relationship between heterogeneity and the risk of civil war depends on whether polarization is symmetrical and whether one of the neighbors moves closer or further away from A . If B and C polarize symmetrically, one moves closer to A while the other moves further away, reducing the risk to A , until it passes A and then increases the risk of civil war (**Figure 2**). We should then observe the risk of civil war decrease when

Figure 2: Symmetric polarization and the risk of civil war to political outlier A .



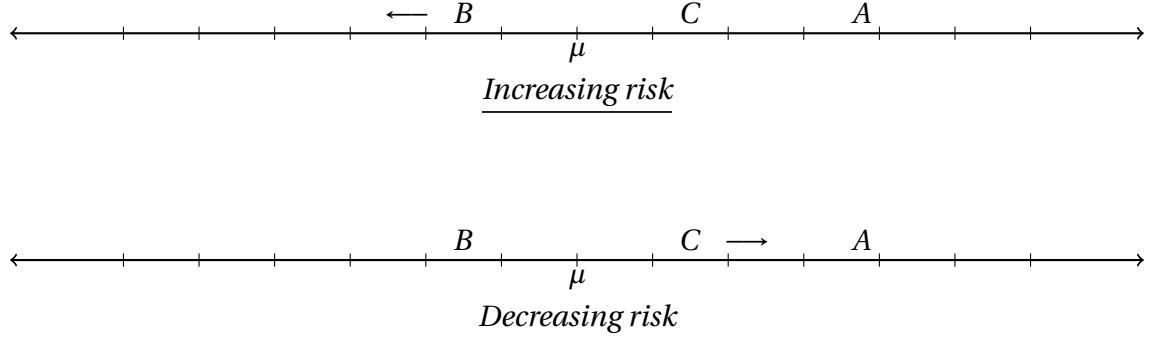
neighborhood heterogeneity increases and political distance decreases, conditional on country A being a political outlier.

Hypothesis 3 *When the neighborhood is polarizing symmetrically, a political outlier is at a decreasing and then increasing risk of civil war in the level of international competition.*

If only one neighbor changes preferences, then the relationship between heterogeneity and civil war onset depends on if that neighbor is moving closer or further away from A (**Figure 3**). If it moves further away, A is at increased risk, because it is simply further away from its neighbors. We should then observe the risk of civil war increase in conjunction with both neighborhood heterogeneity and political distance increasing (because the moving neighbor is shifting the neighborhood mean ideal point), conditional on Country A being a political outlier. However, if the neighbor moves closer, A is at a reduced risk of civil war because it is now more likely to get government support if fighting starts, until the neighbor passes A and then the risks increase again. We should then expect to see the risk of civil war decrease as heterogeneity increases but political distance decreases, conditional on A being a political outlier.¹

¹If a neighbor moves asymmetrically towards A , but radicalizes so much that it moves past A , we would see heterogeneity and distance increase in conjunction with the risk of civil war increasing.

Figure 3: Asymmetric polarization and the risk of civil war to political outlier A .



Hypothesis 4 *If only one neighbor becomes more radical, a political outlier is at an increasing risk of civil war if that neighbor moves away from it, and at a decreasing risk of civil war if that neighbor moves closer to it.*

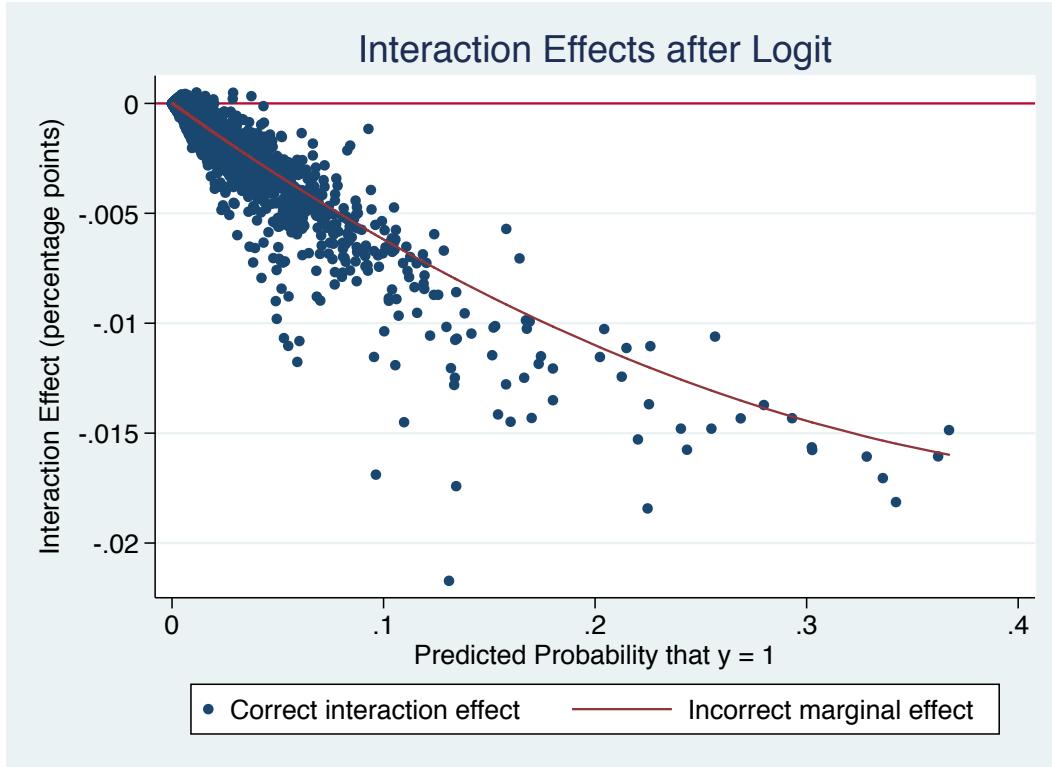
It should be noted here that while the reasoning is different, the observable implications of **Hypothesis 3** and **Hypothesis 4** are identical.

2 Robustness

2.0.1 Non-linear interaction

To better assess the nature of the interaction effect, I use the Inteff package (Karaca-Mandic, Norton and Dowd 2012), **Figure 4**, which plots the individual interaction effect of every observation in the sample. It shows that for many observations across the logit-curve, the individual interaction effect is negative and of greater magnitude than the fitted line would suggest. In addition, **Figure 5** shows the z-statistic of each individual observation's interaction effect. While many fall within the 95th confidence interval, many do not. For lower probabilities of civil war onset, there are some observations with a statistically significant and positive interaction effect.

Figure 4: Plotting individual interaction effects.



However, the majority of observations outside of the confidence interval have a negative interaction. As such, there appears to be a statistically significant and negative interaction effect for lower and higher-risk observations.

2.1 Additional robustness checks

I perform a wide range of robustness checks using different estimators and other techniques, and the results support my initial hypotheses.

The 2,500km band defines a sample of potential interveners and other relevant countries, but a shortcoming of this type of sampling is that it often misses the major powers (the United States, Great Britain, France, Russia, and China). I therefore include those in an alternative mea-

Figure 5: Statistical significance and interaction effects.

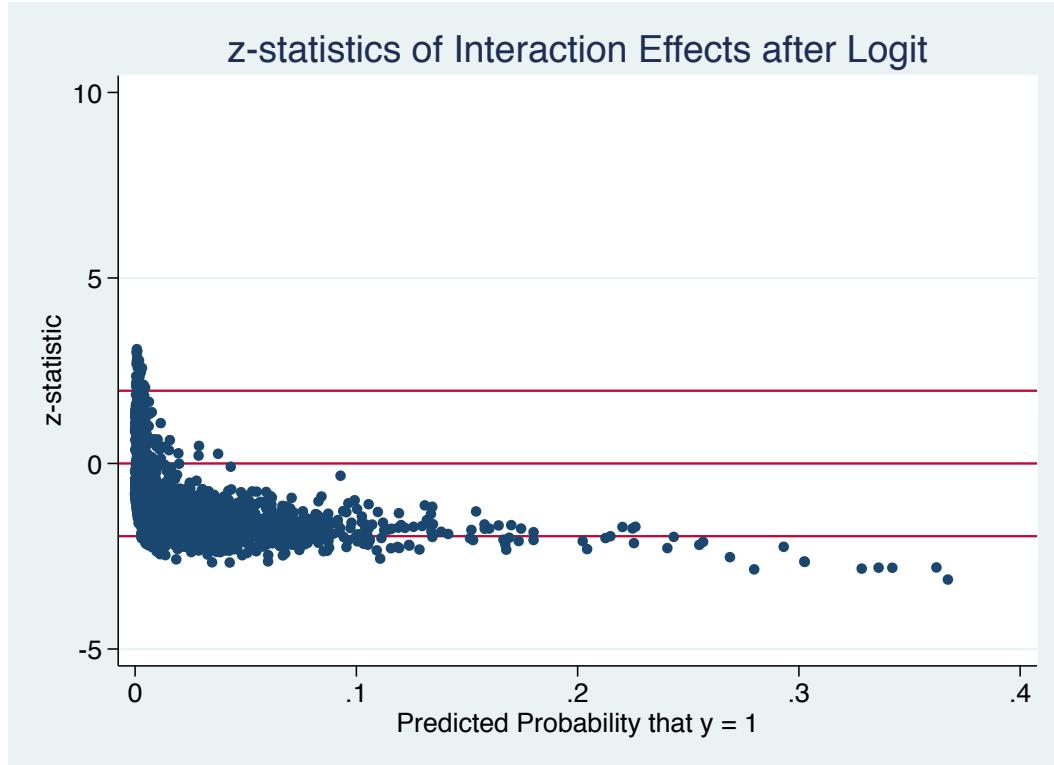


Table 1: Robustness checks

	Major powers (5)	Rare-events logit (6)	Year-fixed effects (7)	Random effects (8)
Polity2 distance	1.449* (2.50)	1.507** (3.25)	1.560** (3.19)	1.005** (2.95)
Polity2 neigh. heterogeneity	1.542* (2.28)	1.648** (2.96)	1.756** (3.16)	1.004** (2.69)
Polity2 distance × Polity2 neigh. heterogeneity	0.944* (-2.42)	0.934*** (-3.49)	0.927*** (-3.55)	0.999** (-2.86)
Observations	4349	4240	3086	4240

Exponentiated coefficients; *t* statistics in parentheses

Control variables, time variables, and geography dummies omitted

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

sure of heterogeneity. The effects are somewhat smaller, with larger standard errors, but the coefficients remain statistically significant and in the directions hypothesized (**Model 5, Table 1**).² One potential issue with this expanded measure of heterogeneity, and a potential explanation

²The p-values are 0.012, 0.016, and 0.015 for Polity2, Neighborhood heterogeneity, and the interaction coefficient, respectively)

for the larger standard errors, is that adding these countries to the sampling procedure means adding the same five countries to every country, for ever year. There is no cross-sectional variation when these countries are included, so by construction every country would be affected by the major powers' distribution of political interests, but more or less so depending on how many neighbors it has. The sampling procedure therefore affects countries' neighborhood heterogeneity differently depending on geography, without a clear theoretical motivation.

I also estimate the main model using alternative estimators: rare-events logit (6), year-fixed effects logit (7), and random-effects logit (8). The results for Polity2 distance and neighborhood heterogeneity are both consistent in direction and statistical significance. One noteworthy difference from the main models is that with random effects, the coefficients are substantially smaller. This change is likely due to these models accounting for more across-unit variation than the simple logit models. That the direction and significance of the coefficients remain the same, however, offer further support for my hypotheses.

My theory specifies that fundamental disagreements over institutions and ideology affect the risk of civil war. However, my measurements of regime type and liberalism might be proxying for more concrete disagreements over policy. I therefore construct two sets of alternative explanatory variables. First, I use the ideal point measure of state preferences based on United Nations General Assembly voting (Bailey, Strezhnev and Voeten 2017). Second, I use a variable that measures a country's capital account openness (Chinn and Ito 2006). Both measure policy disagreements more directly than the Polity2 and Liberal variables.

I estimate models with ideal point and trade openness distance and neighborhood heterogeneity, with and without the institutional and ideological explanatory variables. The results show that neither ideal points nor openness are associated with the risk of civil war onset (**Table**

Table 2: Alternative measures of political distance and heterogeneity

	Ideal points			Trade openness		
	(9)	(10)	(11)	(12)	(13)	(14)
Ideal point distance	0.712 (-0.46)	0.628 (-0.67)	0.686 (-0.53)			
Ideal neigh. heterogeneity	1.282 (0.32)	0.838 (-0.22)	0.883 (-0.14)			
Ideal dist. × Ideal neigh. het.	0.976 (-0.03)	1.125 (0.14)	1.007 (0.01)			
Openness distance				0.357 (-1.51)	0.536 (-0.91)	0.399 (-1.28)
Openness neigh. heterogeneity				1.425 (0.67)	1.412 (0.63)	1.501 (0.73)
Openness dist. × Openness het.				2.314 (1.86)	1.734 (1.24)	2.075 (1.56)
Polity2 distance		1.567*** (3.43)			1.312 (1.85)	
Polity2 neigh. heterogeneity		1.696** (2.94)			1.477* (2.02)	
P2 dist. × P2. het.		0.928*** (-3.66)			0.955* (-1.99)	
Liberal distance			4673.8*** (3.31)			126.0 (1.39)
Liberal neigh. heterogeneity			474154.6*** (3.34)			31822.3* (2.26)
Lib. dist. × Lib. het.			2.45e-22*** (-4.22)			9.73e-18** (-2.58)
Observations	3979	3938	3774	2571	2500	2450

Exponentiated coefficients; *t* statistics in parentheses

Control variables, time variables, and geography dummies omitted

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

2) alone. When I include the ideal point variables with the institutional and ideological variables, the former coefficients remain insignificant while the latter remain statistically significant in the directions theorized. As such, the results for regime type and liberalism appear to be capturing relationships distinct from any general policy disagreement.

The results for the openness models are less clear. The openness variables are never statistically significant, but when included alongside the institutional and ideological variables, the p-values of the latter coefficients drop, with some becoming statistically insignificant. One potential explanation for these null results is that the Chinn-Ito dataset only covers the period 1970-2016, which results in a substantially smaller sample size for the openness models. The

pattern of missingness suggests that it is not random. For instance, 59 of the 119 observations with civil war onset have missing data for openness.

Table 3 reports the results of the following logit models; using the time-cubed procedure; country-fixed effects; using the distance rule for the W-matrix from Buhaug and Gleditsch (2008), with minimum distance for neighbors within 950km and capital-to-capital distance for everyone else to construct the spatially weighted average Polity2 score of other states for the political distance measure; only including countries with a GDP per capita of less than \$1,000; dropping all observations with Polity2 distance at or above 12; and dropping all observations with Polity2 neighborhood heterogeneity at or above 10.

Table 3: Robustness checks

	Time-cubed (15)	Country-fixed effects (16)	Buhaug and Gleditsch (17)	Poor countries (18)	P2 dist < 12 (19)	P2 neigh. het. < 10 (20)
Polity2 distance	1.504** (3.27)	1.004** (2.84)	1.546*** (3.74)	1.507* (2.46)	1.714** (2.88)	1.510** (3.18)
Polity2 neigh. heterogeneity	1.682** (3.15)	1.003* (1.99)	1.904*** (3.58)	1.618* (2.42)	1.734** (2.78)	1.692** (2.95)
P2 dist. × P2. het.	0.934*** (-3.52)	0.999* (-2.56)	0.932*** (-4.10)	0.928** (-2.73)	0.921** (-2.94)	0.933*** (-3.44)
Observations	4240	4240	3879	1666	3953	4192

Exponentiated coefficients; *t* statistics in parentheses
Control variables, time variables, and geography dummies omitted
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results largely support my hypotheses. In particular, it is noteworthy that the results hold while dropping observations with extreme values for Polity2 distance and neighborhood heterogeneity.

3 Politically relevant dyads

The constructions of the political distance and neighborhood heterogeneity measures in the main models are based on an implicit sampling of which other countries are relevant to a given country. By using minimum distance to weight neighbors' relevance in the W-matrix for the

construction of the political distance measure, I implicitly assume that relevance is defined by spatial proximity. Similarly, I define the neighborhood as countries within a band of minimum distance to the given country. However, the set of countries relevant to a given country's risk of civil war might not hinge on geography. Instead, other factors, such as power (which affects the capability to intervene), might be as important or more important than proximity. Therefore, I construct alternative measures of distance and heterogeneity, using politically-relevant dyads to determine the relevant countries. Specifically, political distance is defined as the absolute difference between a given country's score (on Polity2 or Liberal component index) and the mean of every politically relevant country (i.e. contiguous neighbors and major powers). Similarly, neighborhood heterogeneity is the standard deviation of the scores of every country politically relevant to a given country.

These alternative measures differ from the main measures in several ways. All the PRD variables have a higher mean than their main model counterparts, but smaller standard deviations. They also appear to be measuring different things, as the PRD variables are not highly correlated with their counterparts. The political distance variables have the highest correlations, with 0.284 for the two Polity2 distance variables and 0.2646 for the two Liberal distance variables. For neighborhood heterogeneity, the correlations are 0.0927 for the Polity2 variables and 0.0412 for the Liberal variables.

With these new measures, I estimate a set of models similar to the main Polity2 and Liberal models (**Table 4**), with and without the interaction term. None of the models produce statistically significant results, so I fail to reject the null that there is no association between the risk of civil war onset and the interaction of political distance and neighborhood heterogeneity for politically relevant countries. Given that the main models and the various robustness checks

Table 4: Distance and heterogeneity with politically-relevant dyads only

	Polity2 (PRD) (21)	Polity2 (PRD) (22)	Liberal (PRD) (23)	Liberal (PRD) (24)
Polity2 distance	1.008 (0.14)	1.313 (1.66)		
Polity2 neigh. het.	0.872 (-0.89)	1.060 (0.27)		
P2 dist. × P2 neigh. het.		0.965 (-1.56)		
Liberal distance			0.541 (-0.52)	103.5 (0.58)
Liberal neigh. heterogeneity			0.0644 (-0.65)	1.083 (0.01)
Lib dist. × Lib. het.				0.000000176 (-0.68)
Observations	4466	4466	4244	4244

Exponentiated coefficients; *t* statistics in parentheses

Control variables, time variables, and geography dummies omitted

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

find support for my theory, these null results suggest politically-relevant dyads are not an appropriate basis for defining a country's neighborhood. This sampling procedure gives greater weight to major powers, but significantly reduces the number of other relevant countries. In particular, countries once- or twice-removed from a given country are in most cases no longer included in the construction of the measures, which is tantamount to saying that they are not relevant. For example, this is equivalent to saying that Iran was not relevant to the onset of the Syrian Civil War.

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