Political Instability: The Neighbor vs. the Partner Effect

Grechyna, Daryna

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Daryna Grechyna*

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Abstract

This paper investigates the impact of geographical neighbors on the political instability of a country and the role of a country's international relations in shaping the impact of its geographical neighbors. First, we show that political instability in neighbor countries has a strong positive impact on a given country's political instability. Second, we test whether international relations can reduce this impact of geographical neighbors. We find that more active participation in international governmental organizations is associated with lower impact of neighbor countries' political instability on a given country's political instability. Moreover, a country's dependence on its neighbors can be reduced when six or more main trade partners are non-neighbors. Our results indicate that international relations can be an efficient counterforce to the so-called "neighbor's curse."

Keywords: political instability; geographical neighbors; neighborhood effect; international relations; trade partners.

JEL Classification Numbers: D74; F13; F50; O19.

*Department of Economics, Middlesex University London, Business School, Hendon Campus, The Burroughs, London NW4 4BT, UK. Tel.: +44 (0)2084115000. E-mail: dgrechna@gmail.com.

1 Introduction

Politics and economics are closely interrelated in modern societies. Changes in political power lead to changes in economic policy, and the evolution of an economy over time influences political attitudes. Understanding the determinants of political and economic indicators is complicated by the fact that economies do not evolve in isolation. International relations, including trade, political and military linkages, may shape the characteristics and the development path of a given economy. A nation can strategically choose other countries as economic partners to facilitate economic growth. It can become a member of economic, military, or other blocks that support a particular ideology or development strategy. At the same time, a country may find itself surrounded by social and political unrest due to events in neighbor countries. We can distinguish between the international influence considered inherent by a country, indicated by factors such as social ties with geographical neighbors, and international influence that is adopted and modifiable, such as a country's main international trade partners. The latter, being an outcome of a country's policies, could potentially impose the peer effects desired by policymakers. The former has been widely discussed in the literature as the "neighborhood effect" (see Topa and Zenou, 2015; Ioannides and Topa, 2010; and Durlauf, 2004 for recent reviews of the related studies, including various applications). A neighborhood can impose positive or negative peer effects, depending on its characteristics. Whenever a neighborhood has undesirable effects, policies aimed at dissipating its impact through deeper international relations may be a remedy.

In this study we analyze the impact of geographical neighbors on the political instability of a country and the role of a country's international relations in shaping the impact of its geographical neighbors. We use two different measures of political instability, the traditional index by the World Bank and a new measure of political turnover constructed using the Archidos dataset (Goemans et al., 2009). We employ the neighbors neighbors' average political instability and the average neighbors' latitude squared as instruments for the average neighbors' political instability to identify the causal effect on a given country's political instability. We show that the neighbors' instability positively and significantly affects a country's political instability. This result is robust to inclusion of the fundamental factors considered

to be the main determinants of political instability.

Given that geographical neighbors are a fixed factor that cannot be altered, it is crucial to recognize efficient methods of counteracting its possible negative impact on another country's economy. International economic relations look like the most straightforward solution. By diverting resources to politically stable and economically successful economies, a country can reduce the social connections with its neighbors and, potentially, the negative impact of politically unstable neighbors. To that end, we investigate whether more intensive international relations can reduce the impact of a country's neighbors on its political instability.

We consider three different categories of measures of intensity of international relations: participation in international intergovernmental organizations, trade openness, and the characteristics of main trade partners. We obtain several results. First, in general, more active participation in international governmental organizations is associated with lower impact of neighbors' political instability on a given country's political instability. Second, greater openness to trade does not significantly reduce the impact of neighbors' political instability on a given country's political instability. Third, a country's dependence on neighbors can be reduced when six or more main trade partners are non-neighbors. The main trade partners-nonneighbors tend to be much more politically stable and economically developed than main trade partners-neighbors. Thus, international relations can be an efficient counterforce to the negative influence of geographical neighbors, and it is used in practice.

Quantifying the effects of political distortions imposed by politically unstable neighbor countries and the counteracting effect of international relations with non-neighbor countries is important from an economic and policy standpoint. From economic perspective, a nation's government budget should be correctly adjusted for the expenses necessary to maintain political stability given the situation in its neighbor countries. From policy perspective, the economic strategy of a country may depend on the expected impact of a particular international partner on its political stability and economic performance. These issues are of particular importance for developing countries located in politically unstable regions and aiming to escape the poverty trap. The problem is that such countries usually have a limited ability to form relations with their preferred economies. Political instability, bad investment climates, and policy uncertainty frighten off potential investors and trade partners. In this

case, the lead to cooperate from more economically and politically successful countries can be crucial.

Our findings suggest that recent trends in the politics of developed countries like nations in the European Union, the United States, and Canada, which tend to impose sanctions on economies characterized by political unrest, at the same time, encouraging the neighbors of these economies to interact more with developed countries by offering special trade agreements, should reduce political instability in the countries surrounded by politically unstable neighbors.

The remainder of the paper is organized as follows: Section 2 reviews the concept of political instability, its definition, measures, and determinants. It also evaluates the impact of the average neighbors' political instability on a given country's political instability. Section 3 discusses the role of international relations in shaping the impact of geographical neighbors on a country's political instability. Section 4 concludes.

2 The International Nature of Political Instability

Political instability is a broad concept that can refer to the likelihood of riots, revolutions and other forms of violence as well as to the probability of major changes in the government such as those caused by re-elections (according to the definition by the World Bank). When political instability is used to describe the political elections and changes in the government, it is also referred to as political turnover or political uncertainty.

Political instability has a strong and direct effect on economic performance through a number of channels. Several studies have shown that political frictions in the form of political instability and polarization are the main cause of public debt (Persson and Svensson, 1989; Alesina and Tabellini, 1990), high distortionary taxes and government overspending (Battaglini and Coate, 2008; Yared, 2010), lead to lower levels of output and investment (Azzimonti, 2011), amplify economic fluctuations (Azzimonti and Talbert, 2014; Alt and Lassen, 2006) affect income inequality (McCarty, Poole, and Rosenthal, 2006), impair the long run welfare in the economy (Azzimonti, 2011) and, eventually, the development path of the economy (Frye, 2002).

Given its abstract nature, political instability is not easy to measure. The literature has considered several approaches that provide estimates comparable across countries. One approach is to use the standardized surveys that evaluate the citizen opinion regarding the extent of political instability. An example of the corresponding measure of political instability is the Political Stability and Absence of Violence/Terrorism index by the World Bank (World Bank Governance Indicators) which measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Another approach is to count the number of riots, revolutions and other forms of violence or the number of changes in the government over certain time interval and to measure the political instability as the probability of occurrence of such events (see Aisen and Veiga, 2008). Alternatively, an estimate can be computed as a common component in a large number of variables associated with political instability (see Jong-A-Pin, 2009).

In this study we use two measures of political instability: the opposite values of the World Bank Governance indicator (WBDI) of Political Stability and Absence of Violence and a probability of the change of effective political leader constructed with data from the Archidos dataset (Goemans et al., 2009). The former measure reflects a broader concept of instability including the likelihood of riots, revolutions and other forms of violence. The latter measure reflects a narrower concept of instability, political turnover. We compute political turnover as the ratio of the number of regular changes of effective political leader to the total number of changes of effective political leader using the data on political leaders entry and exit during 1970-2014, or shorter period when the earliest available date is after 1970.[1] The total number of changes of effective leader consists of regular and irregular changes. A loss of office is considered irregular when the leader was removed in contravention of explicit rules and established conventions (Goemans et al., 2009). We define the regular changes of effective political leader as those done according to the prevailing rules, provisions, conventions and norms of the country or because of natural death or retirement due to poor health. The

[1] According to Goemans et al., (2009), effective leader means the person that de facto exercised power in a country. In parliamentary regimes, the Prime Minister is coded as the leader, in presidential systems, the President. In regimes that combine elements of both parliamentary and presidential systems the president is coded as the leader since in these regimes presidents typically control foreign policy. In communist states the Chairman of the Party is generally coded as the effective ruler.

constructed probability of political turnover is zero for some countries. For the World Bank measure, we compute the averages over 1996–2014 to obtain the cross-section data.[2]

We denote the political instability measure from the World Bank as PIS_1 and the political turnover measure based on the Archidos data as PIS_2. The correlation between these two political instability measures is 0.50. Table 6 in the Appendix reports the summary statistics for these and other variables for the entire sample of countries for which the data is available and for developing countries separately. Political instability is significantly larger in developing world, consistent with the fact that the quality of institutions is strongly correlated with economic development.

Despite the importance of political instability for the economy, there is little understanding of the efficient ways of dealing with it. The fundamental factors such as population size, geography, and ethnolinguistic fractionalization are considered to be its main determinants in the long run. For example, Easterly and Levine (1997) find that high ethnic fragmentation explains political instability in Africa; Goldstone et al. (2010) use a range of political, economic, and social variables to forecast political instability and conclude that political institutions are the most powerful predictor of political instability episodes. The fundamental factors provide fairly good account for the differences in political instability across countries. Figure 1 presents the scatterplots of political instability as a function of latitude and ethnolinguistic polarization. There is high correlation in all pairs of variables, suggesting that closeness to the Equator and higher variability of ethnic origins in a country are associated with higher political instability.

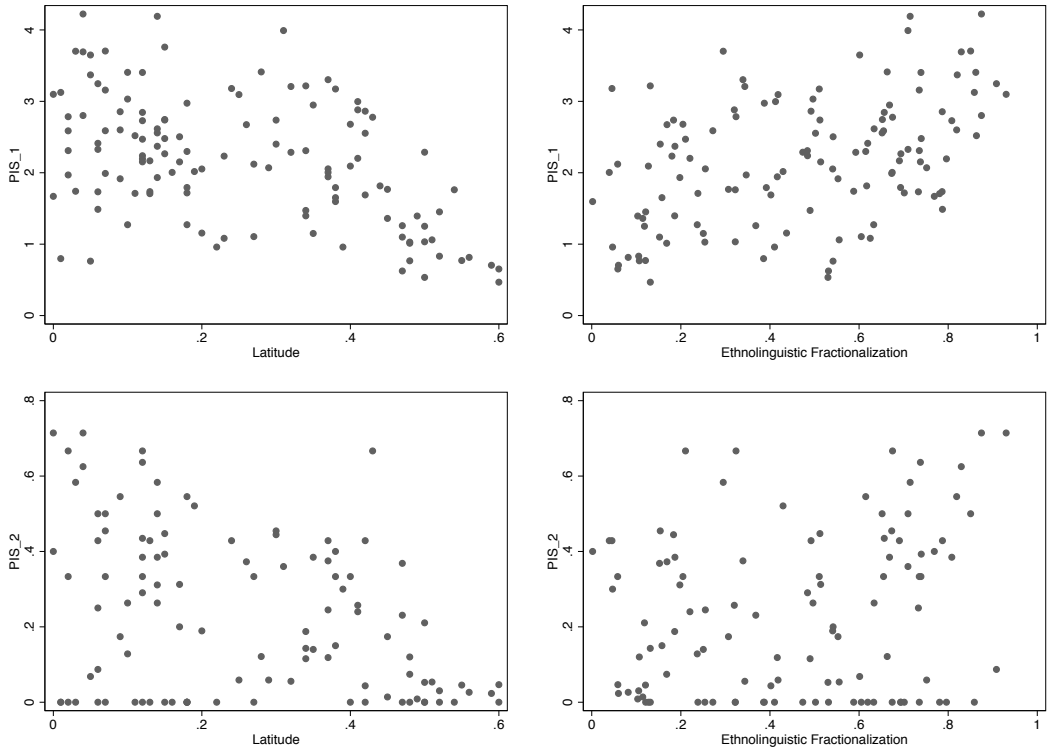
The determinants of the dynamics of political instability are less understood, partially due to the reverse causality.[3] Figure 2 presents the time series of political instability measure PIS_1 for several countries. The variable is relatively persistent over time, regardless of the level of economic development and the type of political regime.

One important consideration that has not enjoyed much attention in the literature on the nature of political instability is the role of international relations. Both fundamental factors

[2]We do not consider the panel data because of low variation in political instability over time.

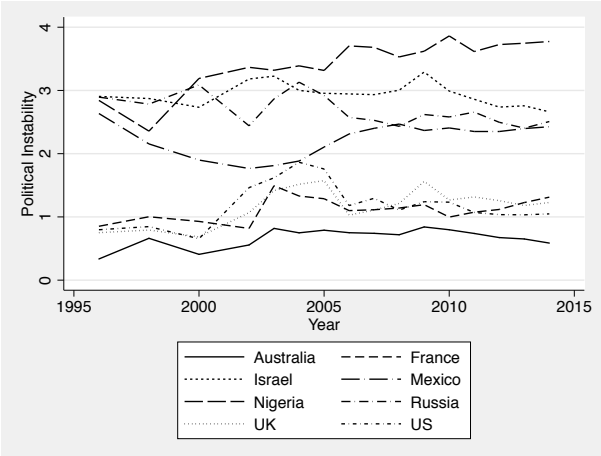
[3]For example, lower levels of economic development cause greater political instability which in turn affects economic development; income inequality and democracy are other potential endogenous determinants of political instability over time (McCarty, Poole, and Rosenthal, 2006; Esteban and Ray, 2011).

Figure 1: Political Instability and Fundamental Factors



Note: The top and bottom panels show the scatterplots for PIS_1 and PIS_2 measures of political instability, respectively. The left and right panels have Latitude and Ethnolonguistic Fractionalization, respectively, on the x-axis.

Figure 2: Political Instability Over Time



Note: The graph shows PIS_1 measure of political instability computed using data from the World Bank.

(such as location and characteristics of neighbors) and international economic linkages (such as the number of trading partners and their characteristics) can shape the nature of political instability in a country. By studying the role of these factors, we aim to contribute to the discussion on how to improve economic performance by improving the political climate in a country.

2.1 The Neighbor Effect

Recent research has demonstrated that regional instability, defined as political instability in neighbor countries, has a strong negative effect on a country's economic performance. In particular, Ades and Chua (1997) discussed the implications for a country's economy of having politically unstable neighbors, calling the phenomenon "the neighbor's curse." The idea is that having politically unstable geographical neighbors influences a country's pattern of government spending and investment, leading to lower economic growth rates (macroeconomic effect). Besides, political instability in neighbor countries can affect political attitudes in a given economy through social interactions, imposing further distortions on economic development (microeconomic effect).

In this section, we discuss the importance of regional instability for political instability in a given country. We define neighbors of a country as the countries that have common borders with a given country. The criterion of having the common borders is important for our purposes. Social networks play a role in shaping political opinions (Axelrod, 1997; Baldassarri and Bearman, 2007; and Iversen and Soskice, 2015). The citizens from the countries which share common borders are more likely to interact with each other through travels, common relatives, similar culture and ethnicity. The social proximity combined with geographical proximity that characterizes contiguous countries can give rise to the "neighborhood effect," defined as a significant impact of the regional characteristics on a given country (Topa and Zenou, 2015).

As a measure of neighbors' political instability, which we denote $ANPIS$, we use the average political instability computed over all the neighbors of a country. We also tried the weighted average neighbors' political instability with weights defined by the neighbors'

Table 1: Political Instability across Different Country Groups

Criterion	All Countries		Developing Countries		Developed Countries	
	PIS_1	PIS_2	PIS_1	PIS_2	PIS_1	PIS_2
Contiguous neighbors	2.152	0.152	2.367	0.168	1.116	0.053
	(0.956)	(0.218)	(0.857)	(0.221)	(0.600)	(0.157)
No contiguous neighbors	1.336	0.091	1.529	0.145	0.911	0.019
	(0.724)	(0.158)	(0.778)	(0.186)	(0.308)	(0.045)
Average over contiguous neighbors	2.260	0.153	2.434	0.176	1.495	0.047
	(0.706)	(0.168)	(0.573)	(0.164)	(0.665)	(0.129)
Average over main trading partners	1.688	0.027	1.755	0.032	1.338	0.010
	(0.813)	(0.088)	(0.815)	(0.089)	(0.622)	(0.080)
Average over main trading partners-neighbors	2.064	0.071	2.394	0.103	1.304	0.003
	(1.005)	(0.136)	(0.964)	(0.152)	(0.516)	(0.018)
Average over main trading partners-nonneighbors	1.593	0.017	1.621	0.018	1.356	0.014
	(0.726)	(0.068)	(0.711)	(0.062)	(0.673)	(0.098)

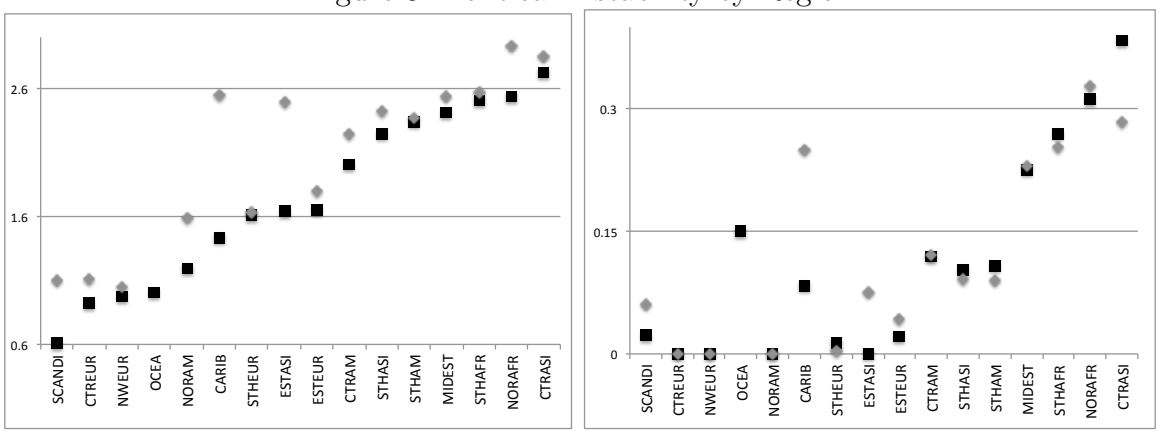
Note: Each entry is the mean value of the variable specified in the column header with the standard error in parentheses. Data sources: PIS_1 – World Bank; PIS_2 – computed using data from Goemans et al., (2009) ; trade and contiguity data – from Fouquin and Hugot (2016).

characteristics such as area, population size, and real GDP per capita, for robustness checks.[4] The correlations between the weighted and unweighted average neighbors' political instability measures is above 0.95 and the results reported in this paper are not affected significantly by different weightings. Therefore, we only report the results for the unweighted averages.

As a starting point, we compare the political instability across different groups of countries. Table 1 reports the results. We observe that the countries which have contiguous geographical neighbors are much more politically unstable and have higher political turnover than the island countries with no contiguous neighbors. This implies that there is some association between the regional instability and a given country instability. Furthermore, on average, the political instability of a country's contiguous neighbors is much higher than the political instability of a country's main trading partner. These results hold regardless of the level of economic development. Looking at the main trade partners only, the political instability of the main trade partners-neighbors is significantly higher than the political instability of the main trade partners-nonneighbors when the whole sample of countries is considered or when the sample is restricted to developing countries. In developed countries, the opposite pattern holds: the political instability of the main trade partners-nonneighbors is significantly higher than the political instability of the main trading partners-neighbors.

[4]For example, the average neighbors' political instability weighted by the area is computed as the average political instability over all the neighbors of a country weighted by the neighbor country size as a fraction of the total area of neighbors.

Figure 3: Political Instability by Region



Note: The left and right panels show the average country's political instability (in squares) and the average neighbor countries' political instability (in diamonds) by region for the PIS_1 and PIS_2 measures of political instability, respectively.

We rely on these observations to formulate the following hypothesis: countries use trading partners to reduce the negative impact of their neighbors' political instability. Before testing this hypothesis in the next section, we analyze the dependence of a country's political instability on its partners' political instability in more detail.

Given that political instability is to a great extent determined by the fundamental factors such as geographical location and ethnolinguistic fractionalization, a given country's and its neighbors' political instability may be jointly determined by the regional factors. Indeed, when classified by regions, the political instability of a country and its neighbors move closely together, with correlation 0.90 across all the countries in the sample. Figure 3 reports the average country's political instability and the average neighbors' political instability by region. There is high variability in political instability by region with Scandinavian region being the most politically stable and Central Asia being the most politically unstable.

We quantify the relationship between a country's and its neighbors' political instability using OLS and IV approaches to estimate the following model:

$$PIS_i = \beta_0 + \beta_1 ANPIS_i + \gamma \mathbf{X}_i + \epsilon_i, \tag{1}$$

where PIS_i denotes country i's measure of political instability, $ANPIS_i$ denotes country i's average neighbors' political instability, and X_i is a set of country-specific control variables.

When PIS is measured by PIS_1, $ANPIS$ is measured by the average neighbor countries' PIS_1; and when PIS is measured by PIS_2, $ANPIS$ is measured by the average neighbor countries' PIS_2. The control variables include the logarithm of population, the logarithm of area in kilometers squared, latitude squared, longitude, and ethnolinguistic fractionalization. For robustness check, we also consider an extended version of the model where the logarithm of real GDP per capita and democracy index for a given country and the averages of neighbor countries' area and population are included as additional controls.[5] The data on control variables is from the World Bank, except for ethnolinguistic fractionalization which is taken from Alesina et al., (2003). The summary statistics are in Table 6 in the Appendix.

Table 2 reports the estimates, for all countries in the sample and for the sample restricted to developing countries.[6]

The coefficient of the average neighbors' political instability is positive, significant, and robust to the inclusion of controls in all the specifications except for the case when PIS_2 is the dependent variable and the logarithm of real GDP per capita is included as a control (Columns (3) and (8) in the bottom panel of Table 2).

Given that the dependent and explanatory political instability measures can be jointly determined by the geographical or historical factors, and a given country can influence the political climate of its neighbors, we instrument the average neighbors' political instability by the average neighbors neighbors' political instability, excluding the country for which the average neighbors' political instability is calculated, and by the average neighbors' latitude squared.

The idea behind the first instrument is that even though a country's political climate can affect the neighbor countries, it cannot have a significant impact on all the neighbors of the neighbor countries. At the same time, the neighbors of the neighbor countries have a direct impact on these countries' political situation, so that the instrument should explain some fraction of this endogenous regressor.[7]

[5]The GDP and democracy index are important but endogenous predictors of political instability.

[6]We do not estimate the model for the sample restricted to developed countries because of the small sample size; many developed countries do not have contiguous neighbors and therefore cannot be included in the estimation.

[7]This identification strategy has been introduced by Bramoullé, et al. (2009) to study the peer effects in

The idea behind the second instrument is that the average latitude over all the neighbors is a factor characterizing the region and is not influenced by the dependent variable, a given country's political instability. We use latitude squared because it has better fit that the linear latitude term.

Columns (4)-(5) and (9)-(10) of Table 2 report the IV estimation results. The neighbors' political instability remains a significant explanatory variable for a given country's political instability. The Hansen test suggests that the instruments are valid and the Cragg-Donald Wald F-statistics imply that the instruments are relevant in all the specifications. When PIS_1 is considered as dependent variable, the exogeneity of neighbors' political instability cannot be rejected according to the endogeneity test, implying that OLS results are more efficient. Notwithstanding, the OLS and IV results are very similar in all the cases, therefore we conclude that higher average neighbors' political instability leads to higher political instability in a given country, keeping other things constant. The estimated coefficients suggest that one unit increase in the average neighbors' political instability causes an increase in a given country's political instability from around half of a unit to around one unit, depending on the specification. The results are similar for the full sample and for the sample restricted to developing countries. The coefficients on the average neighbors' political instability are lower when the sample is restricted to developing countries. However, when computed over the average values, the impact of the average neighbors' political instability in the whole sample is not statistically different from that in the sample restricted to developing countries. This is due to the fact that political instability is greater in developing countries.

Given the significance of neighbors' influence on a given country's political climate, in the next section, we ask whether there is a possibility to reduce the negative impact of geographical neighbors by developing international relations with non-neighbor countries.

incomplete networks. The set of countries can be considered as a network with links representing relations across different countries. In this case, the network is incomplete if a country has links with its geographical neighbors but not with its neighbors' neighbors.

Table 2: Political Instability and the Neighbor Effect

	All Countries					Developing Countries				
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PIS_1	OLS	OLS	OLS	IV	IV	OLS	OLS	OLS	IV	IV
ANPIS_1	0.850***	0.727***	0.488***	0.910***	0.850***	0.676***	0.540***	0.400***	0.734***	0.588***
	(0.0752)	(0.104)	(0.124)	(0.102)	(0.144)	(0.117)	(0.118)	(0.121)	(0.186)	(0.179)
LAREA		-0.0337	-0.0266		-0.0336		-0.143**	-0.0904		-0.139**
		(0.0626)	(0.0530)		(0.0572)		(0.0683)	(0.0690)		(0.0667)
LPOP		0.204***	0.189***		0.201***		0.273***	0.232***		0.269***
		(0.0552)	(0.0487)		(0.0520)		(0.0560)	(0.0582)		(0.0550)
LATITUDE_SQ		-0.988	-0.137		-0.549		-0.926	-0.479		-0.851
		(0.752)	(0.616)		(0.827)		(0.827)	(0.773)		(0.801)
POLARIZ		0.472*	0.251		0.436*		0.589**	0.347		0.567**
		(0.262)	(0.236)		(0.258)		(0.284)	(0.293)		(0.285)
AN_LPOP		-0.0912	-0.0951		-0.106		-0.128	-0.126		-0.134
		(0.0781)	(0.0718)		(0.0772)		(0.0875)	(0.0865)		(0.0839)
AN_LAREA		0.0131	-0.00759		0.00254		0.132	0.0866		0.129
		(0.0796)	(0.0645)		(0.0786)		(0.0927)	(0.0823)		(0.0916)
DEMOCRACY			-0.0230					-0.0368*		
			(0.0199)					(0.0219)		
LGDP			-0.183***					-0.150**		
			(0.0509)					(0.0650)		
Cons.	0.208	-1.186	1.453	0.0722	-1.056	0.697**	-1.420	0.874	0.551	-1.390
	(0.174)	(1.114)	(1.192)	(0.231)	(1.070)	(0.295)	(1.092)	(1.454)	(0.458)	(1.049)
Obs.	122	122	122	122	122	100	100	100	100	100
R-sq	0.460	0.606	0.664	0.457	0.601	0.238	0.437	0.498	0.236	0.436
Hansen p-val				0.0599	0.3851				0.0769	0.7007
Endog p-val				0.4912	0.5278				0.6073	0.9148
Cragg-Donald Wald F stat				114.571	44.019				46.819	27.930

	All Countries					Developing Countries				
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PIS_2	OLS	OLS	OLS	IV	IV	OLS	OLS	OLS	IV	IV
ANPIS_2	0.529***	0.389***	0.179	1.032***	0.969***	0.441***	0.373**	0.138	0.968***	0.918***
	(0.143)	(0.145)	(0.141)	(0.208)	(0.234)	(0.154)	(0.151)	(0.148)	(0.242)	(0.245)
LAREA		-0.0348	-0.0318*		-0.0381*		-0.0670**	-0.0311		-0.0659**
		(0.0235)	(0.0184)		(0.0213)		(0.0285)	(0.0269)		(0.0283)
LPOP		0.0177	0.0183		0.0194		0.0359	0.0160		0.0327
		(0.0207)	(0.0165)		(0.0204)		(0.0232)	(0.0197)		(0.0239)
LATITUDE_SQ		-0.487**	0.141		-0.236		-0.584**	0.0779		-0.349
		(0.203)	(0.246)		(0.235)		(0.253)	(0.292)		(0.279)
LONGITUDE		0.0332	-0.0556*		0.00947		0.0481	-0.0562		0.0299
		(0.0367)	(0.0335)		(0.0372)		(0.0448)	(0.0424)		(0.0462)
POLARIZ		-0.00388	-0.0218		-0.0928		0.00410	-0.0655		-0.0932
		(0.104)	(0.0936)		(0.0979)		(0.126)	(0.110)		(0.120)
AN_LPOP		-0.0427	-0.0362		-0.0247		-0.0654*	-0.0593*		-0.0507
		(0.0272)	(0.0253)		(0.0259)		(0.0369)	(0.0348)		(0.0368)
AN_LAREA		0.0569**	0.0409*		0.0498*		0.0864**	0.0579*		0.0824**
		(0.0259)	(0.0238)		(0.0264)		(0.0348)	(0.0338)		(0.0375)
DEMOCRACY			-0.0217**					-0.0211**		
			(0.0101)					(0.00982)		
LGDP			-0.0482**					-0.0865***		
			(0.0188)					(0.0244)		
Cons.	0.0767***	0.272	0.827**	0.00636	0.00916	0.106***	0.381	1.322***	0.0186	0.167
	(0.0200)	(0.335)	(0.330)	(0.0240)	(0.371)	(0.0272)	(0.442)	(0.466)	(0.0362)	(0.479)
Obs.	120	120	120	120	120	97	97	97	97	97
R-sq	0.142	0.225	0.347	0.014	0.101	0.094	0.184	0.340	-0.041	0.070
Hansen p-val				0.6125	0.7964				0.7072	0.9668
Endog p-val				0.0000	0.0025				0.0007	0.0063
Cragg-Donald Wald F stat				73.716	44.937				47.905	34.802

Note: The top and bottom panels show the results for PIS_1 and PIS_2 measures of political instability, with $ANPIS_i$ defined as the average neighbors political instability PIS_1 and PIS_2, respectively. AN_LPOP and AN_LAREA denote the average neighbors' population and area, respectively. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

3 Can Economic Relations Reduce the Neighbor Effect?

A country can potentially diversify the impact of its geographical neighbors by pursuing a more active role in international political and economic relations. For example, being a NATO (The North Atlantic Treaty Organization) ally potentially makes a country more protected from military threats from aggressive neighbors. Similarly, being an active member of international trade and capital networks can reduce a country's dependence on its geographical (or other fundamental) factors. The interactions between local firms and foreign firms from non-contiguous countries could potentially reduce the social connections between a country and its geographical neighbors and alter the customs and beliefs of the local economy established (partially) through neighbor countries' influence. The problematic issue is that the involvement of a country with international allies and in economic relations is significantly affected by the state of that country's institutions and economic development. A country may find itself in a trap where it is surrounded by politically unstable neighbors (or one powerful and politically unstable neighbor), which precludes its development and transition into the global economy. In this situation, recognition of the problem by international society and help from international organizations may be crucial. The question is whether international influence can have a significant effect on a country and whether it can liberate a country from "the neighbor's curse."

We seek to answer this question by estimating a number of specifications of the following general model:

$$PIS_i = \beta_0 + \beta_1 ANPIS_i + \beta_2 INTER_i + \beta_1 ANPIS_i * INTER_i + \gamma \mathbf{X}_i + \epsilon_i, \qquad (2)$$

where, as before, PIS_i denotes country i's measure of political instability, $ANPIS_i$ denotes country i's average neighbors' political instability, $INTER_i$ is a measure of the intensity of international relations, and X_i is a set of country-specific control variables. The control variables are the same as those used in equation (1). By considering the interaction term $ANPIS_i * INTER_i$, we evaluate whether more intensive international relations reduce the positive impact of political instability on a given country's political instability.

We use several measures of $INTER_i$, as discussed in more detail below.

3.1 Measuring the Partner Effect

We consider three broad categories of the measures of intensity of international relations: involvement in international organizations, trade openness, and characteristics of the main trading partners. For the first category, we extract the data, sourced from Marshall et al. (1999), from the Quality of Government dataset (Teorell et al., 2016). For the second and third categories, we use data on historical bilateral trade flows collected by Fouquin and Hugot (2016). Summary statistics are reported in Table 6 in the Appendix.

The first category consists of several measures of memberships in conventional intergovernmental organizations from 1952-1997. We use the following variables (notation used in parentheses):[8] a dummy for membership in the Council of Europe (CE); a dummy for membership in the Organization of Petroleum Exporting Countries (OPEC); the total amount of memberships in all non-profit international organizations with a widespread, geographically-balanced membership, management and policy-control (ORGB);[9] the total amount of memberships in all international non-profit organizations, whose membership and preoccupations exceed that of a particular continental region, although not to a degree justifying its inclusion in the previous type (ORGC); and the total amount of memberships for all international non-profit organizations, whose membership or preoccupations are restricted to a particular continent or sub continental region (ORGD).

The idea behind the use of these variables is that a country that actively participates in international intergovernmental organizations has more chances to diversify the inflow of political ideas from abroad and to use international organizations to partially protect itself from the negative impacts of politically unstable neighbors.

[8]We exclude from consideration the organizations the participation in which is widespread with more than 90% of countries participating, such as the United Nations, or is characterized by membership of mainly developed countries, such as Organization for Economic Co-operation and Development (OECD).

[9]The rule applied to count the number of memberships of this type is that there should be members in at least 60 countries, or else in more than 30 countries provided that the distribution between continents is "well-balanced."

Table 3: Political Instability and the Partner Effect: Organizations

	All Countries							Developing Countries						
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
PIS_1	CE	OPEC	ORGB	ORGB	ORGC	ORGD	CE	OPEC	OPEC	ORGB	ORGB	ORGC	ORGD	
$ANPIS_i$	0.692***	0.868***	0.375	0.46	0.714***	0.745***	0.569***	0.717***	0.545***	0.284	0.275	0.546**	0.812***	
	(0.132)	(0.0789)	(0.335)	(0.278)	(0.176)	(0.154)	(0.131)	(0.115)	(0.119)	(0.418)	(0.333)	(0.218)	(0.236)	
$INTER_i$	-0.389**	0.267	0.00431	-0.0284***	-0.000407	-0.00206	-0.248	0.775**	0.616**	0.00949	-0.0285**	0.0131	0.00906	
	(0.19)	(0.287)	(0.00928)	(0.00998)	(0.0141)	(0.00656)	(0.204)	(0.328)	(0.309)	(0.0107)	(0.0114)	(0.0194)	(0.00873)	
$ANPIS_i \times$	0.0408	-0.199	0.0186	0.00536	0.0161	0.00606	0.341	-0.899*	-0.681*	0.0186	0.00939	0.0235	-0.0104	
$INTER_i$	(0.208)	(0.506)	(0.0114)	(0.00956)	(0.0163)	(0.00684)	(0.251)	(0.476)	(0.395)	(0.0164)	(0.0126)	(0.0305)	(0.0163)	
Cons.	2.261***	2.145***	2.100***	-1.277*	2.185***	2.206***	2.340***	2.222***	-0.428	2.063***	-1.157	2.195***	2.159***	
	(0.0759)	(0.0589)	(0.235)	(0.676)	(0.106)	(0.11)	(0.0783)	(0.0663)	(0.683)	(0.262)	(0.763)	(0.117)	(0.127)	
Controls	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO	
Obs.	135	135	135	135	135	135	111	111	111	111	111	111	111	
R-sq.	0.447	0.432	0.437	0.572	0.43	0.429	0.253	0.277	0.427	0.247	0.419	0.24	0.235	
	All Countries							Developing Countries						
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
PIS_2	CE	OPEC	OPEC	ORGB	ORGC	ORGC	ORGD	CE	OPEC	OPEC	ORGB	ORGC	ORGC	ORGD
$ANPIS_i$	0.323**	0.623***	0.496***	1.064*	0.341	0.285	0.692**	0.298*	0.537***	0.461***	1.349*	0.371	0.232	0.817***
	(0.154)	(0.141)	(0.151)	(0.549)	(0.206)	(0.215)	(0.279)	(0.159)	(0.155)	(0.163)	(0.717)	(0.231)	(0.252)	(0.302)
$INTER_i$	-0.169***	0.00491	0.00512	-0.00980**	-0.00404	-0.00128	-0.00121	-0.150***	-0.0673	-0.0433	-0.00827*	-0.00182	-0.00107	0.00207
	(0.0319)	(0.0801)	(0.0851)	(0.00379)	(0.0048)	(0.00676)	(0.00218)	(0.0427)	(0.0639)	(0.0748)	(0.00434)	(0.0048)	(0.00791)	(0.00328)
$ANPIS_i \times$	-0.22	-0.735**	-0.631*	-0.028	0.0217	0.0169	-0.0104	0.00414	-0.535**	-0.456	-0.0427	0.0083	0.0253	-0.0269
$INTER_i$	(0.216)	(0.29)	(0.329)	(0.0247)	(0.0328)	(0.0373)	(0.0146)	(0.294)	(0.245)	(0.306)	(0.0334)	(0.0457)	(0.0487)	(0.0165)
Cons.	0.189***	0.163***	0.458**	0.390***	0.186***	0.348	0.177***	0.193***	0.180***	0.475*	0.359***	0.180***	0.444	0.157***
	(0.0233)	(0.0206)	(0.212)	(0.0926)	(0.0353)	(0.277)	(0.0414)	(0.0244)	(0.0229)	(0.25)	(0.104)	(0.0363)	(0.314)	(0.0503)
Controls	NO	NO	YES	NO	NO	YES	NO	NO	NO	YES	NO	NO	YES	NO
Obs.	117	117	117	117	117	117	117	95	95	95	95	95	95	95
R-sq.	0.198	0.168	0.214	0.205	0.15	0.192	0.135	0.132	0.124	0.164	0.14	0.085	0.144	0.106

Note: The top and bottom panels show the results for PIS_1 and PIS_2 measures of political instability, with $ANPIS_i$ defined as the average neighbors political instability PIS_1 and PIS_2, respectively. $INTER_i$ is defined as stated in the column header. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

For estimation, we include one of the variables indicating participation in intergovernmental organizations at a time, to avoid multicollinearity. Table 3 reports the results. The interaction term $ANPIS_i * INTER_i$ is significant when $INTER_i$ indicates membership in the OPEC. When $INTER_i$ is measured as the amount of memberships in organizations ORGB or OGRC, the coefficient of average neighbors' political instability becomes insignificant. These results are robust to the inclusion of controls. They hold in the full sample and in the sample restricted to developing countries.

Thus, there is some evidence that a country's more active participation in international intergovernmental organizations reduces the impact of geographical neighbors on its political instability. The organizations must be relatively widespread and reflect different geographical communities. The participation in international organizations restricted to a particular region, such as CE or ORGD, are insufficient to dissipate the influence of geographical neighbors. This can be due to the fact that politics of regional international organizations can be affected by the politically unstable members which are also a given country's geographical neighbors. So, there is no counteracting peer effect from the membership in such organizations.

The second category consists of two measures of trade openness, reflecting the intensive and extensive trade margins, respectively. The measures are the following: the total volume of trade computed as the sum of exports and imports as a share of GDP (intensive trade margin) and the total number of trade partners – countries with which a given country has trade flows above 1% of GDP (extensive trade margin). Given that the geographical proximity of a partner is important for the country's political instability, we further distinguish between the trade volume with neighbors and the trade volume with non-neighbors, as well as between the total number of trade partners-neighbors and the total number of trade partner-nonneighbors. Again, for estimation, we include one of the variables at a time. The estimation results reported in Table 4 suggest that greater trade openness does not reduce the impact of geographical neighbors' political instability on a given country's political instability. The interaction terms are insignificant or become insignificant when the control variables are added. The coefficient of the neighbors' political instability remains positive and significant in all the specifications. This result is surprising because greater trade open-

Table 4: Political Instability and the Partner Effect: Trade Openness

	All Countries				Developing Countries					
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PIS_1	VOL	VOL_NN	PARTN	PARTN_NN	VOL	VOL_NN	PARTN	PARTN	PARTN_NN	PARTN_NN
$ANPIS_i$	0.793***	0.823***	0.812***	0.822***	0.638***	0.671***	0.645***	0.470***	0.670***	0.492***
	(0.0718)	(0.0908)	(0.0859)	(0.0742)	(0.111)	(0.125)	(0.107)	(0.106)	(0.104)	(0.106)
$INTER_i$	-0.445**	0.507	0.0175	0.0215	-0.308	0.533	0.00498	-0.0199	0.0107	-0.0164
	(0.215)	(0.33)	(0.0126)	(0.0138)	(0.263)	(0.37)	(0.014)	(0.0133)	(0.016)	(0.0143)
$ANPIS_i \times$	0.432	0.329	0.024	0.0228	0.277	0.504	0.0466**	0.0241	0.0462*	0.0233
$INTER_i$	(0.297)	(0.381)	(0.0189)	(0.0197)	(0.396)	(0.471)	(0.023)	(0.0208)	(0.0263)	(0.0249)
Cons.	2.141***	2.131***	2.112***	2.112***	2.237***	2.233***	2.225***	-0.938	2.216***	-0.769
	(0.0556)	(0.0605)	(0.0589)	(0.0551)	(0.0658)	(0.0716)	(0.0657)	(0.772)	(0.0632)	(0.734)
Controls	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES
Obs.	136	136	136	136	110	110	110	110	110	110
R-sq.	0.462	0.459	0.464	0.463	0.253	0.275	0.280	0.460	0.278	0.453

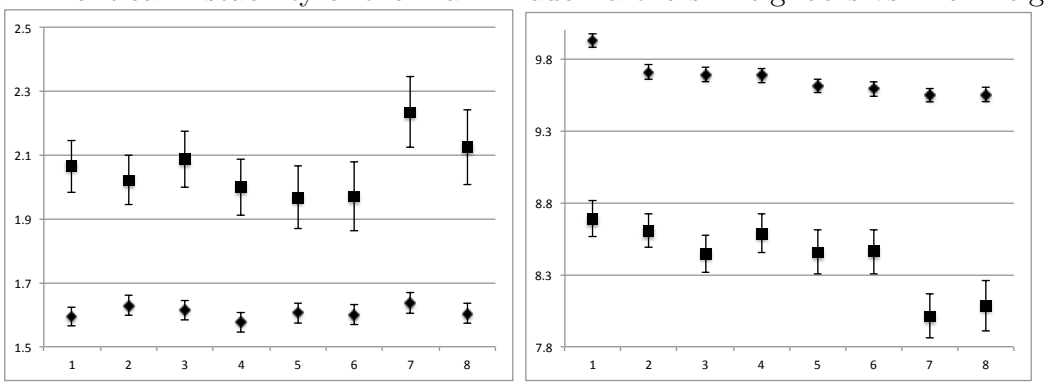
	All Countries				Developing Countries			
Dependent:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PIS_2	VOL	VOL_NN	PARTN	PARTN_NN	VOL	VOL_NN	PARTN	PARTN_NN
$ANPIS_i$	0.537***	0.433***	0.514***	0.528***	0.453***	0.366**	0.445***	0.450***
	(0.143)	(0.141)	(0.143)	(0.145)	(0.155)	(0.151)	(0.152)	(0.154)
$INTER_i$	-0.0805	0.248*	-0.00625	-0.00384	-0.107	0.269*	-0.00588	-0.00311
	(0.0713)	(0.139)	(0.00464)	(0.00527)	(0.101)	(0.137)	(0.00488)	(0.00572)
$ANPIS_i \times$	-0.125	-0.11	0.0182	0.0128	-0.0384	0.00283	0.0199	0.0158
$INTER_i$	(0.196)	(1.114)	(0.0382)	(0.0443)	(0.269)	(1.262)	(0.0417)	(0.0503)
Cons.	0.156***	0.169***	0.163***	0.156***	0.170***	0.181***	0.174***	0.169***
	(0.0194)	(0.0209)	(0.0209)	(0.0204)	(0.0214)	(0.0227)	(0.0225)	(0.0221)
Controls	NO	NO	NO	NO	NO	NO	NO	NO
Obs.	118	118	118	118	95	95	95	95
R-sq.	0.162	0.192	0.172	0.155	0.117	0.143	0.119	0.105

Note: The top and bottom panels show the results for PIS_1 and PIS_2 measures of political instability, with $ANPIS_i$ defined as the average neighbors political instability PIS_1 and PIS_2, respectively. $INTER_i$ is defined as stated in the column header. VOL denotes total trade volume; VOL_NN denotes trade volume with non-neighbors; PARTN denotes the number of total trade partners; and PARTN_NN denotes the number of total partners-nonneighbors. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

ness is supposed to increase a country's possibilities to collaborate with foreign economies and, potentially, to reduce "the neighbor's curse." Analysis of the third category of variables describing international relations offers a potential explanation for this result.

The third category includes the main trade partners of the country, that is, the countries with which a given country has the largest trade flows. The first main trade partner is defined as the country with which a given country has the largest share of its trade flows. The second main partner is defined as the country with which a given country has the largest share of its trade flows, excluding the first main trade partner, and so on. Table 6 in the Appendix reports the summary statistics of the shares of trade flows with the first eight trading partners. On average across all the countries, around 30% of the total trade flows are with the main trade partner; this number drops to 13% and 8% for the second and third main trade partners, respectively. The eighth trade partner occupies approximately 2% of the total trade flows of a country.

Figure 4: Political Instability of the Main Trade Partners: Neighbors vs. Non-neighbors



The figure shows the average political instability and its standard errors (left panel) and the average logarithm of real GDP per capita and its standard errors (right panel) of the main trade partners-neighbors (in squares) and main trade partners-nonneighbors (in diamonds).

Around half of the countries in the sample (54%) have a non-neighbor country as the main trade partner; around a third of the countries have non-neighbor countries as the first two main trade partners; and only around 15% of the countries have non-neighbors as the first six main trade partners.

Before we saw that the main trade partners-nonneighbors are on average much more politically stable than the main trade partners-neighbors (Table 1). Now we check the characteristics of the other trade partners that have significant shares of trade flows in a given country. Figure 4 shows that the neighbors and non-neighbors main trade partners are quite different. There, we plot the average first, second, and so on till the eighth main trade partner's political instability (left panel) and the logarithm of real GDP per capita (right panel). The main non-neighbor trading partners are persistently more politically stable and richer: the significant difference remains even for the eighth main trade partner.

We use information on the main trade partners to evaluate their impact on the degree to which neighbors' political instability affects a given country's political instability. The estimations of the model (2) with $INTER_i$ defined as the share of trade with one, two, and so on main trade partners, distinguishing between neighbors and non-neighbors, does not deliver a significant coefficient on the interaction term $ANPIS_i * INTER_i$. This suggests that the intensity of trade with non-neighbors does not help to reduce the influence of neighbors. Next, we proxy $INTER_i$ by dummies for the country having one through eight main trade

Table 5: Political Instability and the Partner Effect: Number of Main Partners-Nonneighbors

Dep.: PIS_1		All Countries, 134 Observations				Developing Countries, 109 Observations				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$INTER_i$=1 if # of main partners=	$ANPIS_i$	$INTER_i$	$ANPIS_i \times INTER_i$	Cons.	R-sq.	$ANPIS_i$	$INTER_i$	$ANPIS_i \times INTER_i$	const	R-sq
1	0.766***	0.129	0.0773	2.043***	0.447	0.578***	0.139	0.129	2.138***	0.258
	(0.1)	(0.113)	(0.151)	(0.0785)		(0.141)	(0.136)	(0.23)	(0.0839)	
2	0.820***	0.0368	0.00129	2.106***	0.441	0.653***	0.0756	0.0121	2.195***	0.247
	(0.0819)	(0.133)	(0.202)	(0.0673)		(0.123)	(0.168)	(0.287)	(0.0736)	
3	0.852***	0.136	-0.203	2.095***	0.447	0.689***	0.166	-0.167	2.184***	0.252
	(0.0803)	(0.146)	(0.211)	(0.0644)		(0.122)	(0.169)	(0.275)	(0.0716)	
4	0.826***	0.245	-0.243	2.082***	0.451	0.675***	0.257	-0.17	2.171***	0.261
	(0.0766)	(0.194)	(0.319)	(0.0612)		(0.117)	(0.186)	(0.295)	(0.0686)	
5	0.846***	0.31	-0.455	2.090***	0.457	0.715***	0.376**	-0.476*	2.170***	0.274
	(0.0777)	(0.22)	(0.345)	(0.0602)		(0.117)	(0.186)	(0.26)	(0.067)	
6	0.837***	0.367	-0.466	2.092***	0.456	0.698***	0.526***	-0.588**	2.172***	0.282
	(0.0774)	(0.281)	(0.421)	(0.0597)		(0.116)	(0.198)	(0.258)	(0.066)	
7	0.839***	0.366	-0.499	2.094***	0.456	0.704***	0.532***	-0.627**	2.174***	0.283
	(0.0735)	(0.283)	(0.469)	(0.0573)		(0.11)	(0.202)	(0.264)	(0.0648)	
8	0.852***	0.643***	-1.066***	2.090***	0.483	0.714***	0.531**	-0.724***	2.176***	0.284
	(0.0724)	(0.196)	(0.287)	(0.0563)		(0.108)	(0.207)	(0.259)	(0.0642)	
8 + controls	0.431***	0.510***	-0.680***	1.157*	0.705	0.394***	0.367**	-0.698***	1.046	0.569
	(0.105)	(0.193)	(0.231)	(0.617)		(0.113)	(0.176)	(0.248)	(0.699)	
Dep.: PIS_2		All Countries, 116 Observations				Developing Countries, 94 Observations				
1	0.613**	0.0242	-0.171	0.146***	0.158	0.512**	0.0174	-0.111	0.161***	0.107
	(0.237)	(0.0427)	(0.301)	(0.0343)		(0.255)	(0.0457)	(0.324)	(0.0362))	
2	0.467**	0.0747*	-0.0192	0.132***	0.174	0.362*	0.069	0.069	0.145***	0.126
	(0.191)	(0.044)	(0.299)	(0.0262)		(0.209)	(0.0468)	(0.318)	(0.0275)	
3	0.501***	0.121**	-0.204	0.128***	0.204	0.431***	0.116**	-0.156	0.141***	0.151
	(0.145)	(0.0472)	(0.356)	(0.0222)		(0.161)	(0.0509)	(0.376)	(0.0245)	
4	0.545***	0.113**	-0.351	0.138***	0.191	0.466***	0.0922	-0.223	0.152***	0.131
	(0.149)	(0.0558)	(0.364)	(0.0221)		(0.164)	(0.0577)	(0.38)	(0.0242)	
5	0.600***	0.179**	-0.816**	0.142***	0.236	0.533***	0.164**	-0.700*	0.153***	0.173
	(0.156)	(0.0686)	(0.351)	(0.0224)		(0.17)	(0.0735)	(0.374)	(0.0241)	
6	0.589***	0.371***	-1.596***	0.141***	0.323	0.524***	0.405***	-1.626***	0.153***	0.279
	(0.154)	(0.0534)	(0.223)	(0.0219)		(0.167)	(0.0559)	(0.254)	(0.0234)	
7	0.569***	0.357***	-1.456***	0.143***	0.281	0.498***	0.401***	-1.494***	0.155***	0.235
	(0.153)	(0.0569)	(0.201)	(0.0216)		(0.166)	(0.0564)	(0.231)	(0.0231)	
8	0.546***	0.362***	-1.501***	0.141***	0.279	0.476***	0.405***	-1.523***	0.154***	0.233
	(0.141)	(0.0552)	(0.168)	(0.0208)		(0.153)	(0.0562)	(0.214)	(0.0225)	
8 + controls	0.224	0.332***	-1.104***	0.808***	0.425	0.207	0.322***	-0.973***	1.004***	0.384
	(0.148)	(0.0531)	(0.205)	(0.196)		(0.153)	(0.0750)	(0.306)	(0.239)	

Note: The top and bottom panels show the results for PIS_1 and PIS_2 measures of political instability, with $ANPIS_i$ defined as the average neighbors political instability PIS_1 and PIS_2, respectively. Each row reports the estimation results for $INTER_i$ being a dummy for the number of the main trade partners-nonneighbors as specified in the first column. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

partners-nonneighbors, and estimate (2) using each of these dummies. Table 5 reports the results. We obtain that having six or more main trade partners-nonneighbors generally reduces or completely eliminates the impact of neighbors' political instability on a given country's political instability. This result is robust to the inclusion of controls, holds for the full sample and for the sample of developing countries, and is consistent with the hypothesis postulated in the previous section: Countries can protect their political climates from the impact of their geographical neighbors by diversifying their trade relations.

What is the intuition behind this result? Table 4 shows that having more trading partners-nonneighbors or larger trade volume are not sufficient to reduce the negative influence of geographical neighbors on a given country. Countries in the sample have around 15 trade partners with trade flows above 1% of total trade flows, on average, and around 13 out of these trade partners are non-neighbors. However, only around half of the countries have non-neighbor main trade partners and around 60% of the countries have either first or second main trade partner neighbor (Table 6). It has been widely recognized that geographical proximity is one of the main predictors of bilateral trade and the volume of trade flows is negatively correlated with bilateral distance (as explained by the Gravity models of trade conceptualized by Tinbergen, 1962 and well explained, for example, in Head and Mayer, 2014). Therefore, having six or more main trade partners non-neighbors is not a conventional practice and might indicate a particular policy. The results from Table 5 suggest that this policy is efficient at reducing the neighbors' impact on a country's political instability.

4 Conclusion

This study investigated the relationship between a given country's and its neighbors' political instability and the ability of international non-neighbor partners to affect this relationship. We found that regional instability defined as the average political instability of the contiguous countries has a strong positive effect on a given country's political instability. However, this effect can be reduced through active participation in international intergovernmental organizations or through economic relations with successful non-neighbor countries.

Our results suggest that policies targeting the development of international relations with

politically stable countries initiated either by the country affected by regional instability or by the foreign countries-potential partners can be an efficient remedy to "the neighbor's curse."

References

1. Ades, A. and Chua, H.B., 1997. Thy neighbor's curse: regional instability and economic growth. Journal of Economic Growth, 2(3), pp.279-304.

2. Aisen, A. and Veiga, F.J., 2008. The political economy of seigniorage. Journal of Development Economics, 87(1), pp.29-50.

3. Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S. and Wacziarg, R., 2003. Fractionalization. *Journal of Economic growth*, 8(2), pp.155-194.

4. Alesina, A., and Tabellini, G., 1990. A Positive Theory of Fiscal Deficits and Government Debt. *Review of Economic Studies,* 57 (3): 403-414.

5. Alt J.E. and Lassen D.D., 2006. Transparency, Political Polarization, and Political Budget Cycles in OECD Countries. American Journal of Political Science, 50(3): 530–550.

6. Axelrod R., 1997. The dissemination of culture a model with local convergence and global polarization. Journal of conflict resolution, 41(2): 203-226.

7. Azzimonti, M. 2011. Barriers to investment in polarized societies. The American Economic Review, 101(5): 2182-2204.

8. Azzimonti, M. and Talbert, M., 2014. Polarized business cycles. Journal of Monetary Economics, 67: 47-61.

9. Baldassarri, D. and Bearman P., 2007. Dynamics of political polarization. American sociological review, 72(5): 784-811.

10. Battaglini M., Coate S., 2008. A Dynamic Theory of Public Spending, Taxation, and Debt. *American Economic Review,* 98 (1): 201-236.

11. Bramoullé, Y., Djebbari, H. and Fortin, B., 2009. Identification of peer effects through social networks. Journal of econometrics, 150(1), pp.41-55.

12. Durlauf, S.N., 2004. Neighborhood effects. Handbook of regional and urban economics, 4, pp.2173-2242.

13. Easterly, W. and Levine, R., 1997. Africa's growth tragedy: policies and ethnic divisions. The Quarterly Journal of Economics, 112(4), pp.1203-1250.

14. Esteban, J. and Ray, D., 2011. Linking conflict to inequality and polarization. The American Economic Review, 101(4), 1345-1374.

15. Fouquin, M. and Hugot, J., 2016. Two Centuries of Bilateral Trade and Gravity Data: 1827-2014. CEPII Working Paper, N2016-14, mai 2016.

16. Frye T., 2002. The Perils of Polarization: Economic Performance in the Postcommunist World. World Politics, 54(03): 308-337.

17. Goemans, H.E., Gleditsch, K.S. and Chiozza, G., 2009. Introducing Archigos: A dataset of political leaders. Journal of Peace research, 46(2), pp.269–283.

18. Goldstone, J.A., Bates, R.H., Epstein, D.L., Gurr, T.R., Lustik, M.B., Marshall, M.G., Ulfelder, J. and Woodward, M., 2010. A global model for forecasting political instability. American Journal of Political Science, 54(1), pp.190-208.

19. Head, K. and T. Mayer, 2014. Gravity Equations: Workhorse, Toolkit, and Cookbook. Chapter 3 in the Handbook of International Economics, Vol. 4, eds. Gita Gopinath, Elhanan Helpman, and Kenneth S. Rogoff, Elsevier Ltd., Oxford.

20. Ioannides, Y.M. and Topa, G., 2010. Neighborhood effects: Accomplishments and looking beyond them. Journal of Regional Science, 50(1), pp.343-362.

21. Iversen T. and Soskice D., 2015. Information, Inequality, and Mass Polarization: Ideology in Advanced Democracies. Comparative Political Studies, DOI: 10.1177/0010414015592643.

22. Jong-A-Pin, R., 2009. On the measurement of political instability and its impact on economic growth. European Journal of Political Economy, 25(1), pp.15-29.

23. Marshall, M. G., Marshall, D. F. R., & Young, S. M. (1999). Memberships in conventional intergovernmental organizations, 1952-1997. Vienna, VA: Center for Systemic Peace.

24. McCarty, N., Poole, K.T., Rosenthal, H., 2006. Polarized America: The Dance of Ideology and Unequal Riches, MIT Press.

25. Persson, T. and Svensson, L., 1989. Why a Stubborn Conservative would Run a Deficit: Policy with Time-Inconsistent Preferences. *The Quarterly Journal of Economics,* 104 (2): 325-345.

26. Teorell, Jan, Stefan Dahlberg, Sren Holmberg, Bo Rothstein, Anna Khomenko & Richard Svensson. 2016. The Quality of Government Standard Dataset, version Jan16. University of Gothenburg: The Quality of Government Institute, http://www.qog.pol.gu.se doi:10.18157/QoGStdJan16

27. Tinbergen, J., 1962. Shaping the World Economy: Suggestions for an International Economic Policy. New York: The Twentieth Century Fund.

28. Topa, G. and Zenou, Y., 2015. Neighborhood and Network Effects. Handbook of Regional and Urban Economics, 5, pp.561-624.

29. Yared P., 2010. Politicians, Taxes and Debt. *Review of Economic Studies,* 77 (2): 806-840.

Appendix

Table 6: Summary Statistics

	All Countries					Developing Countries				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	N	mean	sd	min	max	N	mean	sd	min	max
PIS_1	138	2.139	0.883	0.467	4.362	112	2.378	0.762	0.959	4.362
PIS_2	122	0.154	0.221	0	0.750	98	0.178	0.227	0	0.750
ANPIS_1	138	2.265	0.679	0.560	3.608	112	2.460	0.532	1.014	3.608
ANPIS_2	135	0.157	0.169	0	0.708	110	0.180	0.166	0	0.708
NEIGHB. NEIGHB. AVG. PIS_1	138	1.633	0.594	0	2.752	112	1.773	0.511	0	2.752
NEIGHB. NEIGHB. AVG. PIS_2	122	0.112	0.102	0	0.419	98	0.129	0.0982	0	0.419
LAREA	138	12.18	1.699	6.534	16.05	112	12.37	1.519	9.222	16.05
LPOP	138	16.11	1.512	12.54	20.98	112	16.13	1.500	12.54	20.98
LATITUDE_SQ	138	0.100	0.101	0	0.360	112	0.0778	0.0859	0	0.348
LONGITUDE	138	0.141	0.524	-1.180	1.440	112	0.142	0.542	-0.970	1.440
POLARIZ	138	0.476	0.248	0.0394	0.930	112	0.514	0.236	0.0394	0.930
AN_LPOP	138	16.66	1.057	14.80	20.92	112	16.67	1.047	15.04	20.92
AN_ LAREA	138	12.81	1.242	8.980	16.33	112	12.92	1.136	10.22	16.33
DEMOCRACY	138	6.058	3.061	0.132	10	112	5.506	2.801	0.132	9.912
LGDP	138	7.937	1.615	5.000	11.24	112	7.350	1.157	5.000	9.519
AVG. NEIGHB. LATITUDE_SQ	138	0.0986	0.0954	0.000400	0.360	112	0.0769	0.0795	0.000400	0.325
CE	133	0.226	0.420	0	1	109	0.119	0.326	0	1
OPEC	133	0.0902	0.288	0	1	109	0.0826	0.277	0	1
CIOB	133	24.20	7.044	11	38	109	22.45	5.942	11	35
CIOC	133	6.609	4.737	0	20	109	5.339	3.695	0	17
CIOD	133	15.01	9.739	0	46	109	13.50	8.475	0	34
TOTAL_TRADE_VOLUME (VOL)	136	0.333	0.248	0.0280	2.023	110	0.321	0.255	0.0280	2.023
TOTAL_#_TRADEPARTN (PARTN)	136	15.66	4.637	4.158	25.42	110	15.42	4.719	4.158	25.42
TRADE_VOLUME_NONNEIGHB (VOL_NN)	136	0.813	0.185	0.216	1.000	110	0.827	0.181	0.216	1.000
#_TRADEPARTN_NONNEIGHB (PARTN_NN)	136	13.43	4.065	3.947	22.58	110	13.26	4.113	3.947	22.58
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=1	136	0.537	0.500	0	1	110	0.564	0.498	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=2	136	0.324	0.470	0	1	110	0.336	0.475	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=3	136	0.265	0.443	0	1	110	0.282	0.452	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=4	136	0.213	0.411	0	1	110	0.236	0.427	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=5	136	0.176	0.383	0	1	110	0.191	0.395	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=6	136	0.147	0.355	0	1	110	0.155	0.363	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=7	135	0.119	0.324	0	1	109	0.119	0.326	0	1
1_IF_#_MAIN_TRADEPARTN_NONNEIGHB=8	134	0.0970	0.297	0	1	109	0.101	0.303	0	1
TRADE_SHARE_1st_MAIN_TRADEPARTN	136	0.305	0.162	0.0993	0.821	110	0.322	0.163	0.125	0.821
TRADE_SHARE_2nd_MAIN_TRADEPARTN	136	0.131	0.0395	0.0358	0.240	110	0.133	0.0402	0.0465	0.240
TRADE_SHARE_3rd_MAIN_TRADEPARTN	136	0.0883	0.0239	0.0170	0.155	110	0.0878	0.0236	0.0170	0.155
TRADE_SHARE_4th_MAIN_TRADEPARTN	136	0.0649	0.0191	0.0129	0.114	110	0.0634	0.0192	0.0129	0.114
TRADE_SHARE_5th_MAIN_TRADEPARTN	136	0.0513	0.0152	0.00986	0.0848	110	0.0499	0.0153	0.00986	0.0827
TRADE_SHARE_6th_MAIN_TRADEPARTN	136	0.0410	0.0122	0.00487	0.0717	110	0.0399	0.0123	0.00487	0.0667
TRADE_SHARE_7th_MAIN_TRADEPARTN	136	0.0341	0.0105	0.00265	0.0603	110	0.0334	0.0108	0.00265	0.0603
TRADE_SHARE_8th_MAIN_TRADEPARTN	136	0.0290	0.00946	0.00190	0.0514	110	0.0285	0.00965	0.00190	0.0514
1_IF_DEVELOPING_COUNTRY	138	0.812	0.392	0	1	112	1	0	1	1

Note: The first five columns report summary statistics for the full sample; the last five columns report summary statistics for developing countries. Data sources: all the data is from the World Bank or Quality of Government Dataset by Teorell et al. (2016), except for all PIS_2 variables which are calculated from the data by Goemans et al., (2009); POLARIZ taken from Alesina et al., (2003); and all TRADE variables calculated from the data by Fouquin and Hugot (2016) .