

Friends for the benefits: The effects of political ties on sovereign borrowing conditions*

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Do stronger political ties with a global superpower improve sovereign borrowing conditions? We use data on voting at the United Nations General Assembly along with foreign aid flows to construct an index of political ties and find evidence that suggests stronger political ties leads to both better sovereign credit ratings and lower yields on sovereign bonds. We use heads-of-state official visits and coalition forces troop contributions as additional measures of the strength of political ties to further reinforce our findings.

Keywords: Political economy, Sovereign borrowing, Foreign aid, UN voting

JEL Codes: F35;F50;G24;H63

”The United States is the world’s largest giver in the world, by far, of foreign aid.... We will examine... whether the countries who receive our dollars and our protection also have our interests at heart. Moving forward, we are only going to give foreign aid to those who respect us and, frankly, are our friends.” - 25.09.2018, Donald J. Trump, President of the United States of America, address at the United Nations.

The US economy has a disproportionate role in the global scheme of things. Apart from being the world’s largest economy with by far the largest military expenditures, recent literature has demonstrated the global importance of US debt, the US Dollar, and US monetary policy as sources and drivers of global financial cycles, safe assets, international liquidity, and real rates.¹ There is also an active component to the global influence of the US which manifests as US foreign policy. To this end, recent events highlight that one of the carrots and sticks used for foreign policy are military and financial assistance in the form of foreign aid.² This has arguably been the case in many instances both in the past and recently. For instance [Faye and Niehaus \(2012\)](#) find evidence which suggests that the United States (US) is more likely to provide aid when ruling political parties in recipient countries are more aligned with US interests. [Kuziemko and Werker \(2006\)](#); [Dreher et al. \(2008\)](#) and [Dippel \(2015\)](#) find similar evidence on *vote-buying* by donor countries in the context of the United Nations General Assembly, United Nations Security Council, and at the International Whaling Commission respectively.

However, the economic consequences of forging closer political ties and voting in line with a global superpower are not necessarily restricted to foreign aid flows. Are there spillovers and effects beyond that directly associated with foreign aid, e.g. stigma, exclu-

¹See e.g. [Rey \(2015\)](#); [Miranda-Agrippino and Rey \(2015\)](#); [Jiang et al. \(2018\)](#); [Gourinchas et al. \(2019\)](#); [Del Negro et al. \(2019\)](#); [Avdjiev et al. \(2019\)](#).

²For instance, over the period 2017-2018, the President of the United States has repeatedly threatened in public addresses and over social media that sovereign states who voted against the US at the United Nations General Assembly will stop receiving aid from the US (e.g. *”Let them vote against us, we’ll save a lot.”* -[@realDonaldTrump](#) on Twitter, December 20, 2017). The Office of the President subsequently ordered a freeze on all foreign aid pending review on August 3 of 2019.

sion, and the implicit support of a global superpower? For instance, [Berger et al. \(2013\)](#) and [Rose \(2019\)](#) link US *soft power* and political ties with trade. [Qian and Yanagizawa-Drott \(2017\)](#) show that US media coverage of human rights violations in other countries co-vary with US State interests. [Garmaise and Natividad \(2013\)](#) find that geo-political alignment influence the financing costs of domestic micro-finance institutions and their development lending activities.

In this paper we consider the effects of stronger political ties on sovereign borrowing conditions.³ We focus on the United States, arguably the predominant global superpower of our times. We use voting similarity with the US at the UN General Assembly along with US foreign aid flows to measure the strength of US political ties. Using these measures, we estimate the effects of stronger US political ties on two key features of sovereign borrowing conditions, sovereign credit ratings and sovereign bond yields.

We find statistically and economically significant effects of stronger US political ties on sovereign borrowing costs. First, an increase of US aid flows by one percent of GDP a year (effectively tripling the average) is associated with 0.6 to 1 notch upgrade in sovereign ratings and 1 to 3 percentage points lower yields. Likewise, a switch from completely voting against to always voting with the US at the UN General Assembly is associated with 1.6 to 2.5 notch upgrade in sovereign ratings and 2 to 3 percentage points lower bond yields. Using our political ties index, we find that a one standard deviation improvement in US political ties leads to a 0.6 to 1.4 notch upgrade in sovereign ratings and 2.6 to 3.1 percentage points lower sovereign bond yields.

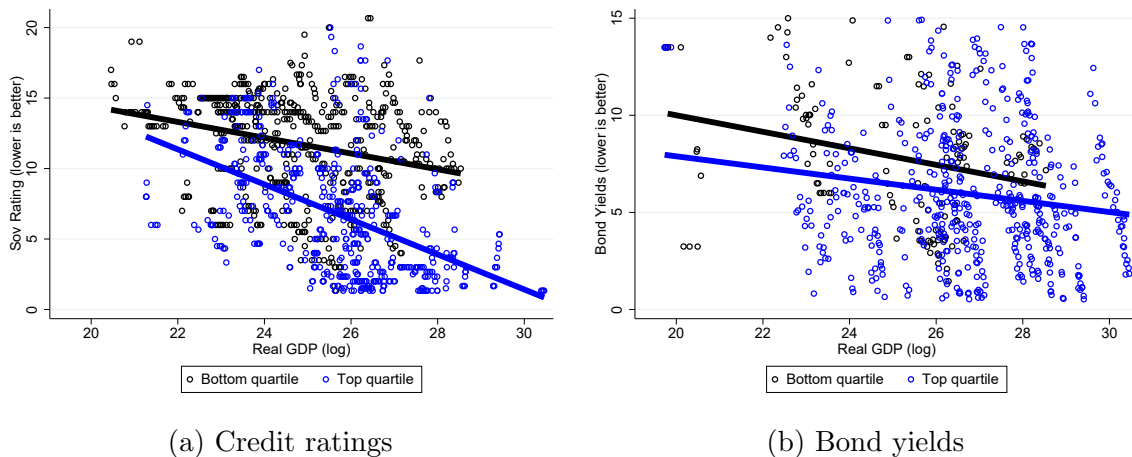
We find further support for the positive effect of US political ties on sovereign borrowing conditions using alternative measures of political ties that are more likely to be exogenous to other confounding factors. We use the number of (peak) troops contributed to the US-led Iraq War by other countries as well as the number of heads of state visits to the White House by each country in each year as alternative measures for the strength of

³See also [Bekaert et al. \(2016\)](#) on political risk as an important driver of sovereign spreads, [Longstaff et al. \(2011\)](#) on the global and domestic determinants of sovereign credit risk and [Gelos et al. \(2011\)](#) on the determinants of sovereign borrowing market access.

political ties with the US. As we detail in succeeding sections of the paper, these alternative measures are largely symbolic in nature and are highly politically charged decisions. Finally, we show that our results are robust to the inclusion of a broad set of additional variables that may drive economic, social, or cultural linkages with the US.

As a motivating example, consider the sovereign credit ratings and bond yields (5-year maturity) that countries obtain relative to their income. In Figure 1, we plot sovereign credit ratings and bond yields across several country-year observations with Real GDP (in logs) on the horizontal axis. We distinguish between those that vote less similarly with the US (black markers) and those that vote more similarly with the US (blue markers) at the UN General Assembly as a measure of the strength of US political ties. On the left panel, we plot numerical equivalents of sovereign credit ratings (lower is better) while the right panel reports sovereign bond yields. In both cases, country-years where a state has voted more similarly with the US obtain a better credit rating or a lower bond yield than comparable country-years in terms of real output.

Figure 1: Voting at the UNGA and sovereign borrowing costs



Each point represent a country-year pair. The left panels plots sovereign ratings on a numerical scale (lower is better, AAA=1 and Default is 23) against real GDP and splits the sample between country-years for which voting similarity with the US at the UN General Assembly (using the Signorino and Ritter 1999 classification) are in the top (blue markers) and bottom (black markers) quartiles respectively. In all cases, real GDP in logs are on the horizontal axes. On the right panel we plot average yields on 5-year sovereign bonds (lower is better) on the vertical axis against real GDP with a similar split. The solid lines represent linear fits across sub-samples.

The link between strong political ties with the United States and sovereign borrowing costs may arise through several channels. Through foreign aid flows, stronger US

political ties present recipient countries with an additional fiscal cushion to help smooth over domestic economic difficulties. [Thacker \(1999\)](#) has shown that stronger political ties with the US, measured through voting similarity in the United Nations General Assembly (UNGA), potentially improves fiscal conditions in recipient countries through IMF lending. Further, [Fleck and Kilby \(2006\)](#) find evidence of significant US influence in World Bank lending.⁴ On the other hand, [Barro and Lee \(2005\)](#) also find that IMF lending reacts to political-economic variables but that such loans may end up leading to lower economic growth.

Another channel may be that US political ties serve as a sovereign risk hedge. Closer ties to the US may provide an implicit insurance against adverse economic conditions or facilitate the implementation of domestic policies during these times through various and potentially informal means. Our results complement recent findings in the literature such as [Bekaert et al. \(2016\)](#); [Brewer and Rivoli \(1990\)](#); [Citron and Nickelsburg \(1987\)](#) who find political risk as an important determinant of sovereign spreads. Evidence to this effect are presented for developing economies in [Brender and Drazen \(2008\)](#) and specifically through foreign aid and when incumbents have sufficient stability in [Licht \(2010\)](#). See as well [Alesina and Passalacqua \(2016\)](#) for a review of the literature on politics and government debt.

This channel is also particularly important since sovereign borrowing conditions spill over to private markets. First, our findings on the effects of political ties and aid flows on sovereign credit ratings have implications for private sector credit conditions and private investment in the domestic economy. [Almeida et al. \(2017\)](#) and [Chen et al. \(2013\)](#) show that private investment co-moves with sovereign rating changes. Second, through its effects on the likelihood of sovereign default, disruptions in political ties and aid flows may lead to costly disruptions of financial intermediation.⁵ For instance, [Boehmer and](#)

⁴See also [Dreher et al. \(2009\)](#) and [Kersting and Kilby \(2016\)](#) who find that membership in the UN security council is associated with more World Bank projects.

⁵Sovereign default is in itself a broad and complex topic for study considering that sovereign states are large borrowers and may default even outside of illiquidity or insolvency considerations. See for example [Eaton and Gersovitz \(1981\)](#) for an early treatment of this issue.

Meggison (1990) show that sovereign risk is an important driver of cross-border bank lending. Andrade and Chhaochharia (2018) find that sovereign defaults can lead to as much as a twelve percent loss of value to vulnerable firms due to their effects on financial intermediation.

Our work expands the literature on the determinants of sovereign ratings and sovereign debt costs.⁶ Aside from purely economic factors, this literature has also emphasized the importance of domestic institutions such as a strong legal environment (Butler and Fauver, 2006), a strong and independent central bank (Bodea and Hicks, 2018), and democracy (Beaulieu et al., 2012; Saiegh, 2005).⁷ Our results suggest that close political ties with the US may be an important determinant to sovereign ratings. These are in line with recent findings emphasizing the role of qualitative factors in the determination of sovereign ratings. Fuchs and Gehring (2017) document a *home bias* towards sovereign ratings of more geopolitically and culturally aligned countries. De Moor et al. (2018) find that subjectivity in sovereign ratings, driven by a country's lobbying effort or closeness to the United States, is substantial.

Our analysis on how bilateral political ties between the United States and other foreign governments mirrors the literature on the value of political connections for private firms. For instance, Fisman (2001); Faccio (2006); Goldman et al. (2009) and Acemoglu et al. (2016) show that political connections positively affects firm value. Further, Claessens et al. (2008); Boubakri et al. (2012); Houston et al. (2014) and Banerji et al. (2018) show that political connections lower the cost of equity capital and improves bank financing conditions while Faccio et al. (2006) show that politically connected firms are more likely to be bailed out.

⁶See Reusens and Croux (2017) for a recent study documenting how the importance of several variables in predicting sovereign ratings have changed for European bonds following the European sovereign debt crisis. See also Cantor and Packer (1996) for an early study on the economic determinants of sovereign ratings as well as Gande and Parsley (2005) who show that negative sovereign rating changes may spill over to other countries.

⁷See also North and Weingast (1989). In addition, related work by Qi et al. (2010) documents evidence that domestic institutional quality relating to political rights lead to significant declines in the cost of bond debt issuance by domestic firms.

Finally, our work builds on the literature investigating the causes and consequences of foreign aid flows. Of particular relevance are the results in [Dreher et al. \(2015\)](#) who find that political similarities between donor and recipient countries tend to increase the effectiveness of aid.⁸ In earlier work, [Boone \(1996\)](#) also argued that foreign aid does not necessarily improve development but rather increases the size of government.

The rest of the paper is structured as follows. Section 1 discusses how we construct measures of US political ties. Section 2 presents our main findings on the effect of voting and aid on sovereign borrowing conditions. Section 3 provide additional results based on alternative measures of US political ties. Finally, Section 4 concludes with some remarks.

1 Measuring the strength of US political ties

There is an established literature which use foreign aid flows and voting patterns at the United Nations General Assembly (UNGA) as measures of state-to-state political ties.⁹ While a strand of the literature has used voting patterns at the UNGA as a measure of political ties and a determinant to foreign aid flows, another strand has shown that (US) aid is used to *buy* votes at the UN General Assembly ([Dreher et al., 2008](#); [Carter and Stone, 2015](#)) and at the UN Security Council ([Kuziemko and Werker, 2006](#)).¹⁰ Consequently, we use both UNGA voting similarities with the US and US aid flows as our baseline measures of the strength of political ties with the US.

We obtain US aid flows or official development assistance (ODA) covering both grants and total disbursements and commitments as a percentage of GDP from the OECD aid

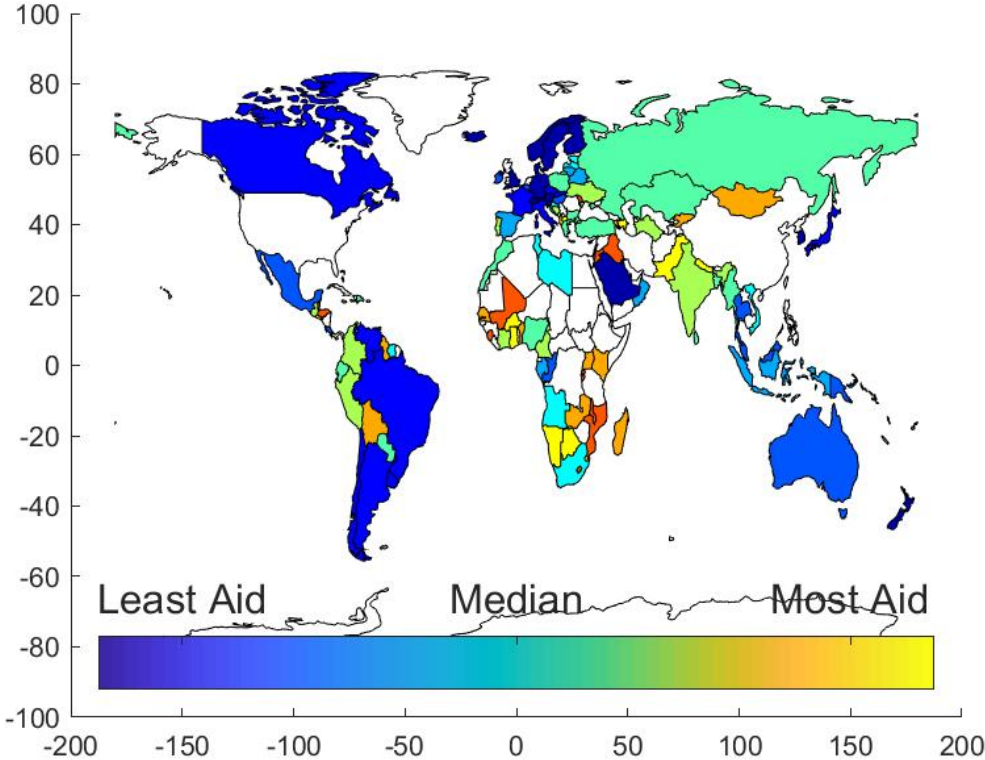
⁸[Burnside and Dollar \(2000\)](#) also point out that aid is effective in stimulating growth when the beneficiary has good macro-policy and little corruption.

⁹See for instance [Boone \(1996\)](#); [Alesina and Dollar \(2000\)](#) and [Dreher et al. \(2008\)](#) for evidence on political relationship with donor countries as a determinant of aid. See also [Alesina and Weder \(2002\)](#) on the relationship between corruption and aid and the large literature on aid and growth ([Burnside and Dollar, 2000](#); [Easterly, 2003](#); [Rajan and Subramanian, 2008](#); [Arndt et al., 2010](#); [Clemens et al., 2012](#); [Jones and Tarp, 2016](#); [Temple and Van de Sijpe, 2017](#)).

¹⁰See also [Dippel \(2015\)](#) for a link between voting at the International Whaling Commission and aid flows.

database. Since this database covers only development aid to developing economies, we also obtain US economic and military aid data from the USAID Greenbook which covers aid commitments to both developed and developing countries. Figure 2 plots the average amount of total aid commitments the US has made to each country over our sample period (USAID Greenbook dataset). On average, developing country recipients receive

Figure 2: Average US aid commitments



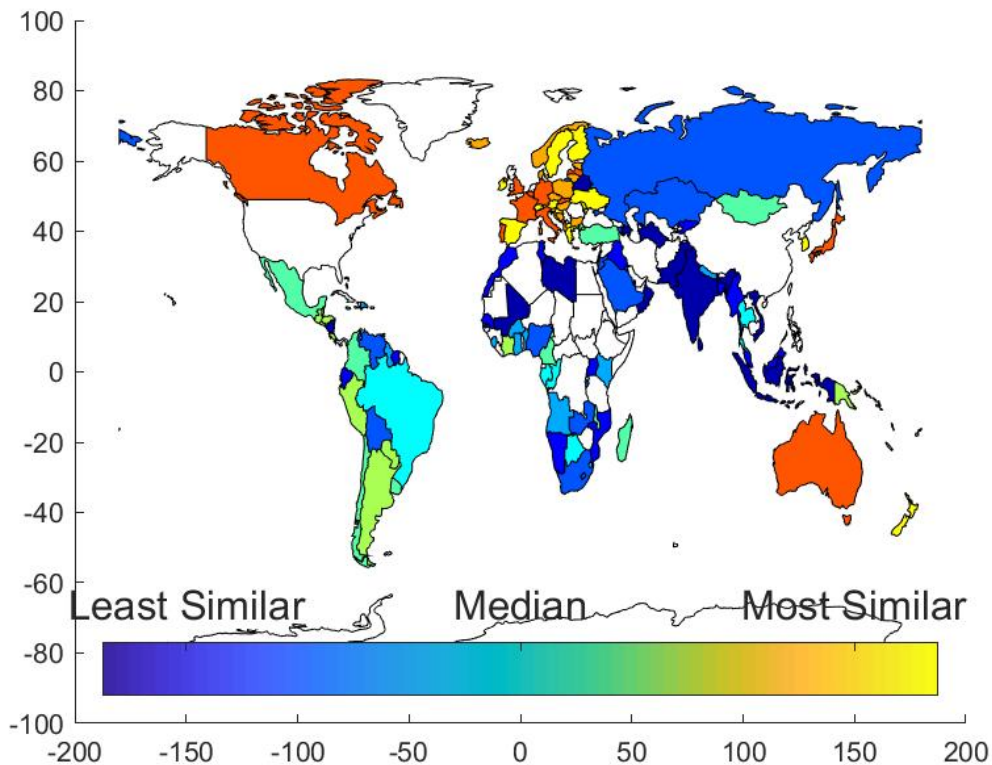
The colors indicate the Total Aid commitment in deciles, from least (blue) to most (yellow), a country receives from the US as averaged over the period 1961-2016.

about 0.6% of their GDP in aid commitments from the US (roughly 120 million in 2015 USD) per year in our sample. Using the USAID Greenbook aid flows variable which includes aid to developed countries, the average falls to about 0.45% of GDP in economic aid.

Second, we collect United Nations General Assembly (UNGA) voting data from Voeten (2013) and Bailey et al. (2017). In particular, we use the Signorino and Ritter (1999) measure of voting similarity (relative to the United States) using *Yes-No-Abstain* categories

($S3-Imp$).¹¹ We also make use of the two-category, *Yes-No*, version of the Signorino and Ritter (1999) index ($S2 - Imp$). These indices are bilateral similarity measures (*dyadic*) which reflects average voting patterns for a given UNGA session and is roughly equivalent to a calendar year. In addition, we focus only on votes that have been deemed important by the US State Department. Figure 3 plots the average voting similarity of the various countries with respect to the US. In terms of voting similarity ($S3 - Imp$), on average,

Figure 3: Voting similarity with the US



The colors indicate the decile, from least similar (blue) to most similar (yellow), a country's UNGA voting is with respect to the US using the Signorino and Ritter (1999) index as averaged over the period 1961-2016.

countries do not appear to disproportionately vote with or against the US (a near-zero value in the Signorino and Ritter (1999) indices).

These variables provide us with a host of measures that can be used to proxy for political ties. To help sharpen the analysis and minimize measurement error, we construct

¹¹Our measure is an average score of voting similarity between other countries and the US on all resolutions during each UNGA session (roughly one calendar year). For each resolution, voting in the same manner with the US is coded as 1, voting in the opposite is coded as -1, and an abstain or absence is coded as 0. $S3 - Imp$ is the simple average of the score for resolutions in each UNGA session deemed important by the US State Department.

a measure of political ties with the US incorporating information from both US aid flows and UNGA voting similarity by using factor analysis. Given that political ties with the US is an unobserved factor that is a common driver to the US aid flows and voting similarity variables, extracting a common factor from the set of observable aid flows and UNGA voting variables can provide us with a summary measure of US political ties. Table 1 provides the results of a factor analysis on the seven aid flow variables and two UNGA voting similarity variables in our dataset for up to five latent factors.

Table 1: Factor analysis: aid and voting

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Share variation	0.601	0.223	0.097	0.061	0.031
Loadings					
USA Grant ODA to GDP	0.830	0.026	-0.095	0.413	-0.098
USA Net ODA to GDP	0.834	0.031	-0.023	0.264	-0.279
USA Grant Comm to GDP	0.923	-0.029	-0.225	0.046	0.270
USA Total Comm to GDP	0.929	-0.009	-0.231	0.006	0.234
USA-G Econ Comm	0.909	-0.014	-0.046	-0.390	-0.140
USA-G Mil Comm	0.535	-0.067	0.826	0.099	0.126
USA-G Total Comm	0.929	-0.027	0.128	-0.332	-0.100
S2-Imp with USA	0.025	0.969	0.034	-0.013	0.011
S3-Imp with USA	0.037	0.969	0.020	-0.013	0.014

All variables have positive loading on the first factor which comprises about 60 percent of the variance of the set of observed variables. Thus we use the first factor as a summary index of the strength of political ties with the US.¹²

¹²The index is only available for country-years where we have observations for all the variables from which the factor was constructed.

2 Do stronger ties with the US reduce the cost of sovereign debt?

To assess the effects of political ties on sovereign borrowing conditions, we augment the data on measures of US political ties with data on sovereign credit ratings and sovereign bond yields as measures of sovereign debt costs. We also collect data on other macroeconomic variables commonly used to explain sovereign debt costs and socio-economic linkages between countries. Macroeconomic and sovereign borrowing data are taken from the World Bank Development Indicators and the International Monetary Fund International Financial Statistics datasets. Sovereign credit ratings are long-term foreign currency ratings from the three major rating agencies (when available), *S&P*, *Moody's*, and *Fitch*. These are converted to a numerical scale with 1 equivalent to the *S&P* AAA rating and 24 equivalent to the lowest category (default).¹³ We also construct an average sovereign credit rating index which averages ratings from all three agencies.

We include socio-economic factors as additional control variables. Measures of political (*democracy*) and civil rights liberties are taken from Freedom House.¹⁴ We also include variables typically used in *gravity* models of international linkages. We take indicator values of common language (English), religion, prior colonial relationships, and geographical distance to the US from Head and Mayer (2014). We also collect data on Free Trade Agreements (FTAs) with the US from the World Trade Organization. These variables provide a comprehensive set of socio-economic controls that will help distinguish the effects of political ties with the US on sovereign debt conditions apart from the effects of other sources of variation potentially correlated with our measures of political ties.

We restrict the sample to those countries who have received US aid, have voted in the UN General Assembly, and for which we have sovereign borrowing data. These leaves us with a starting sample of 3,350 country-year observations from 1961-2016 for 137 countries. Table 2 provides summary statistics. The sample coverage in terms of countries and years are reported in Table A.1 of the Appendix.

¹³See Table A.2 in the Appendix for the conversion table.

¹⁴The historical Freedom House dataset is available at <https://freedomhouse.org> [accessed February 5, 2018].

Table 2: Summary statistics

	Mean	St. Dev.	Count	Description	Source
USA Grant ODA	0.48	0.87	1813	Grant ODA to developing countries as % of recipient country GDP	OECD DAC
USA Net ODA	0.48	0.83	1844	Net ODA to developing countries as % of recipient country GDP	OECD DAC
USA Grant Comm	0.55	1.07	1825	Grant Commitments to developing countries as % of recipient country GDP	OECD DAC
USA Total Comm	0.60	1.15	1828	Total Aid Commitments to developing countries as % of recipient country GDP	OECD DAC
USA-G Econ Comm	0.45	1.12	2776	Official US Economic Aid Commitments as % of recipient country GDP	USAID
USA-G Mil Comm	0.07	0.31	2776	Official US Military Aid Commitments as % of recipient country GDP	USAID
USA-G Total Comm	0.52	1.26	2776	Official US Total Aid Commitments as % of recipient country GDP	USAID
S2-Imp with USA	0.06	0.53	3251	Signorino and Ritter (1999) <i>Yes-No</i> voting similarity index (-1 least similar to 1 most similar)	Voeten (2013)*
S3-Imp with USA	0.05	0.40	3272	Signorino and Ritter (1999) <i>Yes-Abstain-No</i> voting similarity index (-1 least similar to 1 most similar)	Voeten (2013)*
Rating: S&P	8.54	5.48	2340	Numerical Index (1-AAA to 23-Default) country sovereign credit rating	S&P Ratings
Rating: Fitch	8.24	5.05	1684	Numerical Index (1-AAA to 23-Default) country sovereign credit rating	Fitch Ratings
Rating: Moodys	7.67	5.25	2004	Numerical Index (1-AAA to 23-Default) country sovereign credit rating	Moodys Ratings
Bond Yield	7.50	5.59	1282	% Yield on sovereign 5-year bond	IMF IFS
Gov. debt to GDP	51.10	39.91	3447	Central Government Debt-to-GDP ratio	IMF IFS
Real GDP (log)	24.51	2.36	3346	Log GDP in Constant 2010 USD	World Bank
Real GDP growth	0.03	0.04	3346	Real GDP % year-on-year growth	World Bank
Population (log)	8.80	2.03	2832	Population in log thousands	World Bank
Trade openness	86.40	54.50	3134	Total trade as % of GDP	World Bank
Civil rights	2.85	1.62	3183	Civil rights index (1-Free to 7-Restrictive)	Freedom House [†]
Democracy	3.86	2.20	3183	Democracy index (1-Free to 7-Restrictive)	Freedom House [†]
English language	0.38	0.49	3339	Dummy variable; English as (one of) official/primary language(s)	Head and Mayer (2014)
Colonial relationship	0.03	0.18	3339	Dummy variable; Colonial relationship with USA	Head and Mayer (2014)
Common religion	0.18	0.13	3339	Dummy variable; Common religion with USA	Head and Mayer (2014)
Distance to USA	8940.46	3630.00	3339	Population weighted geographical distance	Head and Mayer (2014)
FTA with USA	0.07	0.25	3463	Dummy variable; Free Trade Agreement with USA	WTO

*Voeten, E. (2013). *Data and analyses of voting in the un general assembly*. In *Reinalda, B., editor, Routledge Handbook of International Organization*. Routledge, 1 edition; Bailey, M., Strezhnev, A., and Voeten, E. (2017). *Estimating dynamic state preferences from united nations voting data*. Journal of Conflict Resolution, 61(2):430-456

[†]<https://freedomhouse.org> [accessed February 5, 2018]

[‡]Singer, J., Bremer, S., and Stuckey, J. (1972). Peace, War, and Numbers, chapter *Capability Distribution, Uncertainty, and Major Power War, 1820-1965*, pages 19-48. Beverly Hills: Sage

We now focus on the consequences of voting similarity and aid on the cost of borrowing by sovereign states. We run a regression with sovereign credit ratings (converted to a numerical scale from 1 to 23 with 1 equivalent to AAA) and the yields on a country’s 5-year sovereign bond issues as dependent variables and aid, voting similarity, or our political ties index as explanatory variables. In particular, we run the following regression,

$$Debt_{i,t} = \alpha_r + \alpha_t + \beta Pol_{i,t} + \sum_{j=1}^k \gamma^j Y_{i,t-1}^j + \epsilon_{i,t} \quad (1)$$

where $Debt_{i,t}$ is one of the sovereign borrowing conditions variable, $Pol_{i,t}$ is a measure of US political ties, and $\{Y_{i,t}^j\}_{j=1}^k$ are a set of control variables. We use as baseline control variables a country’s real GDP, Population, Debt to GDP, a dummy variable which takes the value of one if the country in question is Israel, as well as Region (r) and Time (t) fixed effects.

We first report results on the first aspect of sovereign borrowing conditions under consideration, a country’s long-term sovereign credit rating. The results using S&P ratings are reported in Table 3. Columns 1 to 7 use US aid flows as a measure of political ties. We find that an increase of US aid by 1% of GDP leads to 0.5 to 1 notch upgrade in credit ratings. Estimates using UNGA voting similarity in columns 8 and 9 suggest that an increase of voting similarity with the US at the UNGA from completely against (-1) to completely with (+1) leads to a 2 notch upgrade. Finally, the last column reports results when we use our US political ties index derived from factor analysis. A 1 standard deviation strengthening of political ties with the US leads to a 0.3 to 1 notch upgrade. Regressions using Fitch and Moodys sovereign credit ratings provide similar results and are available in the Appendix.

Table 3: Effects of political ties on sovereign credit ratings

Dep. var.: S&P Ratings	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
USA Grant ODA	-1.022***									
USA Net ODA		-0.935***								
USA Grant Comm			-0.567***							
USA Total Comm				-0.570***						
USA-G Econ Comm					-0.835***					
USA-G Mil Comm						-0.668***				
USA-G Total Comm							-0.584***			
S2-Imp with USA								-0.813***		
S3-Imp with USA									-1.245***	
Political Ties Index										-0.805***
L.Real GDP (log)	-1.834***	-1.786***	-1.653***	-1.657***	-3.327***	-3.095***	-3.286***	-3.089***	-3.081***	-1.801***
L.Real GDP growth	-9.253***	-9.551***	-11.003***	-11.000***	-9.549***	-9.956***	-9.649***	-5.996*	-5.948*	-10.027***
L.Population (log)	1.576***	1.539***	1.428***	1.431***	3.121***	2.897***	3.080***	2.786***	2.777***	1.537***
L.Gov. debt to GDP	0.047***	0.046***	0.047***	0.047***	0.037***	0.035***	0.037***	0.029***	0.029***	0.047***
Dummy: Israel	0.000	0.000	0.000	0.000	-0.680*	-0.146	0.068	0.178	0.468	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
R-squared	0.513	0.535	0.474	0.474	0.771	0.764	0.770	0.822	0.823	0.494
Observations	795	804	802	802	1483	1483	1483	1813	1813	784

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The dependent variable is the numerical S&P sovereign credit rating. Region and year fixed effects included in the regression specifications. Due to data restrictions, the first four as well as the last columns are estimated effects only for developing countries.

Next, we consider the effects of voting and aid on 5-year sovereign bond yields. Regression results are reported in Table 4. We find economically and statistically significant effects of political ties on sovereign bond yields. An increase of US aid by 1% of GDP leads to 1-3 percentage points lower sovereign bond yields. An increase of voting similarity with the US at the UNGA from completely against to completely with leads to 2-3% lower yields. A one standard deviation strengthening of political ties with the US leads to 2.6% lower yields.

Table 4: Effects of political ties on sovereign bond yields

Dep. var.: Bond yields	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
USA Grant ODA	-2.251***									
USA Net ODA		-3.044***								
USA Grant Comm			-1.886***							
USA Total Comm				-1.805***						
USA-G Econ Comm					-1.114***					
USA-G Mil Comm						-3.524*				
USA-G Total Comm							-1.055***			
S2-Imp with USA								-1.065**		
S3-Imp with USA									-1.454**	
Political Ties Index										-2.621***
L.Real GDP (log)	-3.336***	-3.414***	-2.460**	-2.403**	-2.449***	-2.123***	-2.461***	-1.755***	-1.713***	-3.335***
L.Real GDP growth	5.857	6.483	8.088	7.614	10.932*	10.030*	11.042*	10.327*	10.375*	6.739
L.Population (log)	3.883***	3.895***	3.204***	3.162***	3.019***	2.709***	3.030***	2.024***	1.994***	3.772***
L.Gov. debt to GDP	0.025**	0.029**	0.022*	0.028**	0.018***	0.012**	0.018***	0.008	0.008	0.031**
Dummy: Israel	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
R-squared	0.615	0.627	0.590	0.592	0.600	0.594	0.600	0.603	0.611	0.606
Observations	285	285	289	289	782	782	782	1003	1016	245

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The dependent variable is the yield on 5-year sovereign bonds. Region and year fixed effects included in the regression specifications. Due to data restrictions, the first four as well as the last columns are estimated effects only for developing countries.

Our results remain after the inclusion of additional control variables and clustering of errors within countries. In Table 5 we repeat the regression analyses including trade openness and an indicator for the existence of Free Trade Agreements (FTAs) as additional economic determinants to sovereign debt costs, civil and democratic rights as controls for domestic institutional quality, and a host of country-specific factors that may lead to special ties with the US. In particular, we also include indicators for a common language (English), religion, prior colonial relationships, and geographic distance with the US.¹⁵

¹⁵We use country-specific factors in lieu of country fixed effects as a significant fraction of the variation in our political ties indices are across-country.

Table 5: Effects of political ties on sovereign borrowing: additional controls

Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	S&P ratings		Fitch ratings		Moody's ratings		Bond yields	
Political Ties Index	-0.710***	-0.562**	-0.290	-0.245	-1.293	-1.366*	-2.743***	-3.145***
L.Real GDP (log)	-1.511***	-1.455***	-1.318***	-1.287***	-1.582**	-1.747***	-3.317*	-3.620
L.Real GDP growth	-8.469***	-8.677***	-2.896	-2.985	-5.315*	-6.690***	8.672	6.491
L.Population (log)	0.960**	1.006**	0.764*	0.869**	1.045	1.396**	3.417	3.615
L.Gov. debt to GDP	0.048***	0.047***	0.040***	0.039***	0.036***	0.037***	0.034	0.015
L.Trade openness	-0.018	-0.014	-0.026***	-0.023***	-0.032***	-0.025**	-0.015	-0.014
L.Civil rights	0.528**	0.458**	0.332	0.230	0.816**	0.789***	0.142	0.324
L.Democracy	0.111	0.100	0.133	0.139	0.081	0.042	-0.151	-0.117
English language		-0.510		-0.502		-1.448		2.466
Colonial relationship		0.000		0.000		0.000		0.000
Common religion		2.647		-1.655		-0.257		-12.472
Distance to USA		-0.000		-0.000		0.000		0.001
FTA with USA		-1.563**		-1.744**		-1.942**		-6.982
Dummy: Israel	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
Standard errors	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty
R-squared	0.539	0.556	0.538	0.567	0.507	0.558	0.624	0.672
Observations	749	742	533	533	568	568	236	236

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; *Country-cluster robust standard errors. The column headers report dependent variables. Region and year fixed effects included in the regression specifications.*

We also find that the effects of political ties approximated with voting and aid flow patterns are specific to the US. If, for instance, the voting patterns and aid flows are largely driven by common preferences, concerns, or needs, then we would expect to obtain the same results using measures of political ties with countries similar to but other than the US. Table 6 reports results of regressions of average sovereign ratings on voting similarities with and aid flows from other countries. We find that sovereign credit ratings and sovereign bond yields are not influenced by similar measures of political ties to the G-6 countries (G-7 less USA), Japan, Norway, Sweden, Denmark, and the Netherlands. The choice of countries are motivated by their similarity in global stature as the US and prior literature on which foreign aid donor countries are deemed to be politically neutral (Alesina and Weder, 2002).

Table 6: Effect of political ties with other countries on sovereign ratings

Dep. var.: Sov. ratings	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
S3 with G6	0.852											
S3 with Japan		-0.354										
S3 with Netherlands			0.672									
S3 with Sweden				0.475								
S3 with Denmark					0.810							
S3 with Norway						0.835						
G6 Net ODA							-0.264					
Japan Net ODA								-0.170				
Netherlands Net ODA									0.412			
Sweden Net ODA										-1.154		
Denmark Net ODA											-0.071	
Norway Net ODA												-1.221
L.Real GDP (log)	-2.779***	-2.763***	-2.757***	-2.756***	-2.758***	-2.767***	-1.371***	-1.270***	-1.094***	-1.218***	-1.138***	-1.198***
L.Real GDP growth	-4.427	-4.872*	-4.402	-4.418	-4.330	-4.380	-6.142**	-7.461***	-6.901***	-6.714**	-6.859***	-6.837***
L.Population (log)	2.235***	2.197***	2.227***	2.233***	2.231***	2.238***	0.890**	0.813*	0.711*	0.813*	0.736*	0.792*
L.Gov. debt to GDP	0.031***	0.030***	0.031***	0.031***	0.031***	0.031***	0.044***	0.042***	0.043***	0.043***	0.042***	0.043***
L.Trade openness	-0.010**	-0.010**	-0.010**	-0.010**	-0.010**	-0.010**	-0.020**	-0.019*	-0.019*	-0.020*	-0.020*	-0.020*
L.Civil rights	0.640***	0.650***	0.638***	0.621***	0.645***	0.643***	0.661***	0.676***	0.541***	0.543***	0.529***	0.552***
L.Democracy	0.082	0.103	0.081	0.080	0.080	0.079	0.029	0.025	0.030	0.028	0.027	0.025
Distance to Japan		0.000						0.000				
Distance to Netherlands			-0.000						-0.000			
Distance to Sweden				-0.000						-0.000		
Distance to Denmark					-0.000						-0.000	
Distance to Norway						-0.000						-0.000
Dummy: Israel	0.364	-0.012	0.324	0.285	0.411	0.453	0.000	0.000	0.000	0.000	0.000	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
Standard errors	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty
R-squared	0.842	0.845	0.842	0.842	0.842	0.842	0.580	0.585	0.591	0.588	0.589	0.587
Observations	1851	1844	1844	1844	1844	1844	845	873	873	873	873	873

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Country-cluster robust standard errors. The dependent variable is the average sovereign credit rating across all three ratings agencies. The measure of voting similarity at the UNGA, S3, averages all votes. Region and year fixed effects included in the regression specifications. Due to data restrictions, columns 7-12 are estimated effects only for developing countries.

We find no statistically significant effect of stronger political ties with the G-6 countries, Japan, Norway, Sweden, Denmark, and the Netherlands on sovereign credit ratings. Similar results are obtained when we consider sovereign bond yields as evidenced in the regression results reported in Table 7.

Table 7: Effect of political ties with other countries on bond yields

Dep. var.: Bond yields	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
S3 with G6	-0.259											
S3 with Japan		0.735										
S3 with Netherlands			-0.008									
S3 with Sweden				-2.181								
S3 with Denmark					-1.016							
S3 with Norway						-0.938						
G6 Net ODA							0.597					
Japan Net ODA								-0.864				
Netherlands Net ODA									9.460			
Sweden Net ODA										15.329		
Denmark Net ODA											19.419**	
Norway Net ODA												30.929*
L.Real GDP (log)	-1.912*	-1.931*	-1.909*	-1.886*	-1.892*	-1.889*	-2.272	-2.062	-0.811	-0.900	-0.226	-0.371
L.Real GDP growth	11.185	11.747*	11.297*	9.942	10.863	10.933	7.568	8.177	6.500	4.494	6.008	7.472
L.Population (log)	2.417**	2.408**	2.416**	2.362**	2.383**	2.386**	2.912	2.355	1.464	1.562	1.078	1.499
L.Gov. debt to GDP	0.008	0.009	0.008	0.008	0.008	0.008	0.030	0.032*	0.021	0.019	0.023	0.022
L.Trade openness	0.009	0.008	0.008	0.009	0.009	0.009	-0.008	-0.020	-0.017	-0.015	-0.013	-0.005
L.Civil rights	0.408	0.428	0.407	0.349	0.381	0.383	0.460	0.248	-0.101	-0.160	0.119	0.077
L.Democracy	0.143	0.176	0.149	0.120	0.139	0.136	-0.040	0.189	0.129	0.027	0.009	-0.126
Distance to Japan		0.000						0.001				
Distance to Netherlands			-0.000						-0.001			
Distance to Sweden				-0.000						-0.001		
Distance to Denmark					-0.000						-0.001	
Distance to Norway						-0.000						-0.001
Dummy: Israel	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
Standard errors	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty	Clust:Cty
R-squared	0.601	0.602	0.601	0.604	0.602	0.602	0.583	0.569	0.578	0.581	0.599	0.593
Observations	987	987	987	987	987	987	259	280	281	281	281	281

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Country-cluster robust standard errors. The dependent variable is the yield on 5-year sovereign bonds. The measure of voting similarity at the UNGA, S3, averages all votes. Region and year fixed effects included in the regression specifications. Due to data restrictions, columns 7-12 are estimated effects only for developing countries.

3 Alternative measures of US political ties

To further buttress our results on the effects of US political ties on sovereign borrowing costs, we consider several alternative measures. Crucially, we are interested in measures that are strongly indicative of stronger political ties with the US and unlikely to be related to other factors affecting sovereign borrowing conditions. With this in mind, we use the number of troops (peak) contributed by other countries to the US-led Iraq War as well as the number of official heads of state visits to the White House by each country in each year as additional measures for US political ties.

The US-led Iraq War effort, beginning with the 2003 invasion and officially ending in 2011, was a globally contentious political issue which divided nations and security organizations such as the UN Security Council and NATO. Several countries were vocally opposed while others were more supportive of the US initiative. For many countries who participated, the motivation for doing so was a shared conviction that an invasion was necessary in support of the wider US global *War on Terror*. Further, troop contributions were largely symbolic with arguably inconsequential direct economic consequences for contributor countries. The US had over 250 thousand troops (peak) in the Multinational Force while the next largest contingents were from the United Kingdom and South Korea which peaked at about 46 thousand and 3,600 respectively. The median peak troop contribution is 180 troops with 31 of the 43 participating countries contributing less than 500 troops at their peaks. Thus, we exploit country variation in troop contributions to the Iraq War as an alternative measure of the strength of political ties with the US. We take data on foreign troop contributions to the Iraq War effort from the 2007 US Congressional Report on foreign contributions by the Congressional Research Service.¹⁶

Similarly, official heads of state visits to the White House provide us with a measure capturing strong ties with the US. Generally considered to be one of the highest expressions of friendly bilateral relations between countries, official state visits are very much symbolic and politically charged in nature.¹⁷ We collect data on the number of visits by heads of state to the White House (per country-year) from the US State Department.¹⁸

Table 8 reports regression results using these alternative measures. Columns one to four report results on the effects of US political ties on average sovereign credit ratings while the last four columns report results on the effects of US political ties on bond yields. In the fourth and eighth columns, we include the full set of control variables capturing

¹⁶December 6, 2007 update of the CRS Congressional Report RL32105. Blanchard, C. and Dale, C. (2007). Iraq: Foreign contributions to stabilization and reconstruction. CRS Report to Congress RL32105, Congressional Research Service

¹⁷See for instance press coverage of contentious or cancelled state visits such as those by Morocco in 1986, China in 1995, and Brazil in 2013.

¹⁸Office of the Historian at <https://history.state.gov/departmenthistory/visits> [accessed April 3, 2019].

economic and socio-cultural linkages between the US and other countries.

Table 8: Effects of political ties on sovereign borrowing: alternative measures

Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Sov. ratings				Bond yields			
White House	-0.223***		-0.235***	-0.044	-0.182		-0.209	0.038
Iraq troops		-0.096***	-0.097***	-0.077***		-0.149***	-0.152***	-0.136***
L.Real GDP (log)	-2.769***	-2.807***	-2.799***	-2.732***	-1.893***	-1.980***	-1.960***	-2.204***
L.Real GDP growth	-4.755*	-4.641*	-4.784*	-4.296*	11.523*	11.665**	11.947**	11.696**
L.Population (log)	2.276***	2.331***	2.366***	2.334***	2.430***	2.612***	2.629***	3.002***
L.Gov. debt to GDP	0.031***	0.030***	0.030***	0.031***	0.009*	0.008	0.008*	0.009*
L.Trade openness	-0.010***	-0.010***	-0.009***	-0.005***	0.009***	0.010***	0.010***	0.012***
L.Civil rights	0.586***	0.538***	0.526***	0.531***	0.414	0.325	0.331	0.471
L.Democracy	0.086**	0.091**	0.093**	0.086**	0.145	0.188	0.185	0.149
English language				-0.910***				-0.230
Colonial relationship				-0.775***				-0.538
Common religion				-0.663				5.432***
Distance to USA				0.000*				0.000**
FTA with USA				-1.366***				-0.615
Dummy: Israel	0.505	-0.010	0.411	2.182***	0.000	0.000	0.000	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
R-squared	0.842	0.844	0.845	0.853	0.602	0.606	0.606	0.614
Observations	1851	1849	1849	1843	987	987	987	987

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The column headers report dependent variables. Region and year fixed effects included in the regression specifications.

We find statistically significant effects of troop contributions to the Iraq War and, to a lesser extent, the number of annual White House visits on sovereign credit ratings and bond yields. Results based on the number of troops contributed to the Iraq War effort as a measure of US political ties is especially promising.

The *War on Terror* following the September 11 terrorist attacks on US soil also marked a shift in US foreign policy including the disbursement of foreign aid. Fleck and Kilby (2010) note that, together with a dramatic increase in overall US aid flows, the direction of US aid has since been less influenced by recipient need and more aligned with US geopolitical interests.¹⁹ This suggests that participation in the Iraq War may be a useful instrument for politically motivated US aid flows and voting patterns at the

¹⁹See also the discussion in Newnham (2008).

UNGA. Further, as earlier mentioned, the size of troop contributions in the Iraq War by other countries meant that variation in troop contributions is unlikely to have direct economic consequences for participating countries. As a final exercise, we instrument US aid flows and voting similarity at the UNGA with Iraq War troop contributions. Table 9 reports instrument variable regression results.

Table 9: Instrument variable regressions

Dep. var.:	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)			
	S2-imp		S2-imp		S3-imp		S3-imp		S2-imp		S2-imp		S3-imp		S3-imp		Net ODA		Net ODA		Mil. Comm.		Mil. Comm.			
	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage	First stage	Second stage		
S2-imp with USA		-2.383***																								
S3-imp with USA				-2.654***																						
USA Net ODA																										
USA-G. Mil Comm																										
Iraq troops	0.034***		0.030***		0.024***		0.026***		0.024***		0.028*		0.033***		0.107***		0.107***		0.107***		0.013***		0.013***		-15.734**	
L.Real GDP (log)	0.010	-2.678***	0.006	-2.688***	0.028*	-1.914***	0.033***	-1.893***	0.028*	-1.914***	0.028*	-1.914***	0.033***	-1.893***	0.107***	-0.179**	-0.179**	-0.179**	-0.179**	-0.179**	-0.025***	-0.025***	-0.025***	-0.025***	-2.986***	
L.Real GDP growth	-0.340**	-5.165*	-0.212*	-4.919*	-0.164	8.561	-0.078	9.795*	-0.164	8.561	-0.078	9.795*	-0.078	9.795*	0.590	14.806	14.806	14.806	14.806	14.806	0.190	0.190	0.190	0.190	12.784**	
L.Population (log)	-0.000	2.311***	-0.003	2.303***	-0.064***	2.487***	0.001**	2.476***	-0.064***	2.487***	0.001**	2.476***	0.001**	2.476***	0.073	5.827***	5.827***	5.827***	5.827***	5.827***	0.024**	0.024**	0.024**	0.024**	4.026***	
L.Gov. debt to GDP	0.000	0.031***	0.000*	0.032***	0.001**	0.011**	0.000	0.012**	0.001**	0.011**	0.000	0.012**	0.001**	0.012**	-0.001	-0.000	-0.000	-0.001	-0.001	-0.001	0.000***	0.000***	0.000***	0.000***	0.022***	
L.Trade openness	0.000	-0.005***	0.000	-0.005***	0.000	0.014***	0.000	0.014***	0.000	0.014***	0.000	0.014***	0.000	0.014***	-0.001	-0.021	-0.021	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.008*	
L.Civil rights	-0.051***	0.409***	-0.032***	0.444***	-0.019	0.414	0.010	0.589*	-0.019	0.414	0.010	0.589*	0.010	0.589*	-0.040	-0.739	-0.739	-0.040	-0.040	-0.040	0.021***	0.021***	0.021***	0.021***	0.790**	
L.Democracy	-0.007	0.065*	-0.008**	0.060	-0.021	-0.101	-0.021*	-0.086	-0.021	-0.101	-0.021*	-0.086	-0.021*	-0.086	-0.039	-0.197	-0.197	-0.039	-0.039	-0.039	-0.007	-0.007	-0.007	-0.007	0.088	
English language	-0.031	-1.057***	-0.017	-1.028***	-0.130***	-0.842	-0.086***	-0.505	-0.130***	-0.842	-0.086***	-0.505	-0.086***	-0.505	0.110	1.718	1.718	0.110	0.110	0.110	-0.012	-0.012	-0.012	-0.012	-0.442	
Colonial relationship	-0.080**	-0.914***	-0.059**	-0.878***	0.032	-0.063	0.002	-0.215	0.032	-0.063	0.002	-0.215	0.002	-0.215	0.002	2.270	2.270	0.002	0.002	0.002	-0.051**	-0.051**	-0.051**	-0.051**	-0.955*	
Common religion	-0.031	-0.860	0.026	-0.716	-0.648***	0.350	-0.387***	2.270	-0.648***	0.350	-0.387***	2.270	-0.387***	2.270	0.265	2.774	2.774	0.265	0.265	0.265	0.112	0.112	0.112	0.112	10.534***	
Distance to USA	0.000	0.000**	0.000**	0.000**	-0.000***	0.000	-0.000***	0.000	-0.000***	0.000	-0.000***	0.000	-0.000***	0.000	0.000	0.002***	0.002***	0.000	0.000	0.000	0.000**	0.000**	0.000**	0.000**	0.001***	
FTA with USA	0.077***	-1.248***	0.063***	-1.260***	0.027	-0.867	0.024	-0.896	0.027	-0.867	0.024	-0.896	0.024	-0.896	-0.338**	-12.540***	-12.540***	-0.338**	-0.338**	-0.338**	-0.006	-0.006	-0.006	-0.006	-0.189	
Dummy: Israel	1.093***	4.794***	0.933***	4.664***																						
Fixed effects	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	Reg.Time	
Cragg-Donald F		127.0		193.0		55.52		120.7		55.52		120.7		19.62		19.62		19.62		19.62		23.42		23.42		
Kleibergen-Paap		102.8		127.3		41.85		75.94		41.85		75.94		16.39		16.39		16.39		16.39		11.41		11.41		
F-squared		0.825		0.830		0.413		0.460		0.413		0.460		0.149		0.149		0.149		0.149		0.371		0.371		
Observations	1827	1827	1827	1827	936	936	949	949	936	936	949	949	949	259	259	259	259	259	259	259	707	707	707	707	707	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The Table reports six instrument variable regressions. Odd columns report first stage results and even columns report second stage results. The first two pairs of columns report instrument variable regressions of average sovereign ratings on voting similarity instrumented with Iraq War troop contributions. The last four sets of regressions report instrument variable regressions of sovereign bond yields on voting similarity and US aid flows instrumented with Iraq War troop contributions. Region and year fixed effects included in the regression specifications.

The first two instrument variable regression results are on the instrumented effect of voting similarity at the UNGA on average sovereign credit ratings and are reported in the first four columns. The first column in each pair reports first stage regression results. The instrumented effect of voting similarity at the UNGA on credit ratings (columns 2 and 4) is about two times larger than previously estimated. Similarly, the instrumented effect of voting similarity at the UNGA on bond yields (columns 6 and 8) is about 2.5 to 6 times larger than the OLS estimates. Finally, the instrumented effects of US aid flows on bond yields (columns 10 and 12) are about 4 times larger than OLS estimates. In all cases, the Cragg-Donald and Kleibergen-Paap statistical tests do not indicate that we have a weak instrument.

4 Concluding Remarks

Do closer political ties with the US improve sovereign borrowing conditions? Briefly, our results suggest yes they do. We use United Nations General Assembly voting similarity with the US and US aid flows to approximate the degree of political connection between sovereign states and the US to answer this question. We find that these voting similarity and aid flows are associated with significant improvements in sovereign borrowing conditions in terms of better sovereign credit ratings and lower sovereign bond yields. Our results provide an additional mechanism by which the *Quid* of voting in line with the US at the United Nations General Assembly and forging closer political ties with the US in general is complemented by a *Quo* of better sovereign borrowing conditions.

The overall macroeconomic effects of stronger US political ties may be larger given spillovers from sovereign borrowing conditions to private investment and credit markets (Almeida et al., 2017; Boehmer and Megginson, 1990; Chen et al., 2013; John et al., 2016).²⁰ Looking into the overall macroeconomic effects as well as medium to long-term

²⁰See also Coeurdacier et al. (2009) who show that the establishment of the European Monetary Union has facilitated merger and acquisition activity among Euro area manufacturing firms.

consequences of US political ties is an area for future research.

Finally, our focus is solely on the US, given its special role as the global *hegemon*. This has been motivated by related literature on the outsized importance of the US economy to the rest of the world. The emergence of China as a rising global power, see e.g. [Farhi and Maggiori \(2019\)](#), may mean that the effects we document in this paper may decline going forward and that political alliance with China may grow in economic importance. Extensions along these lines are other areas for future research. Furthermore, our results are predicated on the US historical stance as a global leader and stable partner that is able to garner international cooperation and generate some measure of consensus. Shifts in the nature, emphasis, and conduct of US foreign policy are likely to affect the results we document.

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Appendix A Additional Tables

Table A.1: Data coverage

	First Obs	Last Obs	N		First Obs	Last Obs	N		First Obs	Last Obs	N
Albania	1996	2016	21	Angola	2010	2016	7	Antigua and Barbuda	2012	2016	5
Argentina	1986	2016	31	Armenia	2002	2016	14	Australia	1961	2016	39
Austria	1972	2016	45	Azerbaijan	1999	2016	18	Bahrain	1987	2016	29
Bangladesh	2007	2016	8	Barbados	1991	2016	26	Belarus	2007	2016	10
Belgium	1961	2016	40	Belize	1979	2016	38	Benin	2003	2016	14
Bolivia	1994	2016	23	Bosnia and Herzegovina	2008	2016	9	Botswana	2001	2016	16
Brazil	1986	2016	31	Bulgaria	1996	2016	21	Burkina Faso	2004	2016	13
Burundi	1989	2006	18	Cabo Verde	1999	2016	18	Cameroon	1985	2016	22
Canada	1990	2016	27	Chile	1992	2016	25	Colombia	1993	2016	24
Costa Rica	1997	2016	20	Croatia	1997	2016	20	Cyprus	2000	2016	17
Czech Republic	1993	2016	24	Cote d'Ivoire	2014	2016	3	Denmark	1983	2016	34
Dominica	1980	2016	37	Dominican Republic	2000	2016	17	Ecuador	1997	2016	20
El Salvador	1996	2016	21	Estonia	2000	2016	17	FYR Macedonia	2004	2016	13
Fiji	1991	2016	25	Finland	1977	2016	40	France	1961	2016	38
Gabon	1985	2016	18	Germany	1990	2016	27	Ghana	1978	2016	39
Greece	1988	2016	29	Grenada	2002	2016	15	Guatemala	1997	2016	20
Guyana	1972	2016	45	Honduras	1983	2016	30	Hungary	1992	2016	25
Iceland	1989	2016	28	India	1961	2016	54	Indonesia	1992	2016	25
Iraq	2004	2016	6	Ireland	1983	2016	34	Israel	1988	2016	29
Italy	1978	2016	39	Jamaica	1967	2016	50	Japan	1972	2016	35
Jordan	1995	2016	22	Kazakhstan	2000	2016	17	Kenya	1972	2016	45
Korea	1991	2016	26	Kuwait	1994	2016	23	Kyrgyz Republic	2007	2016	10
Latvia	1996	2016	21	Lebanon	1990	2016	27	Lesotho	1994	2016	23
Libya	2000	2012	9	Lithuania	1996	2016	21	Luxembourg	1983	2016	34
Madagascar	2001	2016	15	Malawi	1981	2016	36	Malaysia	1976	2016	41
Maldives	2007	2016	10	Mali	2004	2016	13	Malta	1988	2016	29
Mexico	1988	2016	29	Moldova	1996	2016	21	Mongolia	1999	2016	18
Montenegro	2006	2016	11	Morocco	1998	2016	19	Mozambique	2003	2016	14
Myanmar	2010	2016	7	Namibia	1992	2016	25	Nepal	1981	2016	33
New Zealand	1983	2016	34	Nicaragua	2016	2016	1	Nigeria	1992	2016	25
Norway	1983	2016	34	Oman	1996	2016	21	Pakistan	1992	2016	25
Papua New Guinea	1995	2016	22	Paraguay	1995	2016	22	Peru	1999	2016	18
Poland	1995	2016	22	Portugal	1961	2016	53	Qatar	2001	2016	16
Republic of Congo	2013	2016	4	Russia	1995	2016	22	Rwanda	2002	2016	15
Samoa	1984	2006	20	San Marino	2004	2016	13	Saudi Arabia	1996	2016	21
Senegal	2000	2016	17	Seychelles	1989	2016	28	Sierra Leone	1970	2016	47
Singapore	1974	2016	41	Slovak Republic	2006	2016	11	Slovenia	1996	2016	21
Solomon Islands	2005	2016	12	South Africa	1983	2016	34	Spain	1980	2016	37
Sri Lanka	2002	2016	15	St. Kitts and Nevis	1984	2012	29	St. Lucia	2008	2016	9
St. Vincent and the Grenadines	1982	2016	35	Suriname	1999	2016	18	Swaziland	1982	2016	34
Sweden	1983	2016	34	Switzerland	2002	2016	15	Thailand	1989	2016	28
The Bahamas	1983	2016	34	The Gambia	1986	2012	27	Trinidad and Tobago	1966	2016	47
Tunisia	1995	2016	22	Turkey	1987	2016	30	Turkmenistan	1997	2009	13
Uganda	1983	2016	31	Ukraine	1998	2016	19	United Kingdom	1983	2016	34
United States	1983	2016	34	Uruguay	1993	2016	24	Venezuela	1976	2015	40
Vietnam	1993	2015	20	Zambia	1978	2016	37				
Total	1961	2016	3350								

Table A.2: Rating scale conversion

Numerical Scale	Moody's Long Term	S&P Long Term	Fitch Long Term
1	Aaa	AAA	AAA
2	Aa1	AA+	AA+
3	Aa2	AA	AA
4	Aa3	AA-	AA-
5	A1	A+	A+
6	A2	A	A
7	A3	A-	A-
8	Baa1	BBB+	BBB+
9	Baa2	BBB	BBB
10	Baa3	BBB-	BBB-
11	Ba1	BB+	BB+
12	Ba2	BB	BB
13	Ba3	BB-	BB-
14	B1	B+	B+
15	B2	B	B
16	B3	B-	B-
17	Caa1	CCC+	CCC+
18	Caa2	CCC	CCC
19	Caa3	CCC-	CCC-
20	Ca	CC	CC
21	Ca	C	C
22	C	RD	DDD
23		SD	DD
24		D	D

As per convention, a numeric rating of 10 or lower is considered invest-grade while a numeric rating of 11 or higher is considered speculative grade. A numeric rating of 22 or higher is in default.

Table A.3: Voting and aid correlations

	Grant ODA	Net ODA	Grant Comm	Total Comm	G-Econ Comm	G-Mil Comm	G- Total Comm	S2-Imp	S3-Imp
Grant ODA to GDP	1.000								
Net ODA to GDP	0.856***	1.000							
Grant Comm to GDP	0.796***	0.699***	1.000						
Total Comm to GDP	0.767***	0.724***	0.967***	1.000					
G-Econ Comm	0.600***	0.697***	0.787***	0.816***	1.000				
G-Mil Comm	0.389***	0.402***	0.346***	0.327***	0.331***	1.000			
G-Total Comm	0.621***	0.712***	0.781***	0.804***	0.972***	0.544***	1.000		
S2-Imp	0.028	0.037	-0.023	-0.002	-0.102***	0.073***	-0.073***	1.000	
S3-Imp	0.040	0.046	-0.007	0.011	-0.094***	0.086***	-0.062**	0.972***	1.000

Table A.4: Effects of political ties on sovereign credit ratings: Fitch

Dep. var.: Fitch ratings	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
USA Grant ODA	-0.408***									
USA Net ODA		-0.389***								
USA Grant Comm			-0.181***							
USA Total Comm				-0.181***						
USA-G Econ Comm					-0.393**					
USA-G Mil Comm						0.739				
USA-G Total Comm							-0.376***			
S2-Imp with USA								-0.973***		
S3-Imp with USA									-1.740***	
Political Ties Index										-0.365***
L.Real GDP (log)	-1.751***	-1.737***	-1.655***	-1.656***	-3.297***	-3.158***	-3.296***	-3.196***	-3.193***	-1.738***
L.Real GDP growth	-4.451	-4.423	-4.912*	-4.913*	-10.096***	-10.020***	-10.107***	-11.652***	-11.913***	-4.742*
L.Population (log)	1.610***	1.604***	1.532***	1.532***	3.077***	2.960***	3.075***	2.838***	2.834***	1.580***
L.Gov. debt to GDP	0.039***	0.038***	0.038***	0.038***	0.029***	0.028***	0.029***	0.022***	0.022***	0.039***
Dummy: Israel	0.000	0.000	0.000	0.000	-1.011***	-2.337**	-0.468	0.339	0.990*	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
R-squared	0.464	0.458	0.453	0.453	0.778	0.774	0.777	0.822	0.824	0.466
Observations	564	569	568	568	1069	1069	1069	1292	1292	559

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The dependent variable is the numerical Fitch sovereign credit rating. Region and year fixed effects included in the regression specifications. Due to data restrictions, the first four as well as the last columns are estimated effects only for developing countries.

Table A.5: Effects of political ties on sovereign credit ratings: Moodys

Dep. var.: Moodys ratings	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
USA Grant ODA	-0.899***									
USA Net ODA		-0.625**								
USA Grant Comm			-0.592**							
USA Total Comm				-0.598**						
USA-G Econ Comm					-1.155**					
USA-G Mil Comm						1.482				
USA-G Total Comm							-0.822**			
S2-Imp with USA								-1.452***		
S3-Imp with USA									-2.208***	
Political Ties Index										-0.964***
L.Real GDP (log)	-2.016***	-1.936***	-1.917***	-1.920***	-3.628***	-3.384***	-3.576***	-3.291***	-3.285***	-2.044***
L.Real GDP growth	-6.139**	-6.274**	-7.402***	-7.404***	-9.183***	-9.165***	-9.315***	-10.555***	-10.659***	-6.381**
L.Population (log)	2.003***	1.955***	1.926***	1.928***	3.498***	3.298***	3.451***	3.042***	3.037***	2.030***
L.Gov. debt to GDP	0.037***	0.036***	0.036***	0.036***	0.030***	0.028***	0.029***	0.022***	0.022***	0.037***
Dummy: Israel	0.000	0.000	0.000	0.000	-1.554***	-4.290***	-0.523	-0.131	0.439	0.000
Fixed effects	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time	Reg,Time
R-squared	0.441	0.487	0.405	0.405	0.772	0.769	0.771	0.829	0.831	0.416
Observations	596	607	609	609	1238	1238	1238	1582	1582	587

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors. The dependent variable is the numerical Moodys sovereign credit rating. Region and year fixed effects included in the regression specifications. Due to data restrictions, the first four as well as the last columns are estimated effects only for developing countries.