

The Influence of Interest: Real US Interest Rates and Participation in Global Economic Institutions

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Abstract: International trade and capital flows have become increasingly governed by and subject to constraints set by transnational institutions. However, governments' enthusiasm for participating in these institutions varies considerably across space and time. This paper asks: Why do some governments participate in these institutions more than others, and why do governments in general participate in these institutions more at some times than others? We argue that capital scarcity is an important driver of participation in these institutions. More specifically, high US interest rates increase capital scarcity abroad, which leads non-US governments, and particularly governments whose economies are external net-debtors, to engage with international economic institutions more aggressively. We find robust evidence that this is the case with respect to bilateral investment treaties and the WTO dispute settlement mechanism.

Governments have increasingly taken “the decision in different issue areas to impose international legal constraints” on themselves (Goldstein, Kahler, and Keohane 2000, p. 386, quoted in Allee and Peinhardt 2010, p.3). The resulting “legalization” of international economic relations takes a variety of forms, among the most prominent of which are bilateral investment treaties (BITs) and the World Trade Organization (WTO). Both of these institutions establish a set of legal rights and allow protected parties to access dispute settlement mechanisms in the event that their treaty-established rights are infringed. These particular legalized institutions are not only important to the study of legalization, but are also important to the operation of the largely liberal economic order that has defined global economic affairs over the past 25 years.

While the role of these institutions has in general increased over this time period, this increase has been “clumpy”. The temporal dimension to this clumpiness is particularly striking. Figure 1 shows the number of new bilateral investment treaties signed per year along with the number of trade disputes filed at the WTO. As is clear from figure 1, rates of participation in these two institutions - bilateral investment treaties and the dispute settlement mechanism at the WTO - follow similar patterns over time. The coincidence of these two trends over time suggests the possibility of a common driver.

FIGURE 1 HERE

While the common trends observable in Figure 1 are striking, they describe some countries’ experiences much better than others. The first two bars in Figure 2 show the share of countries initiating trade disputes, split across two groups: countries that have not signed any BITs within

the last three years, and countries that did sign at least one BIT within the last three years.¹ As the graph indicates, countries that initiate trade disputes are disproportionately countries that sign BITs. The second set of bars shows the share of countries that sign BITs, split across countries that have initiated a trade dispute within the last three years and countries that have not. The bars show the converse relationship: BITs are disproportionately signed by countries that also initiate trade disputes. As such, engagement with these important international economic institutions appears to cluster across countries as well as across time.

Collectively, Figures 1 and 2 underline a simple point: there are times and places at which participation in legalized institutions is a common occurrence, and time and places where this is not the case.

FIGURE 2 HERE

This paper asks: What explains these patterns in the usage of legalized economic institutions? There are, of course, unique aspects to the political processes that result in the filing of trade disputes and the signing of BITs (see, for example, Paulsen 2013, Davis and Bermeo 2009). Our goal in answering this question is not to provide a comprehensive theory of participation in either institution, but rather to focus on common drivers of both.

The core of our argument is that patterns of participation in legalized forms of international economic relations are driven along temporal lines by changes in US interest rates and across countries by the distribution of foreign currency liabilities, which, we argue, shapes how governments react to a changing interest rate environment. Countries with significant foreign currency liabilities need to maintain the capacity to service those liabilities. Doing so

¹ The figures refer to non-OECD countries, where BIT signing is more clearly motivated by a need to attract capital, rather than protect exported capital.

typically requires, among other things, attracting capital inflows from abroad and avoiding currency depreciations that push up debt levels relative to local output (ex. Walter 2008). High interest rates make both of these goals harder. First, high US interest rates increase the opportunity cost of FDI to the foreign direct investor. This, we argue, prompts governments to “work harder” to attract foreign capital by, among other measures, entering into more BITs. Moreover, by drawing capital into the US, high US interest rates create depreciation pressures on other currencies relative to the dollar. As Mackinnon (2003) and others have shown, countries with substantial foreign currency denominated debt tend to display a pronounced “fear of floating” and use an active monetary policy to avoid depreciation and the accompanying rise in the cost of external debt service. Avoiding depreciation puts exporters at a disadvantage, which we argue, leads governments to use dispute filings at the WTO to aid exporter interests and to signal their responsiveness to exporter needs more generally. Thus, we expect to observe trends in BIT signings and WTO dispute filings to correlate with each other and with US interest rates in countries with large foreign currency-denominated external liabilities.

We evaluate the plausibility of our theory empirically with a series of negative binomial regressions to establish the determinants of BIT signing and WTO dispute initiation for a broad sample of developing countries between 1970 and 2011. The results of these tests are consistent with our theoretical expectations. Governments pursue more trade disputes and sign more bilateral investment treaties when real US interest rates are high. This is particularly (our estimates actually suggest solely) the case for governments whose countries are external net debtors. We also demonstrate three corollary empirical relationships that bolster our causal claims. First, using data from the comparative manifestos project we find that the same conditions that lead to more BITs being signed and more trade disputes being filed are correlated

with more investor friendly rhetoric among political parties. At the same time, these same conditions correspond to more capital account closure and higher tariffs, suggesting that, rhetoric notwithstanding, the common patterns of participation in legalized economic institutions that we observe are not being driven by a more general embrace of neo-liberal policy making. Rather, it seems more likely that these policies are adopted under the same circumstances because they share a common feature: the plausible capacity to help governments manage their finances (and the political fallout from that management) at times when hard currency is both desperately needed and relatively harder to come by.

None of this is to suggest that BITs or WTO disputes can in themselves alleviate the economic and political pressures brought about by the combinations of large external debt and high US interest rates. The effects of BITs on FDI flows are a subject of debate (Aisbett 2009, Yackee 2009, Kerner and Lawrence 2013) and while the capacity of WTO disputes to mollify exporting interests strikes us as plausible, it has limits of its own. WTO suits can take substantial amounts of time to come to a decision, and even an aggressive policy of bringing suits to aid exporters interests can only directly aid so many exporters. Moreover, while WTO disputes may serve the double purpose of increasing exports, many WTO cases involve trade values that are quite small (Bown and Reynolds 2013). However, any policy option that can plausibly attract foreign capital and help alleviate the economic and political strains of the coincidence of foreign currency debt and high US interests rates are likely to be at least marginally more attractive policy when those conditions obtain.

This paper has several important implications. First, while the short-term effect of entering into BITs and bringing more cases to the WTO is likely to be marginal in economic and political terms, the longer-term effect on global economic relations can be profound. WTO suits

create precedent that can be applied elsewhere and thereby shape trade-related jurisprudence in ways that go beyond the initial case brought by the plaintiff (Pelc 2014). Inducing the filing of more claims, especially by developing countries, can shift trade relations in important and lasting ways. Perhaps most importantly, though, practice matters in developing governments' legal capacities to file WTO cases (Bermeo and Davis 2009). Bringing a case today increases those capacities and increases the likelihood that a different case will be brought in the future. To the extent that countries with large external debts are more likely to bring disputes it is precisely those countries that are more likely to build up the legal resources and experience to defend their trading rights in the future.

Second, signing BITs, regardless of whether they actually increases FDI inflow, subjects countries, particularly those with "weak governance", to litigation and the possibility of "regulatory chill" in expectation of future litigation (Neumeyer 2001). BITs' effects in this regard are increasingly observable in governments' distaste for them, especially in Latin America, and most recently Indonesia (Gaillard 2008; Gomez 2011; Tevendale and Nalsh 2014; UNCTAD 2014). Increased usage of these institutions can help foster a more neo-liberal world in which domestic governments' control over their own regulatory standards and trade policy making are curtailed, for better or worse, by the threat of litigation. Our argument's implication is that capital scarcity should not be seen purely as a driver of illiberal and anti-globalizing policies, but as a driver of policies that plausibly help countries' short term balance of payments situation and in the long run lead to behavior that is more typically associated with liberal and internationalist economic policies.

Third, this paper reifies the (non-controversial) view of the United States as the financial hegemon. This particular demonstration of the United States' role in setting financial conditions

worldwide underlines the link between financial hegemony and political behavior within other countries that cumulatively and, perhaps unintentionally, shapes significant aspects of global economic relations. To the extent that the United States has sought to build a more legalized economic environment that prioritizes the rights of businesses relative to those of government, the interest rate appears to be a particularly potent weapon in doing so.

Fourth, the findings in this paper have implications for the role of ideas in the international political economy. As noted above, we find some suggestive evidence that political party rhetoric becomes friendlier to foreign investors in the presence of capital scarcity. In the context of this paper the increase in market-friendly rhetoric appears to be at least somewhat disingenuous, insofar as it co-occurs with policy measures that are linked more by their potential to alleviate balance of payments problems than by their liberalism. Still, ideas matter and likely take on a life of their own if and when they become imbued with conventional wisdom (Blythe 2002). While we don't offer a theory about the independent role of ideas, neither do we discount their importance. Our findings suggest that the relevance of these particular ideas in the political marketplace can likely trace some of their origins to materialist financial interests and, more specifically, to the behavior of the United States Federal Reserve.

Finally, our theoretical approach is notable insofar as it mirrors a prominent argument in the literature that a lack of international capital drives countries towards illiberal policies, such as closures of capital accounts, increased tariffs, and exchange rate manipulations (Eichengreen 2008). The appeal of these policies at these times is in their ability to 'trap' hard currency reserves in the domestic market and not see it eroded through current account deficits or capital flight. As Block (1977, p. 4) puts it, "when international credit is unavailable, it is harder for weaker countries to resist domestic pressures for a more closed economy". Nothing in our paper

disputes this relationship between capital scarcity and illiberal policymaking. Indeed, we demonstrate empirical evidence to suggest that countries with high external debts react to a high interest rate environment with higher tariffs and capital account closures. However, this paper suggests that this relationship is more complicated than typically understood, and that prominent and consequential forms of liberal engagement with legalized global economic institutions are driven by the same capital scarcity that is more typically understood as a driver of illiberal economic policies.

In the next section, we briefly discuss the reasons why countries need access to international capital, the role that United States real interest rates play in determining its availability to countries outside of the US, and why these effects should be particularly important for countries that are net debtors. Section III describes the various economic policies that countries have historically pursued to address shortages of foreign capital, and how trade disputes and bilateral investment treaties fit within those patterns. Section IV describes a series of cross-country regressions that provide empirical evidence consistent with our argument. Section V notes our conclusions and reiterates some of this paper's main implications.

Section II - US Interest Rates, Global Capital Flows, and Debt Positions

US interest rates are an important determinant of the availability of global capital to other countries. The return on US bonds represents the risk free rate of return, against which the return on other assets is typically benchmarked. As such, US interest rates typically represent a standard opportunity cost associated with any other investment. The higher the rate of return to US bonds, the higher the risk-adjusted return that an investor must demand from any alternative

project. As the interest rate on US bonds goes up, the number of investment projects with sufficiently high projected returns goes down. Thus, in the presence of high returns on US bonds, ostensibly profitable investments are not made and capital is channeled into US bonds instead. Conversely, a drop in the risk free return to capital expands the pool of investible projects to include those with relatively lower risk-adjusted projected returns. This prompts capital to flee investments in US bonds into other assets.

These dynamics play out on a global scale. When US interest rates increase, investments in the US become more profitable relative to other investments, resulting in capital flows to the US. Conversely, as US interest rates decline, investments in the US become relatively less profitable, resulting in capital flows from the US to other countries with higher returns to capital. This mechanism has received much attention recently: low US interest rates following the 2008 financial crash flooded foreign countries with capital as investors sought better investment opportunities abroad (and occasionally created asset bubbles in the process²). More recently, the anticipated rise in US interest rates in early 2014 is forcing many emerging markets to face the possibility of large capital outflows. As one observer put it, while these countries may try to counter such global financial pressures through measures of their own, in particular interest rate increases, such attempts are bound to be “to no avail. Their power is not sufficient to counter the American [Federal Reserve].”³

Similar connections between US interest rates and global capital flows can be observed elsewhere in history. At the onset of the Great Depression in 1928, the US Federal Reserve increased interest rates in order to slow the Wall Street boom, which increased the attractiveness

² Forbes 3/5/2014. Why The Worst Is Still Ahead For Turkey's Bubble Economy.

<http://www.forbes.com/sites/jessecolombo/2014/03/05/why-the-worst-is-still-ahead-for-turkeys-bubble-economy/>

³ Die Zeit, January 2014.

of investing in the United States. As a consequence, US lending abroad fell from high levels in the first half of 1928 to zero in the second half of 1928 (Eichengreen 2008). High US interest rates have been similarly noted as being among the most important causes of the international debt crises in the 1980s and the first half of the 1990s, while the easing of US monetary policies starting in 1998 made ample global capital available to other countries (Frankel and Roubini 2001). The relatively stable period between 2002 and 2008 has similarly been attributed to favorable US interest rate policies (Eichengreen 2008).

A second potentially important mechanism that links US interest rates to global capital flows is the money that migrants send back to their home countries as remittances. Remittances constitute a large portion of GDP in many developing countries and are a substantial enough to influence policy choices over exchange rate regimes, among others (Singer 2010). As US interest rates increase, migrant workers may find it more profitable to keep the money in the United States, rather than sending it back to their home countries. Moreover, to the extent that higher US interest rates are intended as anti-inflationary devices meant to trigger economic slowdowns, they may be associated with smaller remittance flows through lower wage receipts and employment opportunities for foreign workers. Third, if US interest rate increases lead to economic contractions in the US that may result in reductions in US import volume and, from there, reductions in the value of other countries' exports and thereby their opportunities to receive foreign exchange from export receipts (Frankel and Roubini 2001).

The inverse relationship between US interest rates and the availability of capital outside of the US is echoed in existing quantitative studies (e.g., di Giovanni and Shambaugh 2008; Frankel and Roubini 2001; Calvo, Leiderman, and Reinhart 1993); as summarized by Frankel and Roubini (2001, p. 6), "the most important identifiable factors behind [global capital flows]

were US interest rates and other macroeconomic variables external to the emerging market countries.”

In Table 1 below we present the results from very simple OLS regressions that demonstrate that the inverse relationship between US interest rates – captured here and elsewhere in our analyses by the real US lending interest rate, as reported by the World Development Indicators - and capital inflows outside of the US - a key assumption in our theory - is observable in the data that we use. These regressions include a linear year trend and a control for the log gross domestic product (GDP).⁴ The first three columns show that higher US interest rates are associated with reductions in foreign direct investment inflows⁵ (column 1), portfolio investment⁶ (column 2), and remittance flows⁷ (column 3). The net effect of declining capital inflows and increasing capital outflows is, of course, is a decline in the foreign currency reserves of countries (column 4) and a decline in demand for local currency. In all of four models, the effect of a two percentage point increase in the US interest rate, which corresponds to an increase of one standard deviation, is larger than the average year-to-year change in the dependent variables, and the effects consistently point in the expected direction.

TABLE 1 HERE

The second part of our argument is that the effects of capital scarcity brought about by

⁴ We obtain similar results when coding the financial variables in first differences. We also obtain almost identical results when including country fixed effects or including a lagged dependent variable

⁵ Taken from UNCTAD. Kerner (2014) and Kerner and Lawrence (2013) have argued elsewhere that FDI inflows are often ill-suited for applications in political science because FDI inflows measures FDI impact on the capital account and political science theories tend to consider other aspects of FDI. In this case it is precisely the impact on the capital account that we are concerned with.

⁶ Taken from the World Bank World Development Indicators.

⁷ Taken from the World Bank World Development Indicators.

high US interest rates are felt disproportionately in countries with large pre-existing external financial liabilities. Many countries, and most non-OECD countries, are unable to borrow externally in their domestic currency. The majority of low- and middle-income countries owe all or almost all of their external public and publicly guaranteed debt in foreign currencies. This inability to borrow in the domestic currency is commonly known as “Original Sin” (Eichengreen, Hausmann, and Panizza 2005). Original Sin occurs for a variety of reasons. Foreign investors might not trust domestic monetary authorities and prefer to put the exchange rate risk on the issuer rather than assume it themselves. Even if exchange rate risk is mild, the demand for a stream of payments in a minor currency is typically low (Hausmann and Panizza 2003). As a consequence, many countries have little choice but to issue their debt in foreign currencies, typically in major currencies such as the US dollar, euro, or yen. Foreign currency debt, by its very nature, requires foreign currency for repayment. Failure to maintain access to international capital can increase borrowing costs and possibly trigger sovereign debt crises. Net liabilities and assets mainly comprise foreign direct investment, portfolio investment, external debt, and foreign exchange reserves. Measures of net assets or liabilities are typically considered a “fundamental determinant of external sustainability” (Lane and Milesi-Ferretti 2001, p. 264). Higher net liabilities imply less external sustainability and more sensitivity to changes in the availability of international capital. The more foreign currency debt a country owes externally, the more sensitive they become to their access to foreign capital and their exchange rate.

Certainly, countries with higher foreign debt have more profound hard currency needs and, other than the US and to a somewhat lesser extent Japan and Europe, cannot print their own hard currency. For these countries increases in US interest rates can be directly associated with increases in the cost of servicing current and future debts. This is particularly true if debt

contracts are tied to US interest rates (as is the case with much short-term and variable-interest debt). Even when debt is not tied to US interest rates, the combination of high foreign currency debts and reduced access to cheap foreign capital can reduce investor confidence, push up risk premiums and increase the costs of servicing existing debts or rolling them over through new debt issues. Increases in US interest rates can quickly become very costly for countries that are dependent on international sovereign debt markets.

A second driver of net debtors' enhanced sensitivity to the US interest rate concerns the considerable share of net liabilities that is comprised of foreign direct investment and, especially, foreign portfolio investment.⁸ An economy with large stocks of foreign investment is for that reason relatively sensitive to a reversal of capital flows, and hence to changes in US interest rates (Razin 1998). This was the experience of many countries in the balance-of-payments crises of the 1980s and 1990s: countries with large liabilities experienced the most dramatic reversals of capital flows.⁹ Large financial liabilities in the form of an excess of inward foreign investment relative to external foreign investment can generate financial fragility when those foreign investors turn to investments elsewhere.

Increases in US interest rates need not be as problematic in countries with large external assets. These countries can draw on their assets as source of hard currency to manage exchange rates, to service foreign denominated debt, and to pay for imports when the US interest rate increases and access to foreign capital becomes scarce on debt markets, through inward foreign investment, exchange receipts, or remittances.

⁸ In this accounting, inward foreign investments - domestic assets over which foreigners have a claim - are considered liabilities and outward foreign investment - foreign assets over which domestic actors have a claim - are considered assets.

⁹ Madrid (2003) notes that the Latin American debt crisis, brought about in large part by increases in the US interest rate under Fed chair Volcker, catalyzed a belief among Latin American policy makers that their reliance on foreign capital left their economies too vulnerable to capital flight and a series of steps to increase domestic savings.

To summarize, higher US interest rates should be associated with a decreased availability of global capital and pressures on foreign currencies to devalue relative to the dollar. Countries with large foreign liabilities should be particularly sensitive to such pressures.

Section III - How Countries Respond to Limited Capital Access

The conventional expectation in the existing literature is that countries respond to scarce global capital with illiberal policies that have the effect of restricting trade and capital flows. Trade policies often play a particularly large role. Because internationally traded goods are typically denominated in foreign currencies, increased export receipts are tantamount to increased access to foreign exchange while increased import penetration drains foreign exchange. The link between the trade balance and access to foreign exchange is well-known to academics and policy-makers alike. The interwar trade closure is often considered to be a reaction to contemporaneous hard currency reserve shortages, just as Nixon's 1971 tariff increase is understood as a reaction to the United States' balance of payments problem (Irwin 2013). British tariffs in 1964 are similarly understood as a reaction to balance of payments issues in the UK (Roberts 2013). More recently - and exotically - in early 2014 Argentina announced a 50 per cent tax on purchases over US \$25 made by Argentinean customers on international websites, and limited such transactions to at most two such purchases a year. These measures were, as observers noted, a deliberate "attempt to shore-up dipping reserves of foreign currency" (Garcia-Navarro, NPR, 2014) and "to curb capital flight and prevent a possible balance-of-payments crisis" (Financial Times, 2014).

Capital account closures have also often been employed during times of capital scarcity as a means of stemming capital outflows. Capital account closures serve a variety of purposes

under these conditions. Closing the capital account limits speculators' ability to attack the currency and can thereby insulate countries from financial contagion that can strike whether or not the economic fundamentals in a country justify those risk perceptions (Morris and Shinn 1998, Leblang and Satyanath 2006). Moreover, capital controls can provide governments with some autonomy in the short run when exchange rates are managed and global interest rates are incommensurate with domestic policymaking goals - if, for example, the domestic government wishes to pursue an expansionary policy when interest rates abroad are high (Alesina, Grilli, and Milesi-Ferretti 1993). The ability to maintain interest rates at below world levels allows governments to finance themselves domestically at cheaper rates, which is particularly valuable when foreign debt-loads are significant (Aizenmen and Guidotti 1990).

Our argument is not that the link between capital scarcity and illiberal financial and trade policy measures is wrong. Indeed, we present additional evidence below to support it. Rather, we argue that it is too narrow, at least as a descriptor of policymaking over the past 25 years. The availability of legalized international institutions provides governments with additional, liberal policy options that can be employed in times of capital scarcity. While governments can address balance of payment difficulties by closing the capital account or limiting imports through tariffs or exchange rate manipulations, they can also try to expand access to stable forms of capital inflows by signing BITs. Similarly, governments can file disputes at the WTO in order to partially ameliorate the economic dislocation that would otherwise befall exporters when governments overvalue their exchange rate to avoid depreciation.¹⁰ As such, while capital scarcity may indeed be a driver of illiberal policymaking, that association should not be seen as monolithic. The legalization of international economic relations has created liberal avenues for

¹⁰ Our contention that capital scarcity induces BIT signing mirrors Milner's (2014) argument that BITs are disproportionately entered into when domestic growth rates are lowest.

channeling the need to attract and maintain capital reserves in times of capital scarcity into policymaking.

Our argument neither requires nor claims that a BIT would act as a plausible substitute for more traditional, illiberal forms of dealing with capital scarcity or that an increase in WTO disputes would solve political problems associated with overvaluation in a comprehensive way. Rather we see them as complements, with BITs and trade disputes simply acting as a small part of a larger arsenal of policy tools that countries can look to when facing the combination of large foreign currency debt and high interest rates. However, to the extent that capital scarcity is a significant driver of participation in legalized international economic institutions, the effects of these dynamics are likely to be far larger and longer lasting than their proximate effect on the balance of payments. In the next section we turn to the data to establish whether and to what extent capital scarcity actually catalyzes engagement with aspects of the legalized liberal economic order.

Section IV - Systematic Evidence

To measure US interest rates, we rely on real US lending interest rates, which are available from the World Bank. The real interest rate, which is net of inflation, is the relevant measure for gauging returns on investments, and therefore the relevant measure for the availability of capital to countries other than the United States (Frankel and Roubini 2001, p. 6). For most of the specifications in the following we use the three-year moving average of the US real interest rate. While the three-year window is arbitrary, it is intended to capture periods of continuously high US interest rates; the results presented in the following are robust to using the current US interest rate in place of the three-year average.

Our main dependent variables are the number of trade disputes filed in a given year and the number of new bilateral investment treaties signed in a given year. We obtain data on trade disputes at the WTO, for the years 1995 through 2011, from Horn and Mavroidis (2011), and data on trade disputes at the GATT, for the years through 1994, from Reinhardt (1996). Following the extant literature, we consider a trade dispute to be initiated the moment a government files a request for consultations at the GATT/WTO dispute settlement body. Our data on BIT signing comes from UNCTAD.¹¹ Because we are interested in BITs signed in the reasonable anticipation of attracting FDI, rather than protecting FDI exports, we limit this variable to BITs signed with OECD countries. Because high-income countries tend not to sign BITs with each other, we limit our sample to the low and medium income countries where our causal mechanism is most relevant.¹² Moreover, high-income countries, with more stable and mature economies, should be less affected by changes in US monetary policies (see also Di Giovanni and Shambaugh 2008). The countries included in our sample are noted in Appendix Table 1.

Because the dependent variables are counts, we estimate our main models using negative binomial regression. The negative binomial model is a generalization of the Poisson model that allows for unobserved heterogeneity, thereby accounting for overdispersion in the data (Cameron and Trivedi 1998). Overall, and once accounting for data limitations, our main models include up to 126 countries for the years 1960 through 2011.

Our first and simplest prediction is that high US interest rates should be associated with more trade disputes and more bilateral investment treaties. We assess two implications of this

¹¹ <http://unctad.org/en/Pages/DIAE/International%20Investment%20Agreements%20%28IIA%29/Country-specific-Lists-of-BITs.aspx>

¹² High-income countries are all OECD countries except Hungary, Mexico, and Turkey.

proposition. First, in the aggregate, years of high US interest rates should also be marked by higher activity at the dispute settlement body of the GATT/WTO and more bilateral investment treaties. For our dependent variables, we calculate the number of total trade disputes and new bilateral investment agreements signed in any given year by non-high income countries. These variables range from 0 to 28 trade disputes per year and from 0 to 62 bilateral investment treaties per year.

Table 2 provides results from very simple negative binomial regression models to evaluate the relationship between these aggregate numbers and US interest rates, without any additional control variables. As the results show, high US interests are indeed positively and significantly associated with the number of trade dispute initiations and the signature of new bilateral investment treaties. The positive relationship is evident in the data using both the current US interest rate as well as the three-year average; as expected, the effects are stronger when using the average interest rate, which is able to capture more persistent effects. The effects are substantial: a one percentage point increase in the average US real interest rate is associated with five more bilateral investment treaties in a given year, which corresponds to almost a doubling compared to the sample median of about seven new BITs every year. Similarly, a one percentage point increase in the US real interest rate is associated with about 2.6 more trade disputes in a given year, which again is a sizeable effect when compared to a sample median of four yearly trade disputes. The first two bars in Figure 3 further illustrate this relationship (based on columns 2 and 4 of Table 2) graphically. The bars represent the percentage change in the number of trade disputes and bilateral investment treaties when moving from the sample average of the US interest rate (which is four per cent) to one standard deviation above the sample average (which is six per cent), together with 95 per cent confidence intervals. The figure shows

that such a change in US interest rates is associated with increases in the number of trade disputes and bilateral investment treaties worldwide of about 90 and 70 per cent, respectively.¹³ Given these results, US monetary policies appear plausibly to be an important driver of dispute behavior at the GATT/WTO and of the conclusion of new bilateral investment treaties.

TABLE 2 HERE

We now turn to the effects at the country-level. Disaggregating the data to the country-year allows us to control for a number of country-level confounders. Table 3 again reports the estimates from several negative binomial models. First, we include variables measuring gross domestic product as well as growth of gross domestic product. United States monetary policies may influence business cycles in other countries, through linkages other than those that we presented in the previous sections of this paper. Di Giovanni and Shambaugh (2008), for instance, find that GDP growth in many countries is affected by changes in interest rates in major industrial countries. The policies we consider may be in part a response to those fluctuations. Governments may pursue trade disputes and bilateral investment treaties not in attempts to gain access to foreign currencies, but in attempts to help a struggling economy. In this case, trade disputes would not be a consequence of the capital scarcity brought about by high US interest rates, but they might be correlated with them in the data. By controlling for these economic variables, we hope to isolate the effects we are interested in.

Second, we include variables for US economic growth and worldwide economic growth (the average of economic growth for each country, weighted by the country's gross domestic

¹³ The results are robust to controlling for other systemic factors, US economic growth and worldwide economic growth.

product) to control for deteriorating economic conditions both in the US and worldwide. Countries may respond to US growth rates directly, rather than interest rates per se. Moreover, it is possible that US interest rate policies reflect growth conditions abroad, and that those growth conditions may be the proximate concern of non-US governments and therefore the catalyst of their policymaking decisions.

In additional models, we also include a variable measuring the log of total trade into the model for trade disputes, in order to rule out that US interest rates affect trade disputes through their effects on trade flows. For analogous reasons we include a variable measuring foreign direct investment flows, as evidenced in the balance of payments, into the model for bilateral investment treaties. All of these control variables are lagged one year and drawn from data provided by the World Bank and UNCTAD in the case of the FDI data. Finally, all models include a linear year trend. As before our sample is restricted to exclude high-income countries. For the models with trade disputes, we further limit the sample to GATT/WTO members, since only those can initiate trade disputes at the institution's dispute settlement body.

Table 3 presents the results from four models. Models one and two have trade disputes as the dependent variable, models three and four have BITs as the dependent variable. The results show that the relationship with US interest rates is robust to these additional control variables, some of which are at the country level, some of which are at the systemic level. While the effects are smaller in size compared to the systemic regressions in Table 2, they still are substantially meaningful and remain statistically significant at the five per cent level. The second set of bars in Figure 3, based on columns 2 and 4 of Table 3, reports the percentage increase in the number of trade disputes and in the number of new BITs, again when moving from the sample average of US interest rates to one standard deviation above the sample average.

TABLE 3 HERE

FIGURE 3 HERE

Our second main proposition is that a country's sensitivity to changes in US interest rates depends on the country's net financial position: Countries that are net debtors have more need than net creditors to gain access to foreign exchange (or, perhaps more accurately, more to fear from a loss of access) and therefore more incentive to use tools for opening up new sources of capital and retaining existing capital. Moreover, countries with large external debts have more to lose from currency depreciation, and should therefore be more likely to react to a high interest rate environment by overvaluing their exchange rate.

Lane and Milesi-Ferretti (2007) provide data on the external wealth of nations, which is comprised of the net assets and liabilities position in foreign portfolio investments, foreign direct investments, debt obligations, and foreign exchange reserves. Their updated and extended version covers the years from 1970 through 2011, which at the upper end coincides with the coverage of most of our other variables. The variable ranges from liabilities of US\$ 852 billion to assets of US\$ 1,537 billion. Liabilities are represented by negative values, while assets correspond to positive values of the variable; a value of zero represents a country with balanced assets and liabilities. We rescale the variable for the regression tables to express it in trillion US dollars; once rescaled as such, it ranges from -0.852 to 1.537 , with a mean of -0.002 . While our concern is primarily on foreign currency liabilities rather than liabilities per se, in this sample of countries the two concepts are virtually synonymous (see Lane and Shambaugh 2010). We interact this variable with the measure of average US interest rates; our proposition suggests that

this interaction term should be negative, such that the effect of US interest rates is larger for net debtors than for net creditors, and that the total effect of US interest rates should be positive for net debtors, but not necessarily so for net creditors.

TABLE 4 HERE

FIGURE 4 HERE

Table 4 reports the estimation results for these models. As the table indicates, the interaction term between net foreign assets and US interest rates always has the expected negative sign. In the models with trade disputes as the dependent variable, the interaction term also reaches conventional significance levels, with a p-value of .008 (column 1), and of .013 when also controlling for a country's trade volume (column 2). While the interaction is only significant at the 10 per cent level in the models for bilateral investment treaties, China is an important outlier that is driving this result: China has more than twice as many foreign assets as the country that is ranked second in the sample in terms of its foreign assets, Saudi Arabia. Once China is dropped from the sample the interaction term is significant with a p-value of .048 and increases in absolute size to -.951.

Figure 4 displays the marginal effects of US interest rates at various levels of net foreign assets: for the 95th percentile (that is, for countries in the sample with large assets), marked as 'creditor' in the graph; for a country that has neither net liabilities nor assets, marked as 'zero'; and for the 5th percentile (that is, for countries in the sample with large liabilities) marked as 'debtor'. The marginal effects are, as before, calculated for a change in US interest rates from 4 to 6 per cent, which corresponds to a change from the mean to one standard deviation above the

mean. The figure reveals effects that are anticipated by our hypothesis. While an increase in US interest rates has a small and statistically insignificant effect for net creditors, the effect is positive and statistically significant for net debtors. For a net debtor at the 5th percentile of the data, an increase in US interest rates of 2 percentage points is associated with about 40 per cent more trade disputes and with about 25 per cent more bilateral investment treaties. By contrast, for a net creditor, the effects of US interest rates on trade disputes and BITs are much smaller and do not reach statistical significance at conventional levels for either variable.

The conditional nature of the effects of US interest rates is important because it lends support to the notion that trade disputes and bilateral investment treaties are responsive to those interest rate changes. It shows that those countries that should be the most sensitive to changes in US interest rates are also the most likely to file more trade disputes and sign more BITs when US interest rates are high. This may also help rule out alternative explanations. For instance, if trade disputes were only due to worsening economic conditions domestically or worldwide (which in turn may reasonably be expected to correlate with US interest rates), then we shouldn't observe that this relationship is conditional on a country's net foreign assets or liabilities – all countries should be affected alike and uniformly.

Beyond BITs and Trade Disputes

The data presented thus far suggests that high US interest rates are associated with more BITs and more trade disputes, especially for countries that have net foreign liabilities. This section provides corollary evidence from three additional sources that helps bolster that claim.

First, if high US interest rates and a position as a net debtor are associated with more incentives to attract international investments through bilateral investment treaties, we might also

expect political rhetoric to follow suit: policy-makers should try to attract investors through investor-friendly language. The Comparative Manifesto Project (Volkens et al. 2013) provides data on the content of electoral campaigns. The data identifies the percentage of sentences in party manifestos devoted to various issues, ranging from specific economic policy to ideological issues. For our purposes the most relevant is the percentage of sentences devoted to ‘economic orthodoxy,’ identified as (positive) references to, for instance, reductions of budget deficits, retrenchment in crisis, and “support for traditional economic institutions such as stock market and banking system” (Volkens et al. 2013). Such references can reasonably be expected to appeal to international investors (Mosley 2000). We create our measure of political pro-market rhetoric in the following way. For each country-year in which an election was held we create a variable that represents the percentage of sentences making positive references to ‘economic orthodoxy’ among all parties and then weigh this sum by the parties’ vote share in the election. This weighting scheme is carried out in order to ensure that the variable is not biased by small parties not representative of the political spectrum.¹⁴

TABLE 5 HERE

FIGURE 5 HERE

The first two columns in Table 5 provide results using this weighted share as dependent variable, using a simple linear regression.¹⁵ The first model omits the interaction between net

¹⁴ We obtain similar results using the non-weighted variable, but for conceptual reasons prefer the weighted variant.

¹⁵ We obtain similar results using a generalized linear model, as proposed by Papke and Wooldridge (1996) for variables that measure proportions and may include zero or one.

foreign assets and the US interest rate, while the second model includes it. The results show that on average, not taking a country's net debt position into account, US interest rates are not significantly related to more references to free-market ideology (column 1). However, once taking into account net foreign assets, higher US interest rates are associated with more references to economic orthodoxy, especially so when a country is a net foreign debtor (column 2). This relationship is shown graphically in the top panel of Figure 5. That panel shows the marginal effects calculated from column 2 together (with 95% confidence intervals) of a change in US interest rates from the sample mean to a one-standard deviation above the mean. As can be seen this effect is associated with 67 per cent more references to economic orthodoxy at the 5th percentile of net foreign assets, which is a country with a large amount of foreign liabilities (the bar labeled 'debtor'). While the large confidence interval suggests that this effect is not very precisely estimated, it is statistically distinguishable from 0. In contrast, the estimated effect of a change in US interest rates from the sample mean to a one-standard deviation above the mean is substantially and statistically insignificant for a country with neither foreign assets nor liabilities, which is shown by the second bar (labeled 'zero') in the top panel of Figure 5, as well as for a country that is a net creditor and at the 95th percentile of net foreign assets, which is the effect shown by the first bar (labeled 'creditor'). Thus, the same conditions that lead to more BITs being signed also lead to more political rhetoric promoting investor-friendly, pro-market policies.¹⁶

Second, it is possible that the empirical link between the combination of high US interest rates and large external foreign currency debt and participation in legalized economic institutions is in fact due to a link between those economic conditions and more support for economic

¹⁶ We obtain similar results using the free-market index created by Volkens et al. (2013).

globalization more generally. Perhaps the correspondence of capital scarcity and engagement with legalized forms of international economic relations reflects an ideological shift away from the belief that illiberal policies are an appropriate or useful approach to dealing with capital scarcity. If so, we would expect to see not only an embrace of the dispute settlement mechanism at the WTO and BITs, but also a refutation of more traditional policymaking responses such as tariffs or capital account closures.

The third and fourth columns in Table 5 and the middle panel of Figure 5 show that the coincidence of high US interest rates and net foreign liabilities is a substantial contributor to tariff increases (which within the bounds of the GATT/WTO may come in the form of reducing binding overhang or of appealing to balance-of-payments exemptions). A change in US interest rates from the sample mean to one standard deviation above the mean is associated with an increase in average applied tariff rates of 24 per cent for a country with net foreign liabilities at the 5th percentile of the sample. Unlike the association between US interest rates and investor friendly rhetoric, the association between US interest rates and tariffs is statistically significant across the range of net foreign liabilities. However, the effect does increase as liabilities increase and the difference between the effects estimated at the 5th percentile of net foreign assets and the 95th percentile is statistically significant at the 5 per cent level. While these findings should be interpreted with some caution, given the limited time coverage of only 1989 through 2011, they show that an embrace of economic globalization is not a necessary response to capital shortages. Instead, governments appear to do whatever they need to do to raise, attract, and retain access to foreign exchange.

The models presented in columns 5 and 6 in Table 5 show similar dynamics with respect to capital account management. If capital scarcity triggered an embrace of economic liberalism

and financial globalization, we would expect that countries also turn increasingly to opening their capital accounts in order to facilitate cross-border capital flows, or at the very least not choose this time to close capital accounts. Relying on data from Karcher and Steinberg (2013), we create a dummy variable equal to zero for country-years in which a country's capital account was either liberalized or stayed the same, and one for country-years in which a country restricted its capital account openness.¹⁷ As the results in Table 5 and the results in the bottom panel of Figure 5 show, the coincidence of high US interest rates and foreign net liabilities is not related to more open capital accounts, as an embrace of economic globalization would suggest, but with significantly and substantially more capital account closures. For a country at the 5th percentile of net foreign assets, a change in US interest rates from four to six percent increases the probability of a capital account closure by 43 per cent; the effect is significantly larger than the effect for a country with no foreign liabilities and for net creditors.

These findings suggest that the observed coincidence of high US interest rates and large foreign net liabilities and participation in legalized international economic institutions are not the result of a more general embrace of neo-liberalism ideas about policymaking. Participation in the legalized aspects of the global political economy such as the WTO or bilateral investment treaties is in many ways consistent with a broader ideational turn towards neo-liberalism and the “disembedding” of the state in the political economy. Yet, the findings that the same conditions give rise to some decidedly illiberal practices suggest that high US interest rates prompt countries with large foreign liabilities to do whatever they can to attract, retain, and raise foreign exchange, without much concern for whether those actions are identifiably liberal or illiberal.

¹⁷ The Karcher and Steinberg (2013) variable is an updated and revised version of the Chinn and Ito (2008) index. We obtain similar results using the continuous measure of capital account openness instead of the binary indicator.

Conclusion

This paper applies a fairly simple argument - countries that need to enhance and preserve access to foreign capital will tailor policymaking to that end - to answer why countries participate in legalized international economic institutions. Our results suggest that participation in these institutions can be traced to the interaction of high US interest rates and net financial liabilities, which is consistent with our argument.

These findings have a number of implications. First, by creating liberal avenues for countries to gain access to hard currency, the legalization of the international economic environment has changed the political implications of capital scarcity that were so evident during the interwar years. It is certainly not the case that the increased usage of legalized economic institutions during times of capital scarcity represents a reversal of the relationship between capital scarcity and illiberal policymaking. Governments still turn to plenty of illiberal policies. But the possibility to pursue liberal policies, and the frequency with which countries take advantage of these liberal channels, muddles that relationship. These liberal means may undermine the previously well-established link between capital scarcity and illiberal policies even more: membership in bilateral investment treaties, the emergence of a large body of trade law, and country-specific experience with trade disputes have long-lasting effects for the future economic trajectory of both the world economy and of individual countries, and these effects last far longer than the capital scarcity that brought them into existence in the first place.

This paper also suggests an interesting line of research into the ability of American administrations to promote legalized forms of international economic relations. During times of high interest rates and global capital scarcity, such initiatives should have much higher success chances than at times of amply available capital. This might be particularly notable insofar as

research suggests that the interest rate is not politically neutral. Clark and Arel-Bundock (2013) show that policies of the American Federal Reserve tend towards higher interest rates over the course of Democratic administrations and lower interest rates over the course of Republican administrations. This pattern should, on balance, bode well for Democratic globalizers but undermine their Republican counterparts.

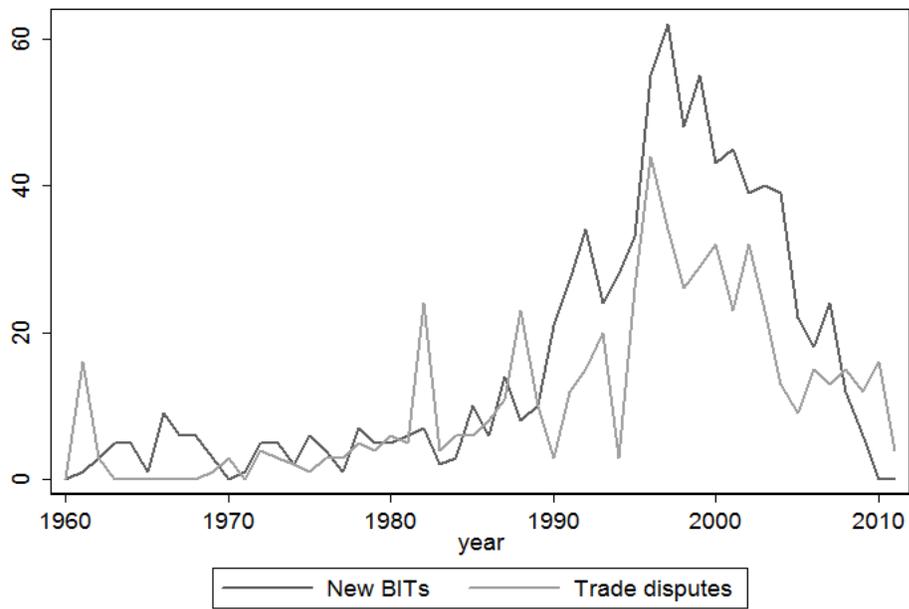


Figure 1: Number of new bilateral investment treaties signed per year and number of trade disputes filed at the GATT/WTO per year.

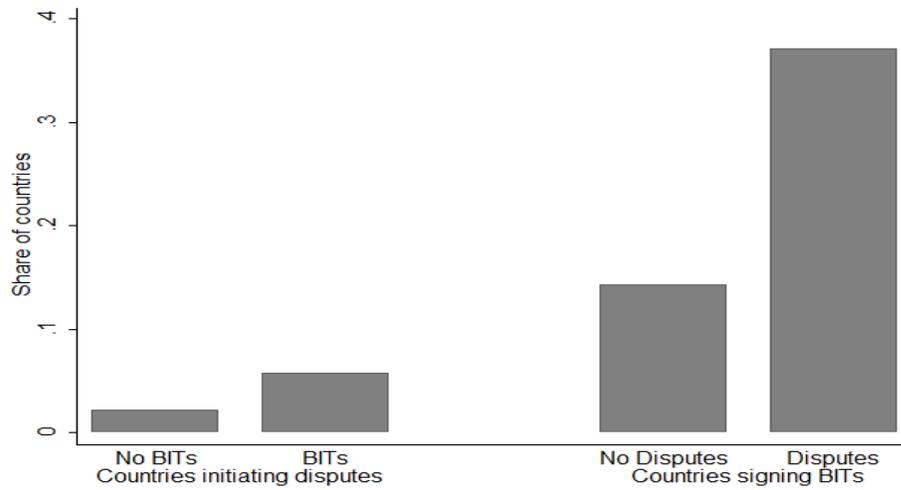


Figure 2: Left: Share of countries initiating trade disputes among countries that have not signed any new bilateral investment treaties within the last three years and among those countries that have signed at least one bilateral investment treaty within the last three years. Right: Share of countries signing bilateral investment treaties among countries that have not initiated any trade disputes within the last three years and among those countries that have initiated at least one trade dispute within the last three years.

Table 1: US interests and Financial Flows

	Log FDI	Log Portfolio	Log Remittances	Log Reserves
US interest rate (3-year avg)	-.17* (.10)	-.33*** (.09)	-.08*** (.03)	-.06*** (.01)
Log GDP	.99*** (.20)	.98*** (.20)	.73*** (.08)	.99*** (.03)
Year	.15*** (.03)	.09*** (.04)	.05*** (.01)	.03*** (.00)
Constant	-297*** (48.9)	-187*** (69.5)	-107*** (19.8)	-67.1*** (5.76)
Obs.	3662	2910	2842	4243
# of countries	121	118	117	124
years included	1970-2011	1963-2011	1970-2011	1963-2011

Linear regression coefficient estimates and robust standard errors, clustered on countries.
*** 1%, ** 5%, * 10%.

Table 2: Trade Disputes, BITs: US Interest Rates, Aggregate Results

	Disputes	Disputes	BITs	BITs
US interest rate (current)	.207*** (.004)		.211*** (.005)	
US interest rate (3-year avg.)		.310*** (.000)		.286*** (.000)
constant	1.18*** (.002)	.681* (.051)	1.85*** (.000)	1.52*** (.000)
No. Obs.	51	49	51	49
Years	1961-2011	1963-2011	1961-2011	1963-2011

Negative binomial regression, coefficient estimates and p-values.

*** significant at 1%, ** significant at 5%, *significant at 10%.

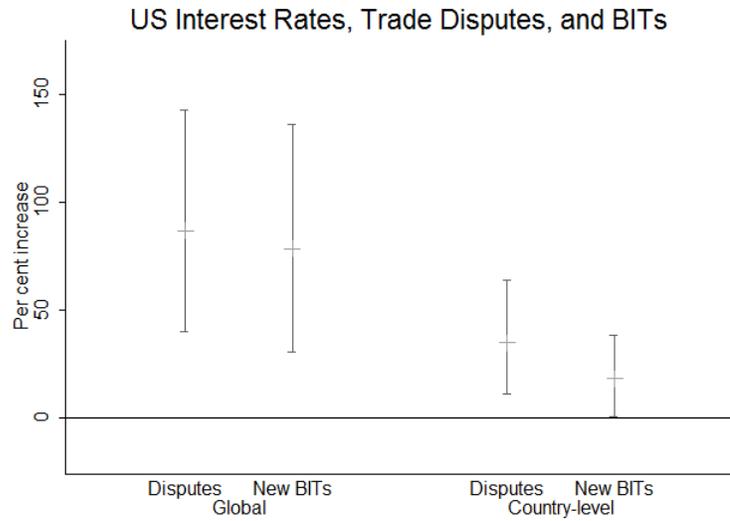


Figure 3: Effect of a change in US interest rates from sample mean (4 per cent) to one standard deviation above the sample mean (6 per cent). “Global” based on Table 2, columns 2 and 4, with yearly data. “Country-level” based on Table 3, columns 2 and 4, with country-year data and controls. Displayed effects are average marginal effects and 95 per cent confidence intervals.

Table 3: Trade Disputes, BITs: US Interest Rates, Country-Level Results

	Disputes	Disputes	BITs	BITs
US interest rate (3-year avg.)	.185*** (.000)	.149*** (.002)	.093** (.022)	.083** (.042)
GDP	4.61*** (.003)	.362 (.596)	.676 (.114)	2.47** (.013)
US growth	.038 (.383)	.039 (.331)	-.047 (.176)	-.007 (.818)
Domestic Growth	-.073 (.895)	-.823 (.241)	.081 (.792)	.255 (.350)
World Growth	-2.71 (.252)	-3.64 (.108)	-3.24* (.059)	-4.98*** (.000)
Trade		.720*** (.000)		
FDI				-.051** (.020)
Year	.027*** (.004)	-.011 (.290)	.033*** (.000)	.039*** (.000)
Constant	-57.9*** (.002)	2.51 (.901)	-67.4*** (.000)	-79.7*** (.000)
No. Obs.	3560	3466	4132	3254
No. Countries	126	124	122	116

Negative binomial regression, coefficient estimates and p-values.

*** significant at 1%, ** significant at 5%, *significant at 10%.

Table 4: Trade Disputes, BITs: US Interest Rates and Net Foreign Assets

	Disputes	Disputes	BITs	BITs
US interest rate	.066	.078	.075*	.073*
(3-year avg.)	(.202)	(.107)	(.083)	(.072)
x net foreign assets	-3.19***	-1.60**	-.907*	-.835*
	(.008)	(.013)	(.090)	(.077)
Net foreign assets	4.59	2.32	2.35	3.30**
	(.306)	(.290)	(.204)	(.032)
GDP	2.64***	.771***	.619**	2.25**
	(.000)	(.008)	(.030)	(.020)
US growth	.015	.012	-.016	-.007
	(.760)	(.804)	(.622)	(.819)
Domestic Growth	.277	-.336	.248	.260
	(.557)	(.549)	(.356)	(.341)
World Growth	-3.66	-3.47	-3.62**	-4.93***
	(.117)	(.136)	(.043)	(.000)
Trade		.595***		
		(.000)		
FDI				-.047**
				(.041)
Year	.009	-.022*	.036***	.038***
	(.404)	(.075)	(.000)	(.000)
Constant	-21.9	26.5	-73.5***	-77.2***
	(.325)	(.264)	(.000)	(.000)
No. Obs.	3094	3048	3407	3183
No. Countries	119	119	116	115

Negative binomial regression, coefficient estimates and p-values.

*** significant at 1%, ** significant at 5%, *significant at 10%.

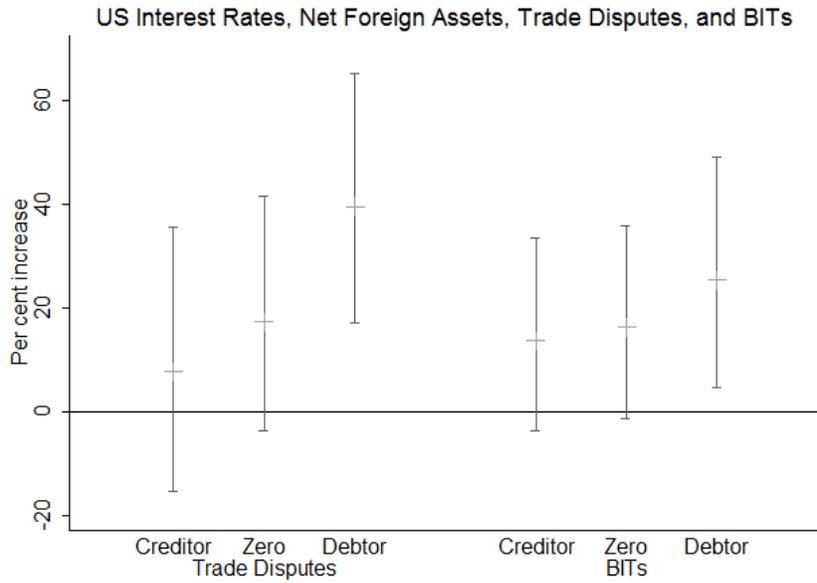


Figure 4: Effect of a change in US interest rates from sample mean (4 per cent) to one standard deviation above the sample mean (6 per cent). *Creditor* is at 95th percentile of net foreign assets, *Zero* is zero assets/liabilities, *Debtor* is at 5th percentile of net foreign assets. “Trade Disputes” based on Table 4, column 2, “BITs” based on Table 4, column 4. Displayed effects are average marginal effects and 95 per cent confidence intervals.

Table 5: Corollaries -- Rhetoric, Tariffs, Capital Accounts

	Campaign Rhetoric	Campaign Rhetoric	Tariffs	Tariffs	Capital Accounts	Capital Accounts
US interest rate	.024	.027	1.021***	.975***	.139***	.126***
(3-year avg.)	(.394)	(.288)	(.000)	(.000)	(.000)	(.002)
x net foreign assets		-.308**		-5.10***		-1.50**
		(.013)		(.003)		(.011)
Net foreign assets		.711		6.32		1.98
		(.325)		(.175)		(.359)
GDP	.113	-.083	.339	1.02	-.113	-.884
	(.549)	(.828)	(.668)	(.305)	(.678)	(.124)
US growth	.024	.013	.192**	.140	-.061*	-.056
	(.178)	(.497)	(.023)	(.105)	(.082)	(.121)
Domestic Growth	-.577**	-.444**	-5.26**	-5.34**	.861**	.885**
	(.018)	(.013)	(.013)	(.013)	(.010)	(.012)
World Growth	.606	.507	9.40	14.01	3.31**	3.96***
	(.596)	(.678)	(.352)	(.178)	(.020)	(.005)
Constant	.067	.098	5.96***	6.00***	-3.49***	-3.46***
	(.659)	(.455)	(.000)	(.000)	(.000)	(.000)
No. Obs.	95	77	1251	1224	4541	3736
No. Countries	25	21	120	118	127	120

Negative binomial regression, coefficient estimates and p-values.

*** significant at 1%, ** significant at 5%, *significant at 10%.

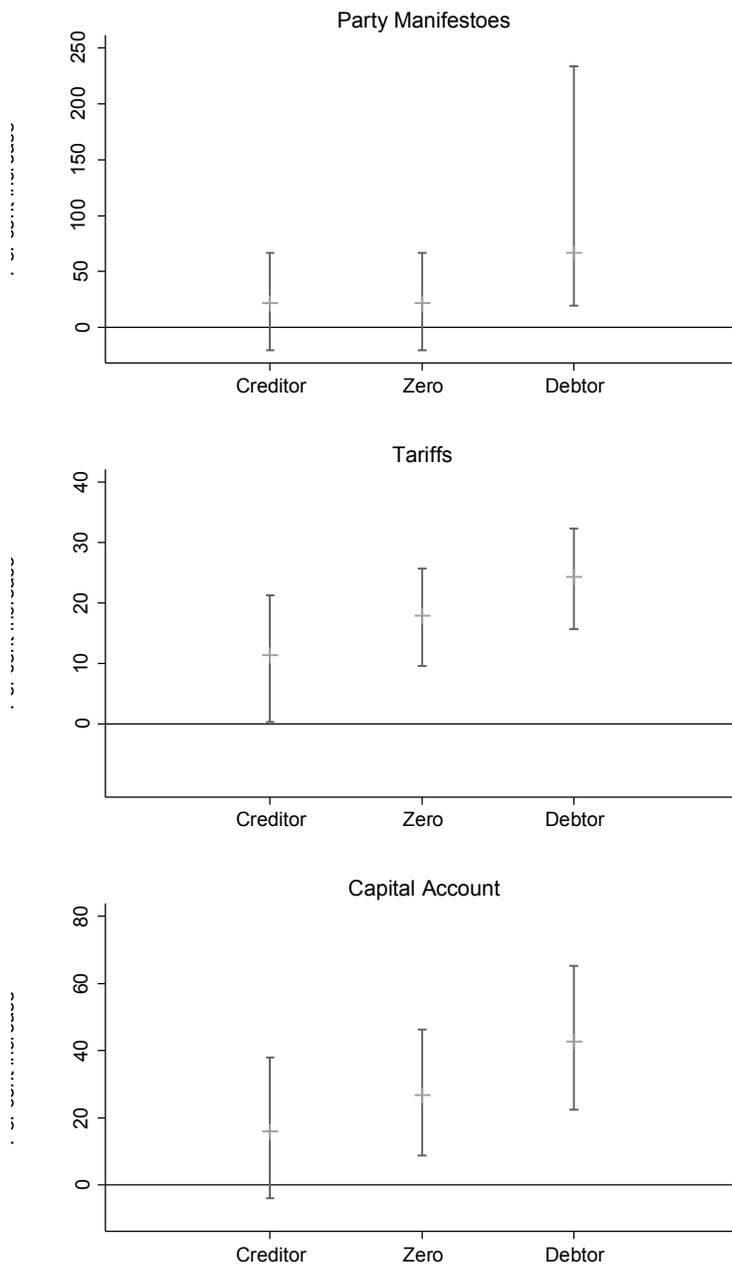


Figure 5: Effect of a change in US interest rates from sample mean (4 per cent) to one standard deviation above the sample mean (6 per cent). *Creditor* is at 95th percentile of net foreign assets, *Zero* is zero assets/liabilities, *Debtor* is at 5th percentile of net foreign assets. “Party Manifestoes” based on Table 5, column 2 (references to economic orthodoxy in party platforms), “Tariffs” based on Table 5, column 4 (applied tariff rate), “Capital Account” based on Table 5, column 6 (capital account closures). Displayed effects are average marginal effects and 95 per cent confidence intervals.

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Table A1: Countries included in sample

Albania	Grenada	Pakistan
Angola	Guatemala	Panama
Antigua and Barbuda	Guinea	Papua New Guinea
Argentina	Guinea-Bissau	Paraguay
Armenia	Guyana	Peru
Australia	Haiti	Philippines
Bahrain	Honduras	Poland
Bangladesh	Hong Kong	Qatar
Barbados	Hungary	Rwanda
Belize	India	Saint Lucia
Benin	Indonesia	Saudi Arabia
Bolivia	Israel	Senegal
Botswana	Ivory Coast	Sierra Leone
Brazil	Jamaica	Singapore
Brunei Darussalam	Japan	Slovakia
Bulgaria	Jordan	Slovenia
Burkina Faso	Kenya	Solomon Islands
Burundi	Korea	South Africa
Cambodia	Kuwait	Sri Lanka
Cameroon	Kyrgyz Republic	Suriname
Cape Verde	Latvia	Swaziland
Central African Republic	Lesotho	Tanzania
Chad	Liechtenstein	Thailand
Chile	Lithuania	Togo
China	Macedonia	Tonga
Colombia	Madagascar	Trinidad and Tobago
Congo	Malawi	Tunisia
Costa Rica	Malaysia	Turkey
Croatia	Maldives	Uganda
Cuba	Mali	Ukraine
Cyprus	Malta	United Arab Emirates
Czechoslovakia	Mauritania	Uruguay
Djibouti	Mauritius	Venezuela
Dominica	Mexico	Viet Nam
Dominican Republic	Moldova	Zambia
Ecuador	Mongolia	Zimbabwe
Egypt	Morocco	
El Salvador	Mozambique	
Estonia	Namibia	
Fiji	Nepal	
Finland	New Zealand	
Gabon	Nicaragua	
Gambia	Niger	
Georgia	Nigeria	
Ghana	Oman	