The political economy of conditionality: An empirical analysis of World Bank enforcement

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Abstract:

Traditional aid conditionality has been attacked as ineffective in part because aid agencies – notably the World Bank – often fail to enforce conditions. This pattern undermines the credibility of conditionality, weakening incentives to implement policy reforms. The standard critique attributes this time inconsistency to bureaucratic factors within the aid agency such as pressure to lend, defensive lending, or short-sighted altruism. Pressure from powerful donors provides another potential explanation for lax enforcement. This paper presents an empirical analysis of the political economy of conditionality enforcement in international organizations using the case of the World Bank and the United States. The analysis examines panel data on World Bank disbursements to 97 countries receiving structural adjustment loans between 1984 and 2005. Using macroeconomic variables to measure compliance and UN voting as an indicator of alignment with the U.S., this paper presents evidence that the World Bank enforces structural adjustment conditions more vigorously in countries not aligned with the United States.

Key words: World Bank, Structural Adjustment, Conditionality, United States

JEL codes: F35, F53, F55, O19

For my friends, anything; for my enemies, the law.
– Oscar R. Benavides, President of Peru, 1914-1915 and 1933-1939

I. Introduction

Traditional aid conditionality has been attacked as ineffective in part because aid agencies – notably the World Bank – often fail to enforce conditions (Mosley et al., 1995; Collier, 1997; Dreher, 2004). This pattern undermines the credibility of conditionality, weakening developing country governments' incentives to implement policy reforms. The standard critique attributes this time inconsistency to bureaucratic factors within the aid agency such as pressure to meet lending targets, defensive lending to promote repayment of past loans, or short-sighted altruism (Svensson, 2003). Yet the cost for the aid agency of lax enforcement is high since it fuels expectations that other conditions – across the agency's portfolio – also will not be enforced and hence broadly undermines compliance.

Pressure from powerful donors with geopolitical or commercial interests in the recipient country provides another potential explanation for lax enforcement of aid conditions (as suggested in Kanbur, 2000). This paper presents an empirical analysis of the political economy of conditionality enforcement in international organizations using the case of the World Bank and the United States. Because project-level disbursement data are not publically available for World Bank lending, the analysis examines overall World Bank disbursements when structural adjustment loans (SALs) are active using a panel of 97 countries from 1984 to 2005. I use macroeconomic variables to measure compliance with typical structural adjustment conditions. Data are widely available only for two relevant variables, inflation and the percentage change in the official exchange rate. I interact these variables with a measure of U.S. geopolitical interests to investigate the hypothesis that the World Bank responds to U.S. pressure to disburse SALs to U.S.-friendly countries

regardless of compliance with loan conditions. The U.S. interest variable is a measure of UN voting alignment similar to Andersen, Harr and Tarp (2006). It reflects countries making concessions to the U.S., i.e., deviating from their normal voting position toward the U.S. position on votes that the U.S. considers important. The fixed effects estimation finds that compliance variables have a significant link to disbursements when countries are not aligned with the U.S. but no significant or substantial effect when countries are aligned with the U.S. This is consistent with the donor pressure explanation of lax enforcement.

Understanding the reasons for non-enforcement of conditions is important as they may influence the success of efforts to reform international organizations. Many reform proposals focus on changing bureaucratic incentives (e.g., linking pay and promotion to outcomes) or on reducing institutional information and commitment problems (e.g., aid tournaments as suggested by Pietrobelli and Scarpa (1992) and Svensson (2003)). Such reforms may have significant merit but do not address the issue of donor pressure directly and hence could yield smaller gains and be more difficult to implement than expected. Other reforms that restrict direct donor influence in international financial institutions (IFIs) – changes in governance, donor financing, and perhaps headquarters location – also need to be considered.

II. Background

Many argue that World Bank structural adjustment conditions have not been enforced: The World Bank sets macroeconomic and institutional reforms as conditions for releasing funds from a SAL, the recipient government fails to satisfy these conditions, and the World Bank releases funds anyway (Mosley et al., 1995; Killick, 1995; Kanbur, 2000). A number of explanations have been offered for this behavior. Svensson (2000) develops the Samaritan's dilemma explanation where conditionality enforcement is not credible because the donor prefers to provide aid in all cases.

Others suggest bureaucratic pressures including a "pressure to lend" to advance loan officers' careers and "defensive lending" to ensure repayment of past loans (Mosely et al., 1995; Martens et al., 2002). Finally, donor pressure is suggested by Kanbur (2000) and modeled by Mavrotas and Villanger (2006). As Kanbur (2000, p. 415) puts it:

> But in other instances it is, again only apparently paradoxically, in the donor's direct self interest not to impose the sanction of aid withdrawal when conditionality is violated. The most obvious case of this is political clientelism. How else can one explain the repeated [World Bank] tranche releases to Zaire and Senegal in the 1980s and early 1990s, for example, despite continued failure to comply with adjustment conditionality, except in terms of pressure from the US and the French?

In this paper, I pursue this aspect of structural adjustment – the impact of donor interests on World Bank SAL disbursement. I focus on U.S. interests since the U.S. is the single most influential member of the World Bank and data on U.S. interests are more widely available. A number of researchers have explored the impact of donor interests on IFIs, including the IMF (Andersen, Harr and Tarp, 2006; Dreher and Jensen, 2007; Harrigan et al., 2006; Stone, 2002, 2004; Thacker, 1999; Vreeland, 2005), the World Bank (Andersen, Hansen and Markussen, 2006; Fleck and Kilby, 2006; Frey and Schneider, 1986; Harrigan et al., 2006) and regional development banks (Kilby, 2006). The current paper follows most closely Vreeland (2005) and Stone (2002, 2004) in spirit.

Vreeland (2005) examines two views of the IMF: "IMF as scapegoat" and "IMF as U.S. piggy bank" (my terms, not Vreeland's). In the scapegoat camp, many at the IMF and elsewhere claim that Fund programs serve as a commitment device. Reform-minded politicians in IMF program countries can deflect popular criticism of the short-term hardships of stabilization onto the IMF and hence remain in power and stay the course. To the extent that the policies promoted are

in the country's long run interests, the IMF is a useful scapegoat. Vreeland points out that this function could be particularly important for a recipient government when its administration has limited power, e.g., in a system with multiple veto players. In the "IMF as U.S. piggy bank" view, international politics influence IMF lending decisions. Countries friendly with the U.S. get preferential access to IMF funds. Vreeland notes that the IMF can only serve as scapegoat when it can credibly threaten to withhold funds, e.g., in countries where it is not providing funds at the behest of the U.S.

To test these theories, Vreeland examines the probability that countries enter into an IMF agreement. Ceteris paribus, this probability is significantly higher for countries with more veto players and for countries moving toward the U.S. position in UN voting. However, the interaction of these two variables enters with a negative sign, suggesting that the scapegoat function is less important for countries friendly with the U.S. This supports the view that the effectiveness of conditionality is undermined by pressure from powerful donors.

Looking at IMF lending in Africa, Stone (2004) comes to a similar conclusion: the IMF fails to enforce its conditions fully when major donor countries interfere. The duration of program interruptions – the key indicator of IMF enforcement – is shorter for countries that are important to major donors (the U.S., France or the U.K.). Measures of importance include the volume of bilateral aid, the strength of post-colonial ties, and UN voting alignment. Stone (2002) reports similar results for Eastern European countries during the post-communist transition period. Overall, conditionality is less effective, program interruptions are more frequent (though shorter), and private capital less responsive in larger countries that were more important to major IMF donors.

This paper presents the first econometric study of the impact of donor interests on the disbursement of World Bank structural adjustment loans. To address the question directly, one

would like to have the difference between planned and actual SAL tranche disbursements, the ex ante policy reform/macroeconomic conditions for each tranche release, the values of these variables at the planned and actual times of tranche release, and measures of the borrowing country's importance to the U.S. In practice, little of this data is systematically available outside the World Bank. We do know when countries were under World Bank structural adjustment programs. Data on disbursements are not available by loan but are available by country from the OECD DAC *International Development Statistics*. We do not know specific conditions on individual loans but several variables are key indicators in structural adjustment programs. In the empirical section, I focus on the two relevant indicators with widely available data, inflation and exchange rates. I include a measure of UN voting alignment to capture U.S. interests.

Since this test is necessarily indirect, it is useful to trace out the indirect impact of the hypothesis and to explore what other factors might influence the results. The variable of interest is the difference between actual and planned World Bank SAL disbursements to country i in year t whereas the available data are overall World Bank disbursements (SAL plus project disbursements) to country i in year t. The next section starts with the former to derive an equation in terms of the latter.

III. Conditionality Enforcement Equation

Our starting point is to examine what percent of a SAL tranche disburses. If the conditions of the SAL are fully met, 100% should disburse regardless of other factors. If conditions are not fully met, a political economy perspective suggests that the percent disbursed may depend both on the degree of slippage and on whether the borrower is important to a powerful donor, in this case the U.S. Define d_{it}^{SAL} as actual SAL disbursements to country i in year t and d_{it}^{SAL*} as planned SAL disbursements to country i in year t (i.e., the scheduled tranche). Conditionality "slippage" is given

by $\Delta m_{it} = m_{it} - m_{it}^*$ where m_{it} is the value of some macroeconomic variable (e.g., fiscal deficit) and m_{it}^* is the upper limit specified in SAL documents.[1] With this notation, we can write the disbursement percentage as a function of conditionality slippage and borrower importance:

$$d_{it}^{SAL} / d_{it}^{SAL*} = f(\Delta m_{it}, US_{it}) \tag{1}$$

One convenient form for this function is:

$$d_{it}^{SAL} / d_{it}^{SAL*} = e^{(\beta_1 \Delta m_{it} + \beta_2 \Delta m_{it} US_{it})} \tag{2}$$

where $\beta_1 < 0$ and $\beta_2 > 0$. For simplicity, consider the case where US_{it} is an indicator variable equal to 1 if the borrower is a U.S. friend, 0 if not. In this case, it makes sense that $\beta_2 \leq |\beta_1|$ or equivalently $\beta_1 + \beta_2 \leq 0$. This specification yields $d_{it}^{SAL} / d_{it}^{SAL*} = 1$ when there is no slippage ($\Delta m_{it} = 0$); the tranche is fully disbursed. With slippage ($\Delta m_{it} > 0$), there are two possible cases. If the borrower is not a U.S. friend, the exponent $\beta_1 \Delta m_{it}$ is negative and $d_{it}^{SAL} / d_{it}^{SAL*} < 1$. If the borrower is a U.S. friend, the exponent $(\beta_1 + \beta_2)\Delta m_{it}$ is greater (less negative) so that $d_{it}^{SAL} / d_{it}^{SAL*}$ is greater. If U.S. friends face no enforcement of conditions, $(\beta_1 + \beta_2)\Delta m_{it} = 0$ and $d_{it}^{SAL} / d_{it}^{SAL*} = 1$ regardless of the value of Δm_{it}.

Taking logs of both sides and rearranging yields

$$\ln d_{it}^{SAL} = \ln d_{it}^{SAL*} + \beta_1 \Delta m_{it} + \beta_2 US_{it} \Delta m_{it} \tag{3}$$

This equation includes two unobserved right-hand side variables, d_{it}^{SAL*} and m_{it}^*. I assume d_{it}^{SAL*} is proportional to original commitments ($d_{it}^{SAL*} = \gamma c_{it}^{SAL}$, $\gamma \in (0,1]$) and take m_{it}^* as a constant, m^*.[2] This gives

$$\ln d_{it}^{SAL} = \beta_0 + \beta_1 m_{it} + \beta_2 US_{it} m_{it} + \beta_3 US_{it} + \ln c_{it}^{SAL} \tag{4}$$

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[1]For simplicity, I take $\Delta m_{it} \geq 0$, i.e., a country's macroeconomic performance is never substantially better than the conditions specified in the SAL agreement.

[2]Original commitments refer to the loan amount specified in SAL agreements for all on-going SALs during year t rather than just commitments for new programs in year t. Some percentage of this amount is intended to disburse each year, e.g., one third each year in 3 year SALs.

where $\beta_0 = \beta_1 m^* + \ln\gamma$ and $\beta_3 = -\beta_2 m^* > 0$. The left-hand side variable, SAL disbursements (d_{it}^{SAL}), is also unobserved. Instead, we have disbursements at the country level, the sum of SAL and project disbursements ($d_{it} \equiv d_{it}^{SAL} + d_{it}^{PRJ}$). Project disbursements depend on original project commitments (c_{it}^{PRJ}) and country-specific characteristics that influence the speed of project implementation.[3] To account for this, we replace d_{it}^{SAL} by d_{it}, replace c_{it}^{SAL} by $c_{it} \equiv c_{it}^{SAL} + c_{it}^{PRJ}$, and include country fixed effects.[4] Our estimating equation, allowing for unexplained variation in disbursements, is

$$\ln d_{it} = \alpha_i + \beta_1 m_{it} + \beta_2 US_{it} m_{it} + \beta_3 US_{it} + \ln c_{it} + \varepsilon_{it} \quad (5)$$

The central implications of the model developed are that $\beta_1 < 0$, $\beta_2 > 0$ and $\beta_1 + \beta_2 \leq 0$.

IV. Data

The dependent variable (World Bank disbursements d_{it}) is the sum of gross disbursements from the IDA and the IBRD to country i in year t. Data come from the *International Development Statistics* CD-ROM (OECD, 2006, 2007) deflated to constant 2005 U.S. dollars in millions.[5] Commitment data are from the World Bank *Projects Database* (World Bank, 2007A), also deflated to constant 2005 U.S. dollars in millions (using year t rather than the original commitment year). These are "original commitments" as defined above, i.e., the sum of the original loan amounts for all loans that are on-going in country i during year t.

To proxy for m_{it}, I draw on the World Development Indicators (WDI) for macroeconomic

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[3]Original commitments for projects refer to the loan amounts for on-going projects, rather than commitments made for new projects during year t.

[4]Factors influencing implementation speed that also vary over time contribute to the error term. This raises the possibility of within-country autocorrelation; to allow for this, I use panel corrected standard errors (i.e., heteroskedasticity and autocorrelation consistent standard errors via clustering on countries) and estimate an AR1 process in Table 6.

[5]OECD (2007) excludes former Part II and CEEC/NIS countries per new OECD DAC classification guidelines. I use earlier data from OECD (2006) for these countries.

variables that may capture the degree of compliance with structural adjustment conditions. While the WDI contains a number of relevant indicators, only two, inflation and the official exchange rate, are available for a wide range of countries and over the full time period. Inflation (the annual increase in consumer prices) may also reflect the government's fiscal deficit in the previous year.[6] I use the official exchange rate (local currency units per dollar, annual average) to construct the percent change from one year to the next. Since devaluation (an increase in the exchange rate as defined here) is often a condition of structural adjustment loans, this variable is analogous to $-m_{it}$ in equation (5).

The measure of U.S. friendship (US_{it}) is derived from UN voting in the previous year. Andersen, Harr and Tarp (2006) take the overall voting record as the country's ideal point. The distance between that point and the country's voting on issues designated as important by U.S. State Department then reflects concessions to the U.S. I operationalize this by calculating distance as the difference between the country's alignment with the U.S. on "important" UN votes and its alignment with the U.S. on all UN votes. Country i is a U.S. friend in year t if it made concessions to the U.S. position the previous year, i.e., if it was more closely aligned with the U.S. on "important" UN votes than on all UN votes.[7]

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[6]WDI data on the previous year's fiscal deficit to GDP ratio are available for only 324 observations and 56 countries between 1991 and 2005 in the estimation sample. The in-sample correlation between inflation and the previous year's deficit to GDP ratio is 0.27. A regression of inflation on the lagged deficit using the same sample yields a coefficient of 1.

[7]I use the previous year because UN votes take place in the last quarter of the calendar year while World Bank disbursements happen throughout the year (peaking at the end of the fiscal year in June). Results are very similar using contemporaneous votes. The voting alignment calculation is the same as in Kilby (2006) and closely follows Thacker (1999) and Dreher and Jensen (2007). For each vote, a country scores a 1 if it follows the U.S., a 0.5 if it abstains or is absent when the U.S. votes (or vice versa), and a 0 if it opposes the U.S. A country's alignment is its mean score for the year and is calculated separately for all votes and for "important" votes. In their analyses of U.S. influence, Thacker (1999) and Vreeland (2005) use movement toward the U.S. position over time;

Table 1 reports descriptive statistics for the estimation sample. The sample covers the period 1984 to 2005, the starting year set by the start of State Department UN voting data and the ending year set by the latest available OECD DAC disbursement data and WDI macro data. Coverage is limited to observations with on-going World Bank-funded SALs as indicated in the World Bank *Projects Database*.[8] World Bank disbursements averaged $289 million in constant 2005 dollars, ranging from a low of $358,000 to Panama in 1993 to a high of $4.6 billion to Mexico in 1990. The average of the natural log of disbursements is 4.78 ($119 million). World Bank original commitments (as defined above) averaged $1.9 billion in constant 2005 dollars, ranging from a low of $6.4 million to Dominica in 2004 to a high of $30.5 billion to India in 1991. The average of the natural log of original commitments was 6.7 ($812 million). Eighty-seven percent of the observations were for U.S. friends. Inflation averaged 35.4%, ranging from deflation of 17.6% in Equatorial Guinea in 1986 (the year after adopting the CFA franc) to inflation of 3,079.8% in Argentina in 1989. For U.S. friends, the average inflation rate was 33.4% with the same range as inflation overall. The percentage change in the official exchange rate averaged 57.7%, with a low of -22.9% in several CFA franc countries (Central African Republic, Congo-Brazzaville, Côte d'Ivoire, Equatorial Guinea, Niger, Senegal, and Togo) driven by appreciation of the French franc against the U.S. dollar in 1986 and a high of 13,932% in Bolivia in 1985. For U.S. friends, the average was 54.3% with the same range as overall. These figures illustrate that mean inflation and exchange rate values do not differ substantially between U.S. friends and other countries receiving

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this paper and Andersen, Harr and Tarp (2006) use movement toward the U.S. position based on issues rather than time. Data on all UN votes are from Voeten (2004); data on UN votes designated as important for the U.S. are from U.S. State Department (1983-2006).

[8]A SAL is indicated by LENDING INSTRUMENT TYPE equal to "DEVELOPMENT POLICY LENDING".

World Bank SALs.

Table 2 presents simple correlations between the variables in the estimation sample. As one would expect, there is a very high correlation (almost 0.9) between disbursements and original commitments, with only cancellations, varying speeds of disbursements, and compositional effects keeping the correlation below 1. The next highest correlation (0.35) is between the lagged percent change in exchange rate and the current inflation rate. The positive correlation is consistent with the inflationary effects of devaluation yet low enough that these variables may capture different effects. At 0.0865 and 0.107, the correlations of inflation with disbursements and original commitments are moderate in size. All other correlations are small.

V. Estimation Results

This section presents results from panel estimation with country fixed effects. The statistics reported are based on heteroskedasticity and autocorrelation robust standard errors unless otherwise noted, though the results are generally not sensitive to the method used (standard, sandwich-type, or bootstrap). All specifications include a time trend (generally insignificant); results are virtually identical if the trend is replaced by annual dummies. A Hausman test strongly rejects the null hypothesis of no country fixed effects although results are qualitatively the same without fixed effects.[9] All specifications using the full sample explain between 25 and 35 percent of the time series variation in the data.[10]

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[9]A Hausman test fails to reject the null hypothesis of random effects against the alternative of fixed effects (p=0.5975) so this is a route one could take if there were time invariant country-specific characteristics of interest.

[10]There are 44 additional data points with zero disbursements that are not included in the sample. This proves to be too few to estimate a selection model or a meaningful probit. Results from a tobit analysis (replacing log of 0 with a small number and setting the tobit lower limit just below the log of the lowest actual positive value) are virtually the same as those reported though

Column 1 of Table 3 gives estimation results for a basic specification that includes original commitments, inflation and percent change in the official exchange rate. The estimated coefficient on commitments is highly significant and statistically indistinguishable from 1. One percent larger commitments are associated with approximately one percent higher disbursements, consistent with the coefficient on $\ln c_{it}$ in equation (5) of Section III. Inflation enters with a negative sign as expected (e.g., if higher fiscal deficits both violate conditionality and generate inflation); however, the coefficient is estimated with a large standard error and is not statistically different from zero. The percentage change in exchange rate enters with an unexpected negative sign but again the standard error is very large and the coefficient estimate is not statistically significant. Column 2 adds *US friend*. The estimated coefficient has the expected positive sign but is also insignificant. The other coefficient estimates do not change substantially.

Column 3 is the benchmark specification with interactions between the *US friend* dummy variable and the macroeconomic indicators. The estimated coefficient on *inflation* remains negative but increases an order of magnitude in absolute value and is statistically significant. The estimated coefficient on the inflation interaction term is positive, significant and nearly the same magnitude as the coefficient on *inflation*. A Wald test fails to reject the hypothesis that the two coefficients sum to zero (p=0.4951), i.e., $\beta_1 + \beta_2 = 0$ in equation (5). Thus, for countries that are not U.S. friends, higher inflation is associated with lower disbursements. For countries that are U.S. friends, there is no link between inflation and disbursements. Putting this in dollar terms, for non-U.S. friends, a one standard deviation increase in inflation (193 %) is associated with $89 million lower disbursements (evaluated at the mean of the log of disbursements). A smaller increase in inflation, say 20%, is associated with $16 million lower disbursements while a one percent increase in

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without fixed effects.

inflation works out to just under $1 million lower disbursements.[11]

We see a similar pattern with the exchange rate. The estimated coefficient on *% Δ exchange rate* becomes positive and is statistically significant. The estimated coefficient on the exchange rate-U.S. friend interaction term is negative, significant and nearly the same magnitude as the coefficient on *% Δ exchange rate*. Again, a Wald test fails to reject the hypothesis that the two coefficients sum to zero (p=0.6641). For countries that are not U.S. friends, a devaluation of their currency (as reflected in the percent increase in the official local currency units per dollar exchange rate) is associated with higher disbursements. For countries that are U.S. friends, devaluation is not linked to disbursements. Put more directly in terms of conditionality, when countries are not U.S. friends, disbursements are lower when they fail to devalue their currency. When countries are U.S. friends, disbursements are unrelated to whether or not they devalue. In dollar terms, for non-U.S. friends, a one standard deviation decrease in *% Δ exchange rate* (4.93) is associated with $57 million lower disbursements. A smaller decrease (say from the sample mean of 0.577 to no change) is associated with $9 million lower disbursements while a one percent decrease in *% Δ exchange rate* works out to $0.2 million lower disbursements.[12]

These results are fairly robust along a number of dimensions. Table 4 presents three alternative specifications. Column 1 omits exchange rate variables. The estimated coefficients for inflation are somewhat smaller in magnitude than before (possible because devaluation in year t−1 is correlated with high – though falling – inflation in year t) but the general pattern remains. Higher

[11]The numbers are larger if we use average disbursements ($289 million) rather than the average of the log ($119 million) as the latter downplays large disbursements. In this case, the figures work out to be $216 million, $39 million, and $2 million.

[12]Again using the average of disbursements as in the footnote above, the figures rise to $137 million, $21 million, and $0.4 million.

inflation is linked to significantly lower disbursements only when countries are not U.S. friends. Column 2 omits inflation. Again, the magnitude of the effect is reduced but the pattern remains with exchange rate policy having no apparent effect on disbursements in U.S.-friendly countries. Column 3 goes the other direction, presenting the results of a "kitchen sink" regression. This specification has both inflation and exchange rates but adds a number of variables considered in past aid allocation studies. These include GDP per capita, population, trade, the autocracy/democracy polity rating, a governmental transition dummy, a major conflict dummy, a post-conflict dummy, and the number killed by natural disasters.[13] While these variables may influence the level of commitments, they matter relatively little for disbursements once we control for commitments.[14] Most importantly,

[13]The GDP variable is the log of PPP GDP per capita in constant 2005 dollars (World Bank, 2007B). Population is the log of the country's population (World Bank, 2007B). Trade is the log of exports plus imports in millions of 2005 dollars, lagged one year to reduce the chance of endogeneity (IMF 2006). The polity rating is "polity2" from the Polity IV Project (2005) with interpolation during periods of governmental transition. The governmental transition dummy captures these periods. The conflict dummy equals 1 for countries involved in internal conflicts with at least 1000 deaths in that year (Gleditsch et al., 2002). The post-conflict dummy equals 1 if the country emerged from conflict (as defined above) in the last five years. The number of people killed by natural disaster is in thousands (EM-DAT, 2007). Most aid allocation studies include GDP and population, typically as indicators of recipient need. Trade also enters a number of analyses of the World Bank and other donors (e.g., Fleck and Kilby, 2006). Polity is frequently included in the analysis of bilateral aid; recently, researchers have begun to include democracy in multilateral estimations as a proxy for good institutions (e.g., Dollar and Levin, 2006). The governmental transition dummy was introduced by Kang and Meernik (2004). Canavire et al. (2005), Collier and Hoeffler (2004), and Kang and Meernik (2004) all examine aid allocation in post-conflict situations. Drury et al. (2005) and Eisensee and Strömberg (2007) consider the impact of natural disasters on aid.

[14]Only the post-conflict variable is significantly related to disbursements once we control for original commitments and this only at the 10 % level. This variable may reflect rapid disbursements from the World Bank's Post-Conflict Fund that started in 1997 though the variable is generally insignificant in sub-samples. Results are the same including each of these additional variables individually. Other than trade, these additional variables arguably reflect humanitarian factors that the Samaritan's dilemma would link to less enforcement and hence higher disbursements. Six of eight have the expected sign but only post-conflict is even marginally significant. Thus, this specification provides scant support for the Samaritan's dilemma explanation of lax enforcement of World Bank structural adjustment conditions.

the estimated coefficients for inflation and exchange rates change very little with these additional control variables.

Table 5 presents results for the benchmark specification estimated with various sub-samples. Column 1 includes only countries from Sub-Saharan Africa, the region with the most countries (34). The sample size falls to 462 observations (an average of 14 annual observations per country). As before, original commitments are strongly linked to disbursements with a coefficient point estimate greater than one but statistically indistinguishable from one (p=0.2321). *US friend* enters with an unexpected negative sign but is not statistically significant. The inflation and exchange rate variables enter with the same signs as in the overall sample, again suggesting that the World Bank enforces macroeconomic conditions of structural adjustment programs in countries that are not U.S. friends but not in those that are. For African countries that are not U.S. friends, disbursements are lower when inflation is higher and when the local currency has been devalued less. For countries that are U.S. friends, the effects (the sum of the direct and interaction terms) are not statistically significant (p=0.7259 for *inflation* and p=0.4811 for *% Δ exchange rate*).

The results for Latin America and the Carribean in Column 2 are based on a much smaller sample (260 observation on 22 countries, an average of 12 years per country). The story is much the same as before for inflation with consumer price increases having a negative link with disbursements only in countries that are not U.S. friends. The percentage change in the exchange rate, however, enters with a negative sign for countries not friendly with the U.S. For all types of Latin American countries (U.S. friends and others), the exchange rate effect is not significant. Whether these results are due to devaluation playing a less central role in Latin American adjustment programs or due to the smaller sample size is an open question.

Column 3 includes all other countries from the larger sample. All estimated coefficients

have the expected signs and magnitudes are roughly similar to estimates from the overall sample. The one interesting difference is that the Wald test does reject the null hypothesis that the exchange rate coefficients sum to zero. U.S. friends that failed devalue their currency face some sanctions, albeit less than those imposed on non-U.S. friends.

Columns 4 and 5 divide the sample period in half to see if conditionality enforcement patterns changed over time. In particular, this tests whether a single event rather than a general practice is responsible for the apparent pattern of conditionality enforcement. Column 4 covers the 1984 to 1994 period which includes 487 observations on 76 adjusting countries, an average of 6 annual observations per country. The results mirror those for the sample as a whole, the only notable difference being a slightly larger coefficient on % Δ exchange rate. Column 5 covers the 1995 to 2005 period, 600 observations on 83 countries, an average of 7 annual observations per country. Again, estimates closely follow those for the overall period. As expected given the results for 1984-1994, the coefficient estimate for *% Δ exchange rate* is somewhat smaller. In addition, we again reject the null hypothesis that the *% Δ exchange rate* coefficients sum to zero so that U.S. friends face reduced but not zero sanctions for failing to devalue.[15] These results support the selective enforcement of conditionality as a general pattern, not driven by isolated events.

Table 6 presents results for AR1 and dynamic panel specifications. Column 1 is estimated via feasible generalized least squares allowing for an error term with first order autocorrelation and country fixed effects, the efficient estimator if the error process follows an AR1. Although the estimated autocorrelation parameter is ρ=0.2576, none of the coefficients or standard errors of interest changes substantially. Column 2 presents a dynamic panel allowing the lagged dependent

[15]The trend terms indicate that the disbursement rate slowed in the first period and accelerated in the second period, consistent with the performance crisis of the early 1990s (Wapenhans, 1992).

variable to enter the equation (again with HAC standard errors). The estimated coefficient on lagged disbursements enters as positive but small and statistically insignificant. Other coefficients change only marginally with no change in interpretation. However, the least squares estimator is known to be inconsistent in a dynamic panel with the resulting bias concentrated in the estimated coefficient for the lagged dependent variable (Judson and Owen, 1999). Hence, Column 3 reports an Arellano-Bond one step GMM estimation with robust standard errors. The estimated coefficient on the lagged dependent variable does change sign (switching from positive to negative) but remains insignificant, and other coefficient estimates are very close to those in the benchmark specification (Table 3, Column 3).

Table 7 addresses the influence of outliers and an alternative definition of the U.S. friend variable. As is apparent from the Table 1 descriptive statistics, the sample includes some extreme values. To further illuminate this point, Figures 1 to 3 present frequency distributions for key variables. Figure 1 is a histogram for the log disbursement ratio, the natural log of disbursements as a fraction of original commitments. The distribution is notably asymmetric with a long left-hand tail extending well beyond −4. Figure 2 is a histogram of inflation. A long right-hand tail includes several values above 10 (1000% inflation). Figure 3 is a histogram of the percent change in the official exchange rate. Repeating the pattern for inflation, we see a long right-hand side tail extending well past 10. To assess the influence of these outliers on the results presented earlier, Column 1 of Table 7 excludes these extreme values, i.e., all observations with log disbursement ratio less than −4, inflation values greater than 10, or exchange rate changes greater than 10. These restrictions reduce the sample by 30 observations and there are some notable changes in the size and standard errors of the coefficient estimates. However, in broad terms, the earlier results persist. Though somewhat smaller, there is still a strong positive link between disbursements and original

commitments. For countries that are not U.S. friends, higher inflation and low devaluation are linked to lower disbursements while the impact, if any, is much smaller for U.S. friends.

Column 2 of Table 7 introduces an additional U.S. friend variable, *strong US friend*, which equals 1 if the UN concessions variable is greater than the mean value of 0.15. Because this specification includes both *US friend* and *strong US friend* dummies, the estimated coefficients are additive. For example, the impact of being a (regular) U.S. friend on the marginal inflation effect is 0.685 while the equivalent figure for a strong U.S. friend is 0.685+0.021=0.706. The key finding here is that the previous results are largely unaffected. While the difference in conditionality enforcement between U.S. friends and non-U.S. friends is larger for those countries making the most concessions to the U.S. (the strong U.S. friends), it is not driven exclusively by this sub-group. Likewise, the difference does not mask some reversal among those making the largest concessions to the U.S. This demonstrates that the results are robust to an alternate definition of U.S. friend.[16]

Finally, Table 8 presents estimates for cases without structural adjustment lending. Disbursements now reflect only project lending where the main focus is on a concrete activity rather than on conditionality and broad policy change. If the previous results reflect the impact of selective conditionality enforcement on disbursements, we expect to see very different results here. This is indeed the case. The link between commitments and disbursements is much tighter as reflected in a coefficient very close to one and very precisely estimated. The looser (though still strong) link between commitments and disbursements for SALs most likely reflects the greater frequency of cancellations and long delays. The estimated coefficients on inflation indicate a negative link with

[16]Using the continuous measure of U.S. friendship directly results in a similar pattern as with the basic *US friend* dummy, i.e., the coefficients on interaction terms have the opposite sign from the non-interaction terms indicating lax enforcement for U.S. friends. The same holds if I use alignment on important UN votes (rather than the deviation of this variable from alignment on all votes) or a dummy variable based on this measure.

disbursements for U.S. friends but no impact for countries not friendly with the U.S. Estimated without the interaction term, the overall link between inflation and disbursements is negative. Devaluation has a marginally significant *negative* link with disbursements with no significant difference between U.S. friendly and unfriendly countries. Not only are these estimates radically different from those for the SAL sample, they are not particularly stable and the variables of interest explain only a very small portion of the variation.[17]

VI. Conclusion

This paper presents indirect evidence that pressure from the U.S. has undermined World Bank enforcement of structural adjustment conditionality. For countries not friendly with the U.S. (countries that do not make concessions to the U.S. position in important UN votes), there does appear to be a significant degree of enforcement. When these countries have active World Bank structural adjustment loans, poor macro policy is associated with lower disbursements and the effect can be substantial. For countries that are friendly with the U.S., there is no such evidence of enforcement. For this second group, disbursements are not systematically related to macro policy.[18] This pattern reoccurs in a range of specifications, across geographic regions, and over different time periods and is robust to a number of estimation methods. In contrast, no similar pattern is found when SALs are not active, again indicating that the pattern is driven by selective enforcement of structural adjustment conditionality.

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[17]Including only commitments, the R^2 is 0.38; including only the macroeconomic variables, the R^2 is 0.02.

[18]It is also possible that SAL conditions are less stringent for U.S. friends. However, the dynamics of the analysis are better suited to detecting lax enforcement than to detecting less stringent conditions. It is doubtful that official conditions could be so different between the groups that they would explain fully the effects found.

These results highlight donor pressure as an important alternate explanation for the failure of conditionality, one that merits more attention from researchers and reformers. This issue has been explored empirically in the context of the IMF (Stone, 2002, 2004; Vreeland, 2005) but not previously for the World Bank.

Why does it matter what is the cause of conditionality slippage? Efforts to reform structural adjustment have focused increasingly on selectivity to change bureaucratic incentives, reduce problems of information and commitment, and promote ownership of programs (largely through the PRSP process). These reforms may have significant merit but do not address the issue of donor pressure that can, as before, undermine borrower incentives and World Bank credibility. Other more fundamental reforms that aim to reduce donor influence – changes in World Bank governance, ending the tradition of allowing the U.S. to select the World Bank president, developing alternative sources or methods of funding – also need to be explored.

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Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	Units/Scale
World Bank disbursements	289.046	472.681	0.358	4606.435	2005 US$ millions
log of World Bank disbursements	4.780	1.415	-1.027	8.435	log of 2005 US $ millions
World Bank commitments	1,931.626	3,211.700	6.400	30,517.760	2005 US$ millions
log of World Bank commitments	6.704	1.311	1.856	10.326	log of 2005 US $ millions
US friend	0.872	0.335	0	1	0/1
inflation	0.354	1.932	-0.176	30.798	decimal (1=100%)
US friend * inflation	0.334	1.933	-0.176	30.798	decimal (1=100%)
% Δ exchange rate	0.577	4.931	-0.229	139.319	decimal (1=100%)
US friend * % Δ exchange rate	0.543	4.922	-0.229	139.319	decimal (1=100%)

N = 1098 observations
n = 97 countries
T = 2 to 22 year, mean of 11 years

Table 2: Simple Correlations

	log of World Bank disbursements	log of World Bank commitments	US friend	inflation	% Δ exchange rate
log of World Bank disbursements	1				
log of World Bank commitments	0.897	1			
US friend	0.0374	0.0316	1		
inflation	0.0865	0.107	0.0428	1	
% Δ exchange rate	-0.0126	-0.0087	0.0243	0.3519	1

N = 1098

Table 3: Basic Specifications

Dependent Variable: World Bank disbursements			
	(1)	(2)	(3)
World Bank commitments	1.044***	1.034***	0.985***
	(10.75)	(10.94)	(10.03)
US friend		0.0842	0.0199
		(1.47)	(0.30)
inflation	-0.00865	-0.00888	-0.716**
	(-0.65)	(-0.68)	(-2.85)
inflation*US friend			0.707**
			(2.86)
% Δ exchange rate	-0.000987	-0.00102	0.131***
	(-0.16)	(-0.16)	(6.31)
% Δ exchange rate*US friend			-0.133***
			(-5.83)
year	0.00293	0.00381	0.00202
	(0.64)	(0.86)	(0.49)
R^2	0.2633	0.2648	0.2722

N = 1098 observations
n = 97 countries
T = 2 to 22 year with an average of 11 years

Estimated with country fixed effects.
Disbursements and commitments are log of constant 2005 dollars.

z statistics in parentheses based on HAC standard errors.
* p<0.05, ** p<0.01, *** p<0.001

Table 4: Alternative Specifications

Dependent Variable: World Bank disbursements

	(1)	(2)	(3)
World Bank commitments	1.000***	1.036***	0.983***
	(10.50)	(10.99)	(9.87)
US friend	0.0106	0.104	0.0319
	(0.16)	(1.74)	(0.50)
inflation	-0.532*		-0.703**
	(-2.21)		(-3.03)
inflation*US friend	0.521*		0.693**
	(2.17)		(3.03)
% Δ exchange rate		0.0735**	0.124***
		(2.94)	(5.16)
% Δ exchange rate*US friend		-0.0759**	-0.127***
		(-2.95)	(-5.05)
GDP per capita			0.0764
			(0.27)
population			0.473
			(0.78)
trade			-0.0570
			(-0.63)
polity			-0.0115
			(-1.44)
polity transition			-0.127
			(-1.33)
war			0.0619
			(0.58)
postwar			0.201
			(1.81)
number killed			0.000369
			(0.22)
year	0.00234	0.00429	-0.00238
	(0.56)	(0.98)	(-0.15)
N	1098	1098	1096
R^2	0.2685	0.2656	0.2798

n = 97 countries
T = 2 to 22 year with an average of 11 years

Estimated with country fixed effects.
Disbursements, commitments, and trade (exports plus imports) are log of constant 2005 millions of dollars. GDP per capita is log of PPP GDP per capita in 2005 dollars. Population is the log of number of people. The number of people killed in natural disasters (number killed) is in thousands.

z statistics in parentheses based on HAC standard errors.
* p<0.05, ** p<0.01, *** p<0.001

Table 5: Estimation Results for Sub-samples

Dependent Variable: World Bank disbursements

	SSA	LAC	Others	1984-94	1995-2005
	(1)	(2)	(3)	(4)	(5)
World Bank commitments	1.255***	0.743***	0.922***	1.194***	0.889***
	(5.88)	(5.53)	(7.63)	(6.50)	(10.17)
US friend	-0.0799	0.104	0.0517	0.0324	0.0807
	(-0.96)	(0.25)	(0.58)	(0.35)	(1.10)
inflation	-1.402**	-0.958**	-0.351	-0.691*	-0.870*
	(-2.91)	(-2.91)	(-1.23)	(-2.50)	(-2.02)
inflation*US friend	1.339**	0.947**	0.342	0.689*	0.857*
	(3.09)	(2.86)	(1.18)	(2.51)	(1.98)
% Δ exchange rate	0.163***	-0.122	0.109***	0.274***	0.109***
	(6.97)	(-0.05)	(3.38)	(5.09)	(3.62)
% Δ exchange rate*US friend	-0.252*	0.116	-0.0793*	-0.279***	-0.0789**
	(-2.11)	(0.05)	(-2.46)	(-5.01)	(-2.60)
year	-0.00287	-0.00663	0.00892	-0.0593	0.0247
	(-0.40)	(-1.03)	(1.12)	(-4.36)	(2.57)
R^2	0.3471	0.2546	0.2438	0.2682	0.1628
N	462	260	376	487	600
Countries	34	22	41	76	83

Estimated with country fixed effects.
Disbursements and commitments are log of constant 2005 dollars.

z statistics in parentheses based on HAC standard errors.
* p<0.05, ** p<0.01, *** p<0.001

Table 6: AR1 and Dynamic Panel Estimations

Dependent Variable: World Bank disbursements			
	(1)	(2)	(3)
World Bank commitments	0.938***	0.994***	1.232***
	(19.95)	(10.92)	(9.87)
US friend	0.0241	0.0177	0.0326
	(0.35)	(0.26)	(0.58)
inflation	-0.879***	-0.675**	-0.703**
	(-3.70)	(-2.60)	(-2.71)
inflation*US friend	0.865***	0.652*	0.700**
	(3.63)	(2.49)	(2.69)
% Δ exchange rate	0.140*	0.119**	0.134*
	(2.38)	(2.64)	(2.34)
% Δ exchange rate *US friend	-0.134*	-0.122**	-0.139*
	(-2.26)	(-2.66)	(-2.44)
World Bank disbursements		0.0173	-0.102
		(0.37)	(-1.30)
year		0.00164	0.0190
		(0.40)	(1.83)
N	1001	1078	1013
R^2	0.3503	0.2940	

Estimation Methods:
(1) FGLS AR1 with fixed effects
(2) OLS Dynamic panel with HAC standard errors
(3) Arellano-Bond GMM with robust standard errors

Disbursements and commitments are log of constant 2005 dollars.

Column 1 reports t statistics in parentheses.
Columns 2 and 3 report z statistics in parentheses.
* p<0.05, ** p<0.01, *** p<0.001

Table 7: Excluding Outliers; Strong US friend

Dependent Variable: World Bank disbursements		
	(1)	(2)
World Bank commitments	0.847***	0.986***
	(12.55)	(10.18)
US friend	0.0172	0.0132
	(0.30)	(0.18)
strong US friend		0.0134
		(0.26)
inflation	-0.655***	-0.707**
	(-4.77)	(-2.80)
inflation*US friend	0.542***	0.685**
	(3.74)	(2.73)
inflation*strong US friend		0.0210
		(0.69)
% Δ exchange rate	0.125***	0.131***
	(10.13)	(6.11)
% Δ exchange rate*US friend	-0.108***	-0.115***
	(-3.46)	(-4.97)
% Δ exchange rate*strong US friend		-0.0206*
		(-2.37)
year	-0.000543	0.00251
	(-0.15)	(0.56)
N	1068	1098
R^2	0.2854	0.2741

Samples:
(1) Excludes observations with inflation>10, % Δ exchange rate>10, or log (disbursements/commitments)<−4.
(2) Full sample.

Estimated with country fixed effects.
Disbursements and commitments are log of constant 2005 dollars.

z statistics in parentheses based on HAC standard errors.
* p<0.05, ** p<0.01, *** p<0.001

Table 8: Project Lending Only

Dependent Variable: World Bank disbursements	
	(1)
World Bank commitments	1.087***
	(17.37)
US friend	-0.0458
	(-0.56)
inflation	0.0208
	(1.60)
inflation*US friend	-0.0342*
	(-2.29)
% Δ exchange rate	-0.0189
	(-1.86)
% Δ exchange rate*US friend	0.00759
	(0.41)
year	-0.00297
	(-0.68)
N	989
R^2	0.3968

Covers only cases with NO active SAL.

Estimated with country fixed effects.
Disbursements and commitments are log of constant 2005 dollars.

z statistics in parentheses based on HAC standard errors.
* p<0.05, ** p<0.01, *** p<0.001

Figure 1: Sample Distribution of Disbursement ratio

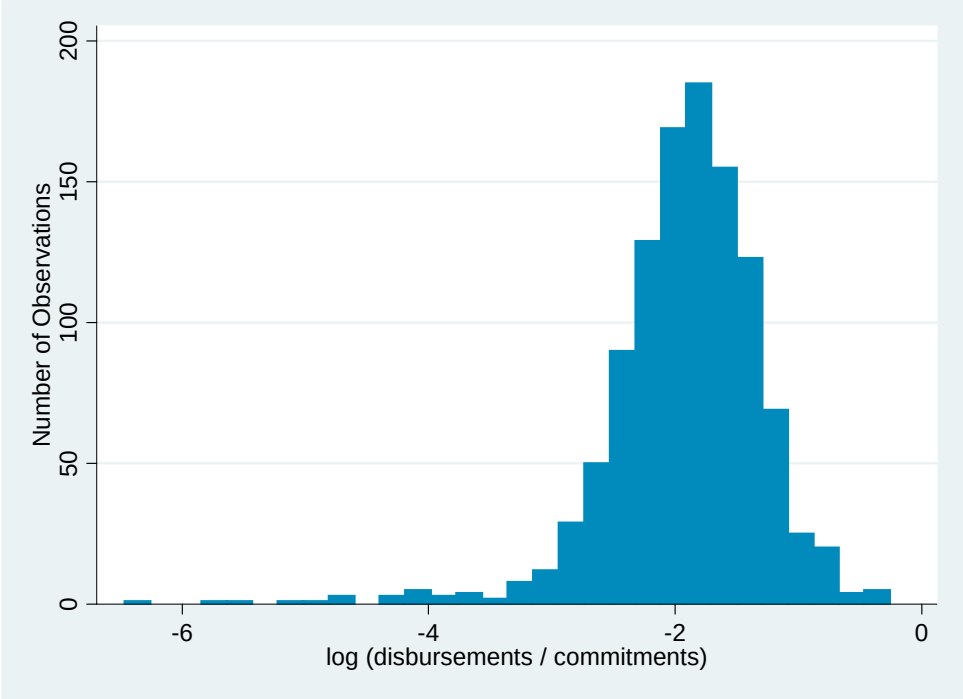

Figure 2: Sample Distribution of Inflation

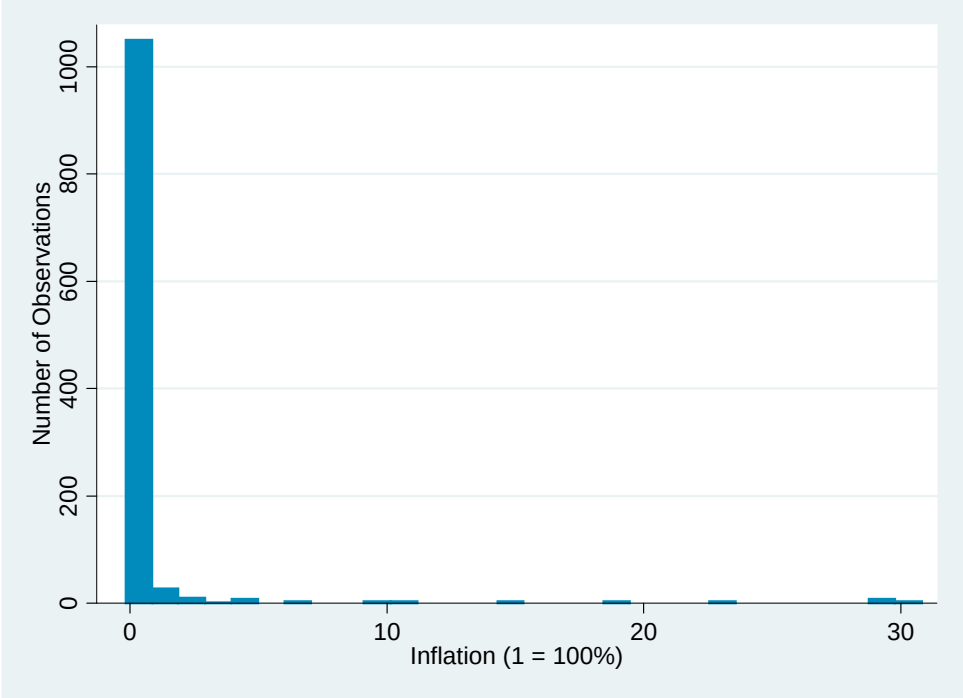

Figure 3: Sample Distribution of % Δ Exchange Rate