

# **Who Borrows? Political Inclusiveness and the Accumulation of Foreign Debt in Developing Societies**

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## **Abstract**

Why do some developing country governments accumulate large foreign debts while others do not? I hypothesize that variation in foreign borrowing is a function of variation in the breadth of public participation in the political process. Specifically, governments borrow less when political institutions enable broad public participation in the political process and encourage the revelation of information about executive behavior. I test this hypothesis against the experience of seventy-eight developing countries between 1976 and 1998. The analysis suggests that governments in societies with broad public participation borrow less heavily than governments in societies with limited public participation. In short, democracies borrowed less heavily than autocracies. The analysis has implications for the likely consequences of the recent debt relief initiative.

Why did some developing country governments become deeply indebted in the late 20<sup>th</sup> century while others did not? Take the case of Zambia, one of the world's poorest societies, which spent the last quarter of the 20<sup>th</sup> century as one of its most heavily indebted. The Zambian government borrowed so heavily, and used these borrowed funds so poorly, that by the early 1990s it owed more than 200 percent of its total national income to foreign creditors. Sadly, Zambia's experience was not unique. According to the World Bank, one-third of all developing country governments borrowed so heavily during the 1970s and 1980s that they entered the 1990s owing, on average, 220 percent of their GDP to foreign lenders (World Bank 2003). By 2006, the official creditor groups—the Group of Eight, the International Monetary Fund, and the World Bank—forgave the debt of these most heavily indebted societies in explicit recognition that the amount they had borrowed far outstretched their capacity to service (see, e.g., Evans 1999).

The real tragedy of large foreign debt burdens lies not in how much is owed, but in foreign debt's negative impact on economic performance. In Zambia, for example, the debt burden contributed to two decades of anemic growth. Poor growth performance translated into falling real incomes and reduced government expenditures on social services. Zambian real per capita income stood at \$720 in 1972; by the early 1990s it had fallen to only \$400 (World Bank 2007).<sup>1</sup> As average incomes fell, government expenditures on social services languished; Zambia was spending only 3 percent of GDP on education and less than \$40 per capita on health care by the early 1990s. In short, Zambia, along with other heavily indebted developing countries exhibited the classic signs of a foreign debt-induced poverty trap (Sachs 2002). Rising foreign debt service

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<sup>1</sup> All data are from World Bank 2007.

depressed economic performance. As individual incomes fell in response, governments struggled to raise the revenues needed to finance critical public goods. The consequence was shrinking government expenditures on public goods, such as health care, sanitation, education, as well as declining government investment in infrastructure critical to building a productive national economy linked to world markets, such as road and railway networks as well as ports. As government-provided social services and infrastructure crumbled, economic performance deteriorated still further, thereby depressing incomes and the revenue available for public goods investment. The steady accumulation of foreign debt thus contributed to a slow downward spiral that pushed already poor societies even more deeply into poverty.

Not all developing countries accumulated large foreign debts. Botswana, for example, entered the 1970s slightly poorer than Zambia. Yet, over the next twenty five years Botswana borrowed little; its foreign debt never rose above 50 percent of GDP and in the 1990s it owed only fifteen percent of its GDP to foreign lenders. Botswana's limited foreign borrowing also illustrates a broader pattern. One-third of all developing country governments never encountered serious foreign debt problems. These governments borrowed relatively little and invested borrowed funds wisely so that by the early nineties they owed, on average less than 50 percent of their GDP to foreign creditors. Botswana's ability to avoid accumulating foreign debt allowed it to emerge during the last quarter of the 20<sup>th</sup> century as Africa's, if not the world's fastest growing economy. Growth in Botswana averaged slightly more than 10 percent per year between 1972 and 1998. Per capita income rose steadily, from \$590 in 1972 to \$3,350 by the late 1990s. Government expenditures on health care rose to about \$200 per capita in the late

1980s, and education expenditures rose to an average of 8 percent of GDP. By avoiding foreign debt, therefore, Botswana enjoyed an extended period of sustained economic growth that steadily raised per capita income and generated the resources needed to expand and enhance social services. For Botswana and many other developing countries, therefore, limited foreign debt facilitated steady movement out of poverty.

How do we explain these varying experiences? Why did some developing country governments, such as Zambia, accumulate crushing foreign debt burdens, while others, such as Botswana, proved better able to manage their external liabilities? Understanding this pattern of foreign debt accumulation is of more than just historical interest. Whether contemporary debt-relief programs, the Heavily-Indebted Poor Countries Initiative and the Multilateral Debt Relief Initiative, enable heavily-indebted societies to begin the long climb out of poverty depends in large part on why these governments borrowed so heavily to begin with. Contemporary debt-relief programs strive to enhance economic performance in heavily indebted countries by encouraging governments to direct the resources they previously dedicated to debt service to welfare-enhancing projects such as education, health care, and infrastructure. Whether governments use the opportunity that debt forgiveness provides to invest in such public goods, or whether instead they consume these resources and then begin to accumulate new foreign liabilities hinges largely on the factors that drive governments to accumulate foreign debt.

Yet, surprisingly little scholarly research investigates why developing country governments accumulate foreign debt at varying rates. Most who have written about the contemporary foreign debt problem have done so as advocates of debt relief. Many such advocates emphasize “bad luck” as the key cause of foreign debt accumulation. This bad

luck hypothesis suggests that governments borrowed heavily as a response to adverse global economic developments. Iyoha (2000, 175), for example, states that “a significant proportion of the increase in [sub-Saharan Africa’s] external debt since 1982 can be attributed to exogenous factors.” Governments borrowed to finance “unexpected and unmanageable current account deficits and to finance burdensome debt-service payments” (see also Locke and Ahmadi-Esfahani 1998; Martin 2001; Oxfam International 2001; Pettifor 2002; Pettifor 2003; Roodman 2001). Even the International Monetary Fund’s official discussion of the debt buildup emphasizes exogenous shocks: “worldwide events in the 1970s and 1980s—particularly the oil price shocks, high interest rates and recessions in industrial countries, and then weak commodity prices—were major contributors to the debt build-up” (International Monetary Fund 2000). The bad luck hypothesis is quite optimistic about how governments will respond to debt forgiveness. Because debt accumulation reflected unwilling responses to a hostile global economy, governments will readily direct resources to welfare-enhancing projects once debt is forgiven.

A far smaller literature emphasizes the importance of “bad policy” in the accumulation of foreign debt (Easterly 2002).<sup>2</sup> The bad policy hypothesis suggests that foreign borrowing reflects conscious government decisions taken in response to political incentives. Easterly argues that developing country governments borrow heavily because “[t]he ruling elite in impoverished societies keeps itself in power by buying off potential rivals and rewarding supporters...All of this requires the state to mobilize resources, which it does by borrowing against the future.” The bad policy hypothesis is quite

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<sup>2</sup>As best I can tell, Easterly is the lone proponent of the bad policy thesis. According to the Social Sciences Citation Index, Easterly’s work has been cited in three published scholarly articles, none of which focus on foreign debt.

pessimistic about the consequences of debt forgiveness. In the absence of political reforms that alter government incentives to borrow, the very factors that encouraged governments to accumulate large foreign debts will discourage investment in public goods. Moreover, such governments will resume foreign borrowing. Debt relief today, therefore, will merely give rise to new debt problems tomorrow.

Both hypotheses are under-developed. The bad luck hypothesis has never been tested; consequently we do not know whether governments accumulated debt primarily in response to negative shocks. For its part, the bad policy hypothesis provides little leverage to explain variation—not all developing countries became heavily indebted—and it offers no theoretical model to explain why the ruling elite must maintain power by “buying off potential rivals and rewarding supporters.” Consequently, neither hypothesis tells us why governments initially became indebted; neither hypothesis can tell us how heavily-indebted governments are likely to respond to debt relief. One offers wishful thinking; the other stark pessimism.

This paper remedies these shortcomings by developing a political model that offers a clear theoretical explanation for why some governments borrow heavily while others do not and testing its expectations alongside the bad luck hypothesis. To do so, I draw on models of the political economy of taxation to hypothesize that governments in highly inclusive political systems, political systems that enable broad and effective public participation in the political process, accumulate substantially less foreign debt than governments in highly exclusive political systems, political systems that restrict public participation. In other words, I argue that developing country democracies should borrow less from foreign creditors than developing country autocracies. I test this hypothesis by

examining the relationship between political inclusiveness and foreign debt, controlling for exogenous economic shocks and other factors, in 78 developing countries between 1976 and 1998. The empirical analysis suggests that while bad luck was not irrelevant to debt accumulation, bad policy was fundamentally important. Governments in highly inclusive political systems accumulated substantially less foreign debt than governments in highly exclusive systems. The finding has clear implications for the success of contemporary debt relief initiatives which I discuss in the conclusion.

### **Political Inclusiveness and Foreign Debt**

The contemporary foreign debt problem is a specific manifestation of a more general question: why do governments knowingly pursue policies that reduce long-run economic performance? This broader question is in turn at the center of two parallel research programs on the political economy of developing countries. One program explores why governments knowingly adopt macroeconomic policies that yield large budget deficits and high inflation (for useful reviews see Kaufman, Kraay, and Zoido-Lobaton 1999; Keefer 2004; Knack and Keefer 1995). A second program explores corruption—the use of public office for private gain (see e.g., Adsera, Boix, and Payne 2003; Aidt 2003; Banerjee 1997; Gerring and Thacker 2004; Kunicová and Rose-Ackerman 2005; Lederman, Loayza, and Soares 2005; Persson, Roland, and Tabellini 1997). While the two research programs focus on different questions, they reach a similar conclusion: governance structures influence government behavior. More specifically, both research programs agree that societies in which broad public participation selects and constrains the government enjoy stronger economic performance—lower inflation,

balanced budgets, and less corruption—than societies lacking public constraints on government policy.

The bad policy hypothesis asserts that foreign debt accumulation corresponds to a similar political logic. Government borrowing from foreign creditors is strongly influenced by the public's ability to select and constrain government behavior. Political economy of taxation models provide relatively precise expectations about how the breadth of public participation in the political process shapes government decisions to borrow from foreign lenders. A political model of taxation yields hypotheses about foreign debt accumulation because government debt and taxes are inextricably linked across time: government debt is a tax on future national income. When the government borrows today, it commits itself to raise revenues via taxation at a later date to repay the debt. As a consequence, a model that examines how politics shape government decisions about current tax rates speaks directly to how politics shape government decisions about future tax rates and thus, current borrowing. Using the tax model to develop hypotheses about foreign debt accumulation does require us to consider government discount rates, a point I take up after explicating the basic model.

The class of models I rely on advances a general argument along the following lines (see e.g., Adam and O'Connell 1999; Alesina and Rodrik 1994; Boix 2003; Fauvelle-Aymar 1999; Lee 2003; Meltzer and Richard 1981; Ndulu and O'Connell 1999; North 1981; Olson 1993; Persson and Tabellini 1994; Przeworski 1990). In autocracies, that is, government by a small ruling class relatively unconstrained by the broader public, public officials use state power to enrich themselves at the expense of society as a whole. Such governments enrich themselves by using the instruments of state to tax society.

Taxes distort the economy, however, and thus reduce total national income. As public participation in the political system expands, that is, as society moves from autocracy toward democracy, governments' incentives to use the instruments of state to enrich themselves at the expense of long run economic performance (and society as a whole) falls. Consequently, the tax rate is a function of the breadth of public participation in politics. The tax rate falls as political inclusiveness rises.

Olson offers the most fully elaborated such model (see McGuire and Olson 1996; Olson 2000). To begin, divide society into two groups: insiders and outsiders. Insiders are the subset of citizens authorized to participate in politics and who thus set the tax rate. Outsiders are citizens who are not authorized to participate in politics and thus cannot set the tax rate. The inclusiveness (and exclusiveness) of a political system is thus a function of the ratio of insiders to outsiders. In exclusive political systems, insiders are few in number and outsiders constitute the majority of the population. In inclusive political systems, insiders are many and outsiders are few.<sup>3</sup>

Insiders set the tax rate so as to maximize their total income. Insiders generate income in two ways: by taxing outsiders and sharing the resulting revenue and by participating directly in market-based activities (e.g., wage-based labor, managerial functions, entrepreneurial activities, etc.). For simplicity, I refer to direct market participation as "work." The relative importance of tax revenue and work as sources of income for insiders is a function of the inclusiveness of the political system. In exclusive political systems, taxes on outsiders generate a large pool of revenue divided among a

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<sup>3</sup> The logic of Olson's model is similar to the logic of the selectorate model (Buono de Mesquita et al. 2003). The two models differ, however, in an important way. The selectorate model focuses on the ratio between the size of the winning coalition and the size of the selectorate. Olson's model focuses on the ratio of the selectorate to the total adult population.

small number of insiders. Because each individual insider's tax revenue share is quite large, income from work is relatively unimportant. In contrast, in inclusive political systems the outsiders from whom insiders can extract income are small and the group which divides the resulting revenues is large. Consequently, each insider's individual income from taxes is relatively small and work is the more important source of income. The importance of work as a source of insiders' income thus grows in line with the inclusiveness of the political system.

Because taxes are distortionary, total national income falls in line with the share of this income extracted through taxes. In setting the tax rate, therefore, insiders must take into account how the tax rate affects their tax revenue stream and how it affects the income they earn from work. The two sources of income need not always move together in response to a change in the tax rate. Over the early portion of the tax rate curve, progressively higher tax rates increase tax revenues even while the distortions reduce total national income. At the revenue-maximizing rate (RMR), the last penny of tax revenue reduces total national income by one penny. Tax rates beyond the RMR reduce national income so much that total tax revenue falls too. In setting the tax rate, therefore, insiders balance the individual gain from a higher tax rate against the lower income they receive from work.

Within this framework, the tax rate that insiders impose falls as the political system becomes more inclusive. In an exclusive political system in which insiders earn all of their income from tax revenues, insider income is maximized at the revenue maximizing rate. As the political system becomes more inclusive, each insider progressively becomes more sensitive to the loss of income from work caused by tax

distortion and benefits less from the greater tax revenues generated by a higher tax rate. Consequently, the incentive to minimize tax distortion strengthens as the political system becomes more inclusive. The tax rate will fall, therefore, as political inclusiveness increases.

Olson generalizes this relationship with a simple ratio. Insiders will tax until the last penny of tax revenue reduces national income by the reciprocal of the share of national income that they control (or  $1/1/n$  where  $1/n$  is the share of national income that insiders control). Figure 1 graphs the relationship between the inclusiveness of the political system and insiders' sensitivity to tax distortions. The vertical axis depicts the implied tax rate, the measure of insiders' sensitivity to tax distortions. The horizontal axis depicts inclusiveness, measured as insiders as a share of the total adult population. The curve thus depicts the implied tax rate as a function of political inclusiveness. At the high tax rate end, insiders in highly exclusive regimes have substantial tolerance for tax distortions and will therefore tax heavily; at the limit they impose the RMR tax. As the political system becomes more inclusive, insiders become more sensitive to tax distortions and tax at a lower rate. The tax rate falls as the inclusiveness of the political system rises.

(Figure 1 about here)

Applied to foreign debt accumulation, the model asserts that governments' incentive to tax future income by accumulating foreign debt falls as the political system becomes more inclusive. In other words, governments in inclusive systems will accumulate less foreign debt than governments in exclusive systems. This theoretical relationship between political inclusiveness and foreign debt accumulation is contingent

upon one assumption about the relative discount rates of insiders in inclusive and exclusive systems. In order for insiders in inclusive systems to borrow less than insiders in exclusive systems, insiders in inclusive systems must not discount the future *substantially more than* insiders in exclusive systems. Stated differently, the theoretical relationship between political inclusiveness and tax rates extends into the future (and thus applies to foreign debt) if insiders in inclusive and exclusive systems discount the future by the same amount, or if insiders in exclusive systems discount the future more than insiders in inclusive systems. The theoretical relationship fails to extend into the future only if insiders in inclusive systems care less about future economic performance than insiders in exclusive systems

To understand why, look back at figure 1. Insiders in inclusive systems will borrow as much as insiders in exclusive systems only if the future implied tax rates in the two systems are equal. In the context of figure 1, this means that the slope of the future implied tax rate curve must be zero rather than negative. The future implied tax rate in exclusive and inclusive systems can be equal only if insiders in inclusive systems discount the future income loss from tax distortions substantially more than insiders in exclusive systems. For insiders in inclusive systems to accumulate *more* foreign debt than insiders in exclusive systems, they must discount the future by an additional magnitude, thereby transforming the slope of the tax rate-political inclusiveness curve from negative to positive. Moreover, the magnitude of the required difference in discount rates required in order for inclusive insiders to borrow more than exclusive insiders grows as the political system becomes more inclusive. Thus, as long as insiders in inclusive systems do not discount the future substantially more than insiders in exclusive systems, insiders

in exclusive systems will accumulate more foreign debt than insiders in inclusive systems.

Is it reasonable to assume that insiders in inclusive systems will not discount the future substantially more than insiders in exclusive systems? Although we lack empirical evidence on discount rates in the two political systems, this seems to be a reasonable assumption. Perhaps the simplest way to think of this is to ask whether insiders in exclusive systems have long or short time horizons. The scant literature that exists on this question generally suggests that autocratic rulers have quite short time horizons (see e.g., Easterly 1999; Przeworski and Limongi 1993, 55). The generally offered explanation for this is that although many autocratic rulers remain in office for long periods, the high degree of political instability characteristic of developing societies leads them to expect to retain power for a short period. As Easterly summarizes, because rulers in autocratic regimes do “not feel secure, the future does not have a strong voice in elite circles” (Easterly 2002, 1680). Given short time horizons in exclusive systems, the question boils down to a simple query: is it possible for insiders in inclusive systems to discount the future substantially more than autocratic rulers who discount the future quite heavily? Even if we assume that insiders in inclusive systems discount the future heavily, it is unlikely that they can discount the future more heavily than insiders in exclusive systems. Thus, as long as we are comfortable with the claim that autocratic rulers discount the future sharply, it is reasonable to assume that insiders in inclusive political systems do not discount the future substantially more than insiders in exclusive systems. We should thus expect to find that foreign debt accumulation is a function of political inclusiveness.

Governments in more inclusive political systems will borrow less heavily than governments in highly exclusive political systems.

In summary, the accumulation of foreign debt is a function of the inclusiveness of the political system. All else being equal, governments in more inclusive political systems will borrow less than governments in exclusive systems. I turn now to test this expectation.

## **Empirical Analysis**

### **Data and Methods**

I test the hypothesized relationship between political inclusiveness and foreign debt using observations for 78 developing countries over the period 1976 – 1998. I begin the analysis in 1976 because consistent political and economic data for developing countries is scarce prior to the mid-1970s. I end the analysis in 1998 because by the late 1990s the international community was shifting toward the current debt forgiveness regime. The growing importance of debt forgiveness strengthened the relative importance of external factors on foreign debt accumulation and reduced the relative importance of domestic factors. Consequently, even the heaviest borrowers of the 1980s and early 1990s ceased to accumulate debt at the same rate.

Two complications limit our ability to employ standard time series cross sectional regression to explain variation in the level of foreign debt. A first complication arises from the recognition that foreign debt as a share of GDP is non-stationary. A stationary time series has a constant mean and variance. An intuitive way to think of whether a

series is stationary or not is to see whether a dominant trend exists, or whether a short-term movement from the mean returns toward the mean relatively rapidly. Foreign debt violates the assumption of a constant mean, as annual average foreign debt rises steadily from about 26 percent of GDP in 1975 to just over 100 percent in the mid-1990s (see figure 2). Figure 2 also suggests that variation around this mean is changing substantially over time. An augmented Dickey-Fuller test for a unit root confirms that foreign debt is non-stationary.<sup>4</sup> Using standard regression techniques to model variation in the level of foreign debt across time and space is thus inappropriate.

(Insert figure 2 about here)

A second complication arises from the interaction between the year-to-year stability of accumulated foreign debt and the rather large changes in political inclusiveness that occur over time as a consequence of widespread democratic reforms of the early 1990s. The case of Zambia illustrates this complication. For the first thirty years of its independence, Zambia was a highly autocratic political system; Zambia's Polity score for the late 1970s through the early 1990s is -9. Under Kenneth Kaunda's autocratic regime, Zambia accumulated a large foreign debt, which peaked at just slightly more than 200 percent of GDP in 1990. Political reforms initiated in 1990 by the Movement for Multiparty Democracy led to constitutional change and multi-party elections in October 1991. Zambian democratization is fully reflected in Zambia's Polity score, which jumps to 6 in 1991 and remains at this level until 1996. Yet, Zambia's accumulated foreign debt did not fall. Hence, regressing debt against Polity scores in Zambia's case will fail to enlighten us about the relationship between regime type and foreign debt; because early

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<sup>4</sup> I employed an xtfisher test for unit root; as far as I am aware, this is the only unit root test available for a time series cross section data set with an unbalanced panel.

observations will have autocracy and relatively lower debt while later observations will have democracy and relatively high debt we might even discover a clearly spurious positive relationship between level of democracy and level of foreign debt.

The complication illustrated by Zambia is common. Many countries display similar patterns: autocratic regimes accumulated large foreign debt burdens in the seventies and eighties, followed by political reform. As a consequence, many newly-established democratic regimes inherited large foreign debt burdens in the early 1990s. This is evident in average Polity scores over time. The average Polity score for the most heavily-indebted countries average -4 or -5 in the early and mid-1980s. By the mid-1990s, average polity scores for these countries had risen to 0.6. For the sample as a whole, Polity scores rise from an average of -3.5 in the early 1980s to 2.5 in the mid-1990s. Regressing the level of foreign debt against Polity scores over time, therefore, is likely to yield misleading results.

These complications lead me to test the central hypothesis relating foreign debt accumulation to political inclusiveness against the first difference of foreign debt. Employing a first difference transformation of the dependent variable is standard practice for non-stationary series, as first differencing strips the trend component from the time series. We then model annual changes in foreign debt. The underlying data for the dependent variable is public foreign debt as a percent of gross domestic product. Public foreign debt is the “sum of public, publicly guaranteed long-term debt, use of IMF credit, and short-term debt” (World Bank 2002). It therefore excludes private sector foreign liabilities. I create two measures of the change in foreign debt from year  $t-1$  to year  $t$ . One

measure is the first difference of the absolute value of the debt-to-GDP ratio. The second measure is the first difference of the log of the debt-to-GDP ratio.

I employ three measures of political inclusiveness. One measure is the Polity IV democracy-autocracy index. The index is based on the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive (Marshall and Jaggers 2002, 13). This index ranges from -10 (autocracy) to +10 (democracy). Because higher scores are associated with more inclusive regimes, I expect a negative sign on the coefficient for this variable. The second measure is winning coalition relative to the selectorate (Buono de Mesquita et al. 2003). This measure, *W over S*, is derived in part from the Polity index (W) and in part from the Banks index of legislative selection (S). Its values range from 0 to 1, with higher values indicating more inclusive regimes. I expect a negative coefficient on this variable. The third measure is the Freedom House index of political rights. The Freedom House index is based on the extent to which the executive and legislature are selected through free and fair elections, the degree to which citizens have the legal right to form political parties, and the extent to which electoral politics directly determine government policy. The index ranges from 1 to 7, with higher scores denoting less inclusive regimes. Hence, I anticipate a positive sign on the coefficient for this measure of inclusiveness.

I test the bad luck hypothesis with two measures of exogenous shocks. *Terms of Trade* measures the change in the ratio between the price a country receives for its exports and the price it pays for its imports. *Terms of Trade* is measured as a three year moving average. As this variable ranges from negative numbers indicating declining terms of trade to positive, the bad luck hypothesis expects a negative sign on the

coefficient. The second measure is U.S. nominal interest rates. World interest rates affect the cost of debt service, and one might expect countries with large foreign debts to borrow more heavily in high interest rate periods than in low interest rate periods.

I control for three sets of factors. First, I include lagged values of the level of foreign debt as a share of GDP to control for the relationship between the amount a government has already borrowed and how much it will borrow in the current year.<sup>5</sup> This relationship could be positive or negative. On the one hand, governments that have borrowed heavily in the past might be expected to continue to borrow heavily in the present, all else being equal. On the other hand, governments who have borrowed heavily in the past might be less able to borrow heavily in the present, as fewer lenders will be willing to accept the risk associated with lending to a highly-indebted borrower. I test for this relationship by including the level of foreign debt as a share of GDP and the square of the level of debt as a share of GDP.

Second, I control for structural factors that should influence foreign debt accumulation. *Per Capita Income*, measured in constant U.S. dollars, controls for the level of development and the underlying propensity to borrow. This coefficient should be negative, as wealthier countries will have larger pools of domestic savings and consequently less need to import foreign capital. *GDP*, also measured in constant U.S. dollars, controls for country size. I expect larger countries to borrow less than small countries, and thus this coefficient should be negative. *Trade Openness* is the sum of imports and exports as a share of GDP. All else being equal, I expect more open economies to carry larger foreign debt burdens because their greater export capacity

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<sup>5</sup> I employ the lag of the absolute Debt-to-GDP ratio in the first difference of the first difference of the Debt-to-GDP ratio and the lag of the log foreign debt to GDP ratio in the first difference of log foreign debt model.

enables them to service a larger debt more comfortably. This coefficient should therefore be positive.

Finally, I control for participation in international debt management programs: the signing of a Paris Club agreement as well as participation in a World Bank/IMF Structural Adjustment Fund and Enhanced Structural Adjustment Fund program. The relationship between program participation and change in foreign debt could be positive or negative. On the one hand, highly indebted countries should be more likely than less-heavily indebted countries to participate in such programs. Hence, one might expect a positive sign on the coefficients for these variables. On the other hand, if these programs effectively encourage governments to restructure and manage their foreign debt, or make it difficult to borrow from foreign lenders, we might expect participating governments to borrow less than heavily indebted countries that do not participate. In either case, however, it is important to control for participation in the program.

## **Findings**

To manage the estimation problems inherent in cross-sectional time series data, I employed Stata's routine for cross-sectional time series data employing a common first order autocorrelation function (xtpcse) and report panel corrected standard errors. The results of the analysis are presented in table 1. The models perform well. The Wald statistics indicate that each model fits the data relatively well, though the proportion of total variance explained varies across the measures of the dependent variable. In general, models estimated against the first difference of the log-transformed debt to GDP ratios account for substantially greater share of the total variance than models estimated against

the first difference of the debt-to-GDP ratios. Before moving to the discussion of the individual variables I note that the empirical analysis returns substantively equivalent results under alternative assumptions about autocorrelation, such as panel specific first order autocorrelation and no autocorrelation. I also ran the models reported here on subsamples that progressively excluded the more extreme changes in foreign debt. None of these alternatives fundamentally altered the results I report.

(Insert table 1 about here)

I turn first to the control variables. The level of foreign indebtedness is significantly related to the annual change in foreign indebtedness across model specifications. Moreover, the models yield consistent estimates about the direction and the magnitude of this relationship. The models estimated against the Debt-to-GDP ratio suggests that each one unit increase in the Debt-to-GDP ratio, e.g., a shift from 72 percent to 73 percent, raises the annual change in debt by .1. The models estimated against the change in log debt/GDP yield a slightly smaller relationship of about .08. The direction and magnitude of these estimates is consistent with the suggestion that on average, governments rolled their current interest payments into new loans. Consequently, over time, and controlling for other factors, Debt-to-GDP ratios grew by the difference between the interest rate and the country's GDP growth rate. I had suspected that the relationship between the existing Debt-to-GDP ratio and additional debt accumulation would be non-linear. Specifically, I hypothesized that larger Debt-to-GDP ratios would be associated with larger changes in foreign debt but at a diminishing rate. The quadratic term (Debt-to-GDP squared) failed to yield a significant coefficient in any of the models. I thus omitted the quadratic term from the models that I report here.

The structural control variables yield mixed results. The estimated coefficients for *GDP* yield consistent patterns regarding the direction of the relationship, with larger economies borrowing less than smaller economies. However, this relationship is statistically significant only in the difference in log debt to *GDP*. Foreign debt accumulation does not appear to be significantly related to either *Per Capita Income* or *Trade Openness*. The coefficients are consistent with the expectation that wealthier countries borrow less than poorer countries, but the estimated relationship does not approach conventional levels of statistical significance. The coefficients for *Trade Openness* do not even yield consistent results regarding the direction of the relationship. *Trade Openness* yields a negative relationship to change in the change in log Debt-to-GDP ratio and a positive relationship with change in Debt-to-GDP ratio, but none of the estimated coefficients approach statistical significance. Because these variables do not account for a substantial share of the variance, I re-estimated the models excluding the insignificant variables to determine whether the other estimated relationships are contingent upon the inclusion of these variables in the model. The results from these estimates (not reported) indicated that none of the other relationships reported here are contingent upon the inclusion of these control variables.

Finally, participation in international debt management programs yields mixed results. *Paris Club Agreement* returned a significant coefficient in all models, but the direction of the relationship changes across measures of the dependent variable. In the models estimated against the first difference of Debt-to-GDP ratios, the coefficient for *Paris Club Agreement* carries a negative sign, suggesting that participation is associated with reduced foreign borrowing. In the models estimated against the first difference of

logged Debt-to-GDP ratios, the coefficient is positive, suggesting that participation is associated with increased foreign borrowing. *Structural Adjustment Fund* participation returns significant coefficients in the models estimated against the first difference of the logged Debt-to-GDP ratios. The negative coefficient suggests that governments that participate in Structural Adjustment Fund programs accumulate approximately one-quarter of a point less debt each year than governments that do not participate in such programs. This result is consistent with a causal relationship, as SAF programs require governments to enact policies that should reduce the demand for foreign debt. The relatively small magnitude of the effect may speak to the high recidivism rate among program participants.

Turning our attention now to the primary hypothesis under investigation, we see that the models yield strong support for the hypothesized relationship between foreign debt accumulation and political inclusiveness. Indeed, the estimated relationship between political inclusiveness and change in foreign debt is consistent in direction, in magnitude, and in statistical significance across all of the specifications. The *Polity* score yields the strongest and most consistent results. The coefficients for the *Polity* score are negative and statistically significant against both measures of change in foreign debt. The negative coefficients in the models tell us that as societies move from highly autocratic to highly democratic, the average annual change in foreign debt falls. I return below to the magnitude and substantive impact of this relationship. The two other measures yield consistent support for the hypothesized relationship. Bueno de Mesquita et als. measure of political inclusiveness, *W Over S*, and the *Freedom House Index* of political rights both return statistically significant coefficients in all models, though our confidence in these

estimates is less in the logged Debt-to-GDP models than in the Debt-to-GDP ratios. Moreover, both alternative measures of political inclusiveness yield coefficients for which the direction of the estimated relationships is consistent with the hypothesis. The coefficients yield the expected negative relationship between *W Over S* and change in foreign debt and the expected positive relationship between the *Freedom House index* and change in foreign debt. In short, the three alternative measures of political inclusiveness yield results that are fully consistent with the hypothesized relationship. The annual change in foreign debt falls as political inclusiveness increases.

Is the estimated relationship between political inclusiveness and change in foreign debt substantively important? There are two dimensions to substantive importance. First, does the estimated relationship between political inclusiveness and change in foreign debt highlight different borrowing practices across levels of political inclusiveness? That is, do these estimates suggest that democracies and autocracies actually behave differently? Second, do the differences across regimes have a substantively important impact on the accumulation of foreign debt over the long run? We can gain insight into the first question by using Clarify to generate the expected annual average change in foreign debt for each value of the Polity index (see King, Tomz, and Wittenberg 2000). Figure 3 presents the estimated annual change in the Debt-to-GDP ratio across the Polity index, as well as the 95 percent confidence intervals. Panel (A) graphs the results for the annual change in Debt-to-GDP; Panel (B) graphs the results for the annual change in the log of Debt-to GDP. Notice first that both panels highlight a substantial difference between regime types at the extreme poles of the index. Holding all other variables at their mean (including average foreign debt), the estimates suggest that on average, democracies

reduce their foreign indebtedness as a share of GDP while autocracies increase their debt. On average, therefore, the estimates predict a substantively important difference in borrowing behavior.

(Insert Figure 3 about here)

The differences persist even once we recognize the uncertainty inherent in these estimates. The positive rate of debt accumulation in the Debt-to-GDP ratio for a democratic regime at the upper boundary of the 95 percent confidence interval is still lower than the rate of debt accumulation for an autocracy at the lower boundary of its 95 percent confidence interval. The two regime types accumulate the same amount of additional foreign debt only as we move further out along the confidence interval. The regime distinction is less sharp in the change in the log of Debt-to-GDP model. In this version, democracies at the upper 95 percent confidence interval borrow as much as autocracies at the lower 95 percent confidence interval. Yet, both graphs reveal the same basic expectation: on occasion we expect to see democracies and autocracies accumulate foreign debt at the same rates. More typically, however, we expect autocracies to accumulate more foreign debt than democracies. There does therefore appear to be a meaningful difference in behavior across the two regime types.

Does this difference in borrowing behavior across regime types lead to large differences in the level of foreign indebtedness over time? For although we find that inclusive and exclusive regimes borrow at different rates, it might still be the case that this difference is too small to have any substantively important impact on the level of foreign debt each government accumulates over time. One way to conceptualize the substantive impact of political inclusiveness on foreign indebtedness is to ask how much

debt a typical autocracy and a typical democracy would accumulate over a twenty-year period, say 1979 through 1998, given the estimated annual increase in foreign debt for each type of regime. For example, take the average debt held by all governments in the late 1970s, roughly 33 percent of GDP. Now allow this debt to grow at the average borrowing rate for the average autocracy for twenty years. The average autocracy score in the 1975-1982 period is -6.3; the estimated annual additional debt accumulation for such a government is roughly 4 percent per year. At this borrowing rate, after twenty years the typical autocratic regime will accumulate foreign debt equal to 98 percent of GDP. In contrast, allow the same average debt to grow for twenty years at the borrowing rate of the typical democracy. The average polity score for democracies in this period was 8.77. The upper bound of the 95 percent confidence interval suggests a rate of debt accumulation for such regimes of about two percent per year. After twenty years, the democratic regime would have accumulated foreign debt equal to 49 percent of GDP. These rough estimates highlight how seemingly small differences in annual borrowing patterns across regime types accumulate over time to very different foreign debt levels. An average autocracy would owe twice as much as the average democracy.

These simulated foreign debt accumulation trajectories are reflected in the contrasting real-world experiences of Zambia, Botswana, and Senegal. Highly autocratic Zambia, which is coded -9 on the Polity index until the early 1990s, increased its foreign Debt-to-GDP ratio by an average of 9 points per year between 1975 and 1991. Consequently, its total foreign debt rose from 68 percent of GDP in 1975 to 210 percent of GDP in 1991. In contrast, highly democratic Botswana, coded 9 on the Polity index throughout the period, reduced its foreign debt burden by an average of 1.6 points per

year over the same period. As a consequence, foreign debt in Botswana fell from 40 percent of GDP in 1975 to about 15 percent of GDP by the early 1990s. Foreign debt in Senegal, which is coded -1 on the Polity index throughout the period, traced a path midway between Botswana and Zambia. Senegal's foreign Debt-to-GDP ratio grew by an average of 3.2 points per year between 1975 and 1991, as a consequence of which Senegalese foreign indebtedness rose from 20 percent of GDP in the mid-1970s to 70 percent of GDP by the early 1990s. Thus, the estimated relationship between political inclusiveness and change in foreign debt is substantively significant on both dimensions: autocracies and democracies borrow at different rates, and these different borrowing rates produce very different levels of foreign indebtedness.

While the bad policy hypothesis receives robust support, the models provide only modest support for the bad luck hypothesis. Our measure of *Terms of Trade* shocks failed to return a statistically significant coefficient in any of the models. Moreover, the coefficients on *Terms of Trade* suggest that any relationship that may exist is positive—larger changes in foreign debt are associated with improvements in countries' terms of trade. This finding does not mean that governments who borrowed heavily did not face large negative terms of trade shocks. In fact, it may well be the case that heavily-indebted governments borrowed heavily in response to such shocks. What it does suggest is that the less-deeply indebted societies also faced large negative trade shocks but did not respond by borrowing heavily. Hence, what matters is not the shock *per se*, but how governments responded to the shock.

Foreign debt accumulation was more responsive to interest rate shocks, but these results are not robust across the models. The *World Interest Rate* returns strongly

significant coefficients in the change in logged foreign indebtedness models, but less robustly significant coefficients in the change in foreign indebtedness models. The estimated coefficient suggests that the change in Debt-to-GDP ratios is a positive function of the World Interest rate, a finding consistent with the bad luck hypothesis. Overall, therefore, the models yield only moderate support for the bad luck hypothesis. Terms of trade shocks did not have any systematic impact on foreign debt accumulation, but interest rate shocks appear to have had some impact. This suggests that while bad luck was important, it was not the only factor, and certainly not the dominant factor driving foreign debt accumulation in the developing world.

## **Conclusion**

This paper demonstrates that variation in political inclusiveness, the familiar distinction between democracy and autocracy, was an important cause of the variation in foreign debt accumulation among developing countries since the mid-1970s. Governments working within highly inclusive political systems accumulated substantially less foreign debt than governments in highly exclusive political systems. The relationship between political inclusiveness and foreign indebtedness holds even once we control for other likely causes of foreign debt accumulation, including the level of development, integration into the global trade system, and participation in international debt management programs supervised by the IMF and World Bank. The analysis not only confirms that political inclusiveness is an important cause of foreign debt accumulation, but also suggests that political institutions have a more systematic impact on debt

accumulation than the exogenous shocks emphasized by the bad luck hypothesis. Whereas political inclusiveness was always a significant predictor of foreign debt accumulation, the relationship between exogenous shocks and foreign debt accumulation was sensitive to the measure used and model specification. Thus, although bad luck was not irrelevant to the accumulation of foreign debt, bad policy was fundamentally important.

My conclusions about the important role of political inclusiveness in the accumulation of foreign debt are based on a theoretical model that relates government decisions to borrow from foreign lenders to the political institutions that structure the population's ability to participate in politics. I argued that variation in political inclusiveness drives variation in debt accumulation by changing governments' incentives to minimize tax distortions. Relying on previous work by Mancur Olson, I argued that as a larger share of a society's population gains the right to participate in politics, incentives to reduce the distortions generated by high taxes strengthen. I extended this tax-based argument to government debt accumulation with the recognition that government borrowing today is an implicit decision to tax income in the future. Consequently, highly inclusive political systems, democracies, should borrow less heavily than highly exclusive political systems.

The robust empirical support for the underlying theoretical model suggests that the approach provides a useful lens through which to pursue further research on how political institutions will shape government behavior within the Multilateral Debt Relief Initiative (MDRI). On the one hand, the findings discourage us from fully embracing the optimism embodied in the bad luck hypothesis. The analysis reported here suggests that

governments who benefit from debt forgiveness are unlikely to dedicate the resources freed by this program to projects that enhance social welfare. In fact, a strong bias against investment in public goods by autocracies is an explicit implication of Olson's model. Government investment in public goods obeys a logic identical to tax rates: investment in public goods increases in line with political inclusiveness. The relationship between public good investment and political inclusiveness holds for familiar reasons. The importance that insiders attach to productivity-enhancing public goods grows as work becomes more significant as a source of insider income. Consequently, government investment in public goods follows the same ratio as the tax rate— $1/1/n$ . That is, the government invests in public goods until the last penny of investment raises national income by the reciprocal of the share of national income that insiders control.

As a consequence, the empirical findings regarding foreign debt bear directly upon government behavior following debt forgiveness. Governments presiding over highly exclusive political systems constitute the overwhelming majority of governments eligible for debt relief under the MDRI. The analysis reported here suggests that these governments accumulated foreign debt because they operated within a political environment in which they had little incentive to care about the negative impact that high debt has on long run economic performance. Consequently, governments in highly exclusive political systems that benefit from debt forgiveness under the MDRI are unlikely to devote the freed-up resources to public goods. Instead, one expects such governments to consume rather than invest these resources, and one might reasonably expect them to begin to accumulate new foreign liabilities as well. At present, of course, this expectation can only be a conjecture; debt relief is too recent to allow for evaluation

of post-relief trends. It will prove interesting to return to this hypothesis in a few years to see whether Olson's predicted symmetry holds.

This does not mean that we must embrace the bad policy hypothesis's unfettered pessimism. For while societies are not driven deeper into poverty by a hostile global economy over which they have little influence, governments in developing societies are not innately wedded to bad policy. Instead, governments borrow in response to the political incentives they face. These incentives are in turn a function of the political institutions within which they work. Hence, one can encourage better policies by encouraging political reform. This paper suggests that preventing the reemergence of debt problems in developing countries will require governments to move toward more inclusive political systems. Multilateral and bilateral lenders must also reform their practices. In particular, foreign lenders must be willing to deny loans to governments in highly exclusive political systems. The World Bank's growing awareness of and emphasis on so-called "governance indicators", of which voice and accountability is an important component, as part of their country evaluations suggests that the international financial institutions recognize the importance of these issues in the development process.

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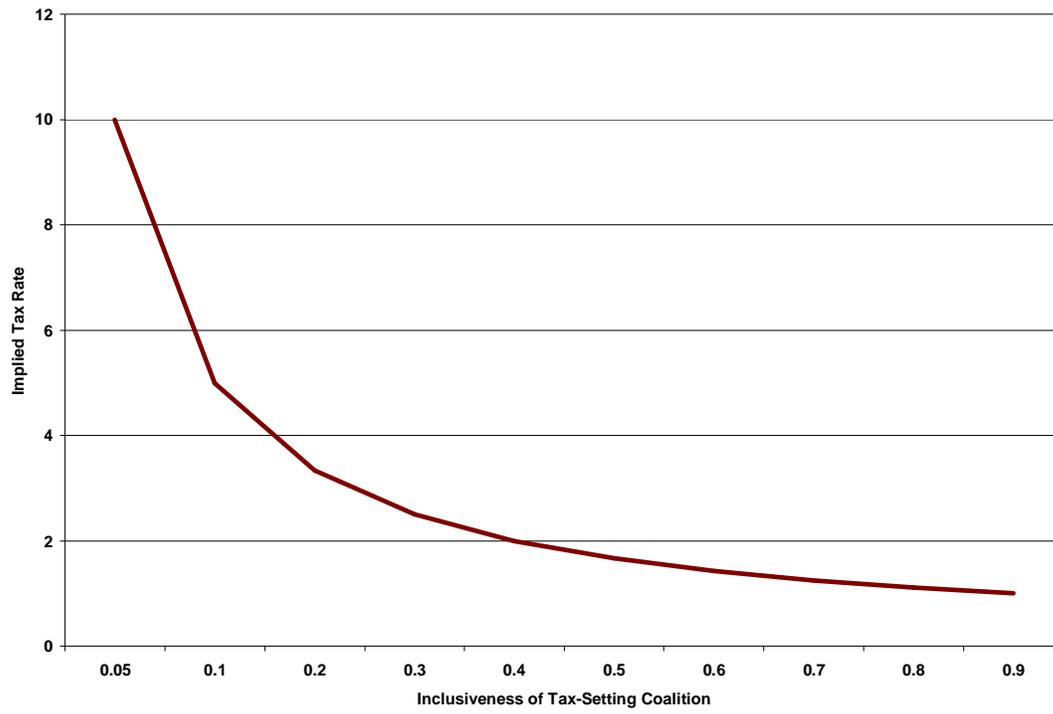
**Table 1: Political Inclusiveness and the Change in Foreign Debt**

	Polity Index		W Over S		Freedom House	
	Debt to GDP	Log Debt/GDP	Debt to GDP	Log Debt/GDP	Debt to GDP	Log Debt/GDP
<b>Debt-to GDP</b>	<b>.10**</b>	<b>.85***</b>	<b>.10**</b>	<b>.85***</b>	<b>0.10**</b>	<b>.85***</b>
	-0.05	-0.04	-0.05	-0.04	-0.05	-0.04
<b>GDP</b>	<b>-0.78</b>	<b>-.04**</b>	<b>-0.69</b>	<b>-.04**</b>	<b>-0.75</b>	<b>-.04**</b>
	-0.72	-0.02	-0.71	-0.02	-0.72	-0.02
<b>Trade Openness</b>	<b>-3.48</b>	<b>0.05</b>	<b>-2.96</b>	<b>0.06</b>	<b>-3.47</b>	<b>0.05</b>
	-2.29	-0.05	-2.25	-0.05	-2.28	-0.04
<b>Per Capita Income</b>	<b>2.38</b>	<b>0.05</b>	<b>2.47</b>	<b>0.05</b>	<b>2.11</b>	<b>0.05</b>
	-1.68	-0.03	-1.83	-0.03	-1.75	-0.04
<b>Political Inclusiveness</b>	<b>-.40***</b>	<b>-.007***</b>	<b>-10.29***</b>	<b>-.15*</b>	<b>0.92**</b>	<b>0.02*</b>
	-0.12	-0.003	-3.59	-0.09	0.46	0.01
<b>Terms of Trade</b>	<b>5.15</b>	<b>0.08</b>	<b>4.43</b>	<b>0.07</b>	<b>5.20</b>	<b>0.09</b>
	-8.17	-0.22	-8.22	-0.22	-8.20	-0.22
<b>World Interest Rate</b>	<b>0.62</b>	<b>.05***</b>	<b>0.74*</b>	<b>.05***</b>	<b>0.77*</b>	<b>.05***</b>
	-0.44	-0.02	-0.44	-0.02	-0.45	-0.02
<b>Structural Adjustment</b>	<b>-0.37</b>	<b>-.23**</b>	<b>-0.67</b>	<b>-.23**</b>	<b>-.08</b>	<b>-.22**</b>
	-3.61	-0.10	-3.66	-0.10	-3.70	-0.10
<b>Paris Club Agreement</b>	<b>-5.49***</b>	<b>.21***</b>	<b>-5.90***</b>	<b>.21***</b>	<b>-5.13***</b>	<b>.22***</b>
	2.09	.05	2.14	.05	2.07	.05
<b>Constant</b>	<b>7.57</b>	<b>-3.45***</b>	<b>7.88</b>	<b>-3.43***</b>	<b>4.12</b>	<b>-3.57***</b>
	-16.65	-0.51	-17.46	-0.53	16.68	-0.53
Observations	1542	1542	1542	1542	1542	1542
Countries	78	78	78	78	78	78
R-squared	0.06	0.43	0.06	0.43	0.05	0.43
Wald chi2	32.08	1347.98	32.74	1334.01	28.57	1388.03
Prob>chi2	0.0002	0.000	0.0001	0.000	0.001	0.000

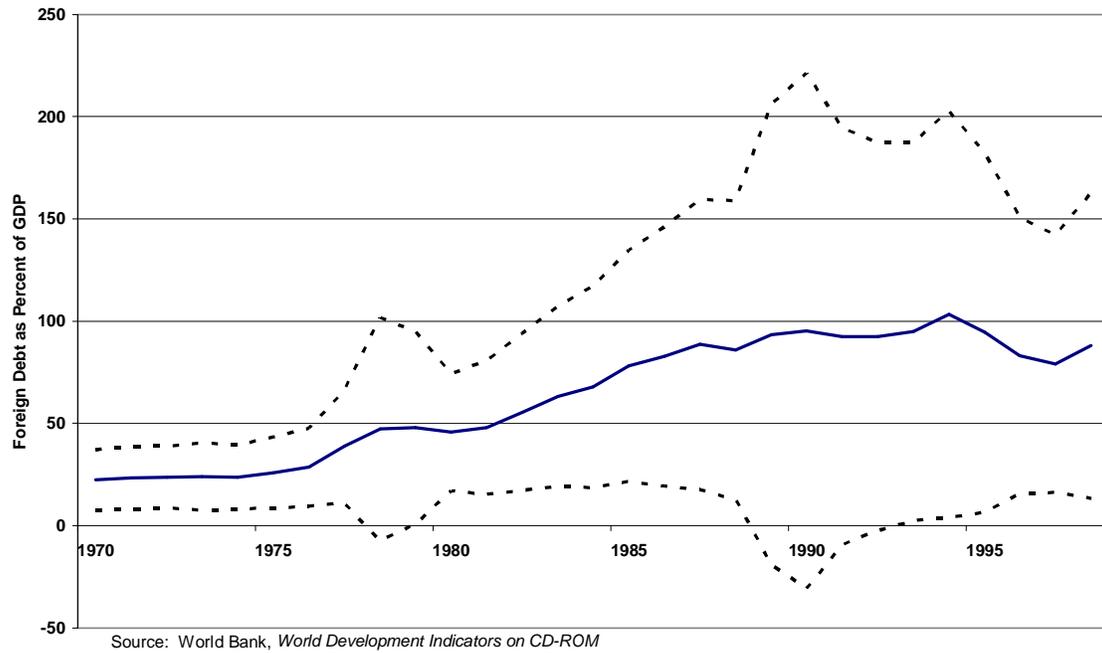
Note: Dependent variable is the change in the foreign debt to GDP ratio from year t-1 to year t. Absolute is the first difference of the absolute values of debt to GDP; Log is the first difference of the logged debt to GDP ratio. Method of estimation is stata's xtpcse procedure with a common ar(1) process. Standard errors are thus panel corrected.

\* p<0.1, \*\* p<0.05, \*\*\* p<0.01

**Figure 1: Taxation as a Function of Political Inclusiveness**

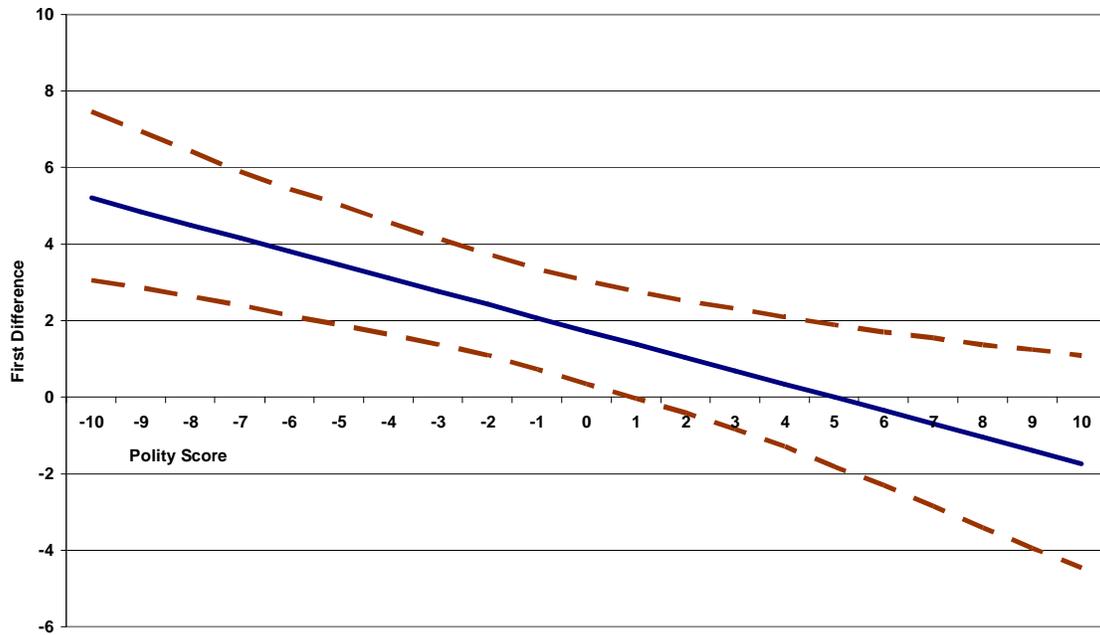


**Figure 2: Growth of Developing Country Debt**  
(Foreign Debt as a Percent of GDP)

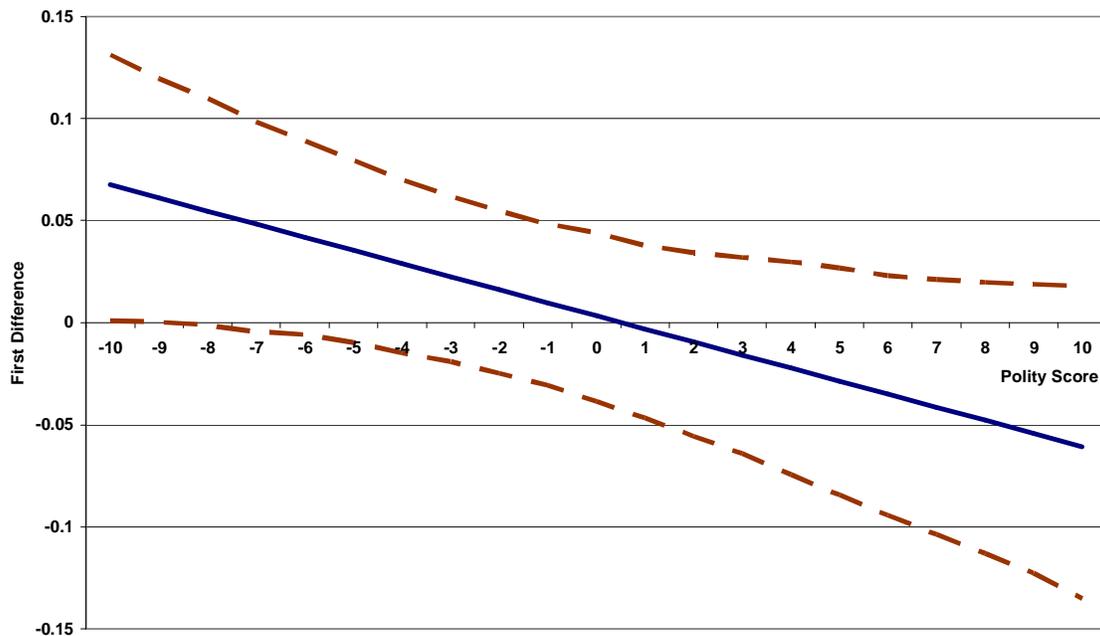


**Figure 3: Political Inclusiveness and Expected Change in Foreign Debt to - GDP**

**Panel A: Absolute Debt/GDP**



**Panel B: Log of Foreign Debt/GDP**



### Countries Included in the Analysis

Algeria	Gambia	Nigeria
Angola	Ghana	Pakistan
Argentina	Guatemala	Panama
Bangladesh	Guinea	Papua New Guinea
Benin	Guinea-Bissau	Paraguay
Bhutan	Guyana	Peru
Bolivia	Haiti	Philippines
Botswana	Honduras	Republic of Congo
Brazil	India	Rwanda
Burkina Faso	Indonesia	Senegal
Burundi	Iran	Sierra Leone
Cameroon	Jamaica	Somalia
Central African Republic	Kenya	South Africa
Chad	Korea	Sri Lanka
Chile	Lesotho	Sudan
China	Liberia	Swaziland
Colombia	Madagascar	Syria
Costa Rica	Malawi	Tanzania
Cote D'Ivoire	Malaysia	Thailand
Democratic Republic of Congo	Mali	Togo
Dominican Republic	Mauritania	Tunisia
Ecuador	Mauritius	Turkey
Egypt	Mexico	Uganda
El Salvador	Morocco	Uruguay
Equatorial Guinea	Mozambique	Venezuela
Ethiopia	Nicaragua	Zambia
Gabon	Niger	Zimbabwe

### Summary Statistics

	Mean	Standard Deviation
Change in Debt/GDP	2.10	27.63
Change in Log Debt/GDP	0.01	1.08
Log of Debt/GDP	3.99	0.79
Debt/GDP	74.23	77.55
Log of GDP in US Dollars	22.65	1.83
Log Trade Openness	3.97	0.57
Log Per Capita Income	7.37	0.76
Polity	-1.09	7.06
W Over S	0.51	0.29
Freedom House Political Rights	4.40	1.88
Terms of Trade	0.01	0.09
US Interest Rates	6.82	2.69