

Why Democracies Escalate the Race to the Bottom: International Trade and Government Revenues in Developing Countries

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Abstract

Governments of developing countries need revenue to meet their substantial spending, development, and poverty reduction goals. How has globalization affected their ability to raise such revenues? In this analysis, we contribute to the globalization and taxation debate by focusing on the fiscal impacts of declining international trade tax revenue in poor nations. We hypothesize that regime type is a major determinant of revenue raising capacity *after* liberalization policies have been adopted. As international trade taxes decline—once the primary form of government revenue generation in developing economies—policymakers in democracies find it more challenging than their authoritarian counterparts to replace the revenue loss via domestic tax reform. The unfortunate consequence is that the poor bear the brunt of this revenue shortfall in democracies. Surprisingly, our results reveal that in more repressive countries, the welfare of the poor improves alongside trade liberalization.

One of the most fundamental ways that governments of developing countries can reduce poverty and address their development challenges is by raising revenue. International Financial Institutions (IFIs) advise policymakers to avidly pursue tax reforms in order to meet these goals. Yet, tax collection remains a key challenge for most of these countries. With the onset of financial liberalization, scholars caution that it may be even more difficult for governments to mobilize revenue. The “race to the bottom” theory of taxation suggests that, in a world of increasingly mobile capital, policymakers progressively lose their capacity to tax. As markets expand, they have little alternative but to reduce taxes to the lowest common denominator. Otherwise, any efforts to raise taxes will discourage investment and prompt capital to shift to low-tax regions.

Debate on this topic has been tempered by recent studies presenting compelling empirical evidence that aggregate tax burdens have remained stable despite increasing capital mobility. All report that revenue changes accompanying globalization have been relatively modest. However, the great bulk of these studies have tested this hypothesis on a small number of advanced industrialized countries only.¹ Even a quick look at developing economies suggests a more complex picture, and one that begs closer exploration of the potential revenue impacts of globalization. It is striking that, soon after the eighties debt crisis, when a large number of developing countries began embracing openness policies, government revenue as a percent of gross domestic product (GDP) in liberalizing economies grew at a far slower rate (0.46%) than developing economies that did not liberalize (3.2 %).² This is in sharp contrast to stable, or increasing revenues in many

¹ Wubbels and Arce (2003) are an important exception. This is discussed in more detail in the following section. Quinn (1997) and Slemrod (2004) include developing countries in their broader sample but the analysis stops in the late eighties and early nineties (respectively), which is approximately the period when most developing countries began liberalizing.

² This is the average annual growth rate for government revenue as a percent of GDP between 1991 and 2009 (WDI 2011). Countries are identified as ‘open’ or ‘closed’ based on Sachs-Warner 1995 and Wacziarg and Welch 2008.

countries from the Organization for Economic Cooperation and Development (OECD), as current literature predicts (see Appendix A.1).

What accounts for this unexpected trend in developing economies? In this analysis, we focus on the revenue impacts of trade liberalization in developing economies, particularly the reduction of tariff barriers. Scholars engaged in the race-to-the-bottom taxation debate have focused overwhelmingly on financial liberalization, but they have stopped short of theorizing the revenue consequences of trade liberalization. One of most important components of trade liberalization is the substantial lowering of trade taxes. This can have a major impact on total revenues, primarily because many developing economies have historically relied on international trade taxes as *the* major source of government revenue. Standard policy advice from international financial institutions (IFIs) holds that policymakers must offset the revenue loss by implementing tax reforms such as increases in goods and/or income taxes. However, this is not always an easy proposition; on the demand-side of the political market, citizens must be willing to accept and comply with such reforms, while on the supply-side, political elites must be prepared to propose and enforce it. We assess if and how market integration—measured in an unconventional way in this paper as reductions in trade taxes—affects these demand and supply-side considerations. More specifically, we ask if governments are able to recover their trade tax revenue loss by raising hard-to-collect taxes, such as goods and income taxes.³

We argue that, in this process, democracies will have far greater difficulty than non-democracies. Governments of democratic nations face a dual challenge. First, citizens of poor democracies tend to have low confidence in their government's ability to provide efficient public goods and therefore object to proposals for higher taxes. Second, absent the tools of coercion that exist in non-democracies, citizens are more hesitant to comply with new or existing tax policies, and policymakers-- responding to electoral pressures-- have limited incentives to enforce tax reform. 'Race to the bottom' pressures are relevant, but in more complex ways than existing theory predicts. Specifically, we contend that policy elites *in democratic*

³ See Aizenman and Jinjark (2009) for a discussion on 'hard to collect' and 'easy to collect' taxes in developing economies.

nations find it more challenging to increase and collect taxes from export-oriented and import-competing businesses. Some developing economies have successfully implemented domestic tax reform *de jure*, but collecting on those taxes in democratic nations *de facto* has been a constant source of struggle. The bottom line is that broad categories of regime type have become a major determinant of revenue raising capacity post-openness.

We provide relatively strong statistical evidence consistent with this explanation, using error correction models and data from 105 developing nations from 1990 until 2009. In the second phase of our empirical analysis, to further test our theoretical predictions, we explore the causal mechanisms of our argument in more detail. Using micro-level survey data for 42 countries, we find that citizens in poor democracies have a higher propensity to cheat on taxes, and tend to display low confidence in their governments. The latter is reinforced by our final set of results, which confirm that post-liberalization, democracies are engaging in socially inefficient welfare spending that disproportionately protects better-off groups. The broader implication that *ceteris paribus*, trade liberalization is adversely affecting the poor *in democracies* is rather startling, albeit not surprising. Recent studies have shown that democracy is not necessarily good for the poor; this paper provides new insights into at least one reason why this might be the case.

Findings from this study contribute to four pivotal debates in political science. First, it adds to the international political economy (IPE) literature on the fiscal implications of openness by examining the consequences of declining international trade tax revenue. Second, it is striking that studies which debate the impacts of international market expansion on welfare states in developing nations ignore supply-side dynamics, i.e., the effects of openness on how they are financed (i.e., taxes). This paper takes *both* the tax and welfare angle into account. Third, scholars in comparative political economy (CPE) have long deliberated if and how regime type affects revenue-raising capacity, but little (or no) research addresses how this dynamic is affected by conditions of globalization. Finally, as more and more scholars question the conventional wisdom that democracy helps the poor, this analysis offers a novel explanation for this outcome by taking into account the political challenges of revenue expansion in an era of global markets. We suggest that broad categories of

regime type are of great consequence in determining the impacts of openness on fiscal policy, more so than more narrowly defined institutional variables such as partisanship and labor organizations.

EXISTING RESEARCH AND UNANSWERED QUESTIONS

The literature on globalization and taxes is extensive. Much of this scholarship centers on the relationship between financial liberalization and tax rates. Throughout the eighties and nineties, scholars made dire predictions on the decreasing ability of policymakers to tax mobile asset holders and increase revenues in a global economy (Gill and Law 1989, Wilson 1985). By the late nineties, however, the fervor surrounding doomsday race to the bottom scenarios began to subside. Following Quinn (1997), multiple studies have produced evidence that governments retain significant ability to tax despite increasing globalization (e.g., Takashima 2007, Garrett and Mitchell 2001).

Now, differences amongst scholars of IPE boil down to factors driving this outcome.⁴ These disagreements are relatively minor in the bigger picture; it is of no small import that scholars have reached a solid consensus that policymakers do not have to resist globalization because it will result in loss of revenue. Concomitant fears about the effects of rising fiscal constraints post-openness on the sustainability of the welfare state have also been shelved. Research shows that social security contributions continue unabated (Rodrik 1998, Brady, Beckfield and Seeleib-Kaiser 2005). Even if capital taxes fall, governments increase labor taxes to maintain the necessary revenue base (Adam and Kammass 2007). Nonetheless, despite the great talent behind this research and the implicit promise for policymakers across the world, this body of work is

⁴ The impact of financial liberalization on changes in the tax rate are revenue neutral, due to one or more of the following reasons (1) taxes on capital have been increasing (Quinn 1997, Slemrod 2004); (2) governments have been raising other forms of revenue from capital, such as through investment incentives (Swank and Steinmo 2002); (3) taxes on labor have been increasing (Plumper, Troeger and Winner 2009, Rodrik 1997); and/or (4) domestic politics, such as the number of veto players (Basinger and Hallerberg 2004) or the type of political institution (i.e., majoritarian democracies (Hays 2003)) has played a critical role in mitigating race to the bottom pressures.

still burdened by two concerns: (1) the vast majority neglect the globalization and tax relationship in the developing world; and (2) they stop just short of exploring, both theoretically and empirically, how and why *trade* liberalization might affect revenue generation.⁵

Among IPE scholars, Wibbels and Arce (2003) are the only ones to consider the unique situation facing developing economies in their efforts to raise revenues in global markets. They recognize several reasons why tax efforts in Latin America are more likely be vulnerable to the whims of mobile capital.⁶ Despite this, the empirical results show mixed support for the race to the bottom hypothesis; and the authors conclude with a guarded rebuke of ‘globaphobics’. Regardless, by taking the particular dynamics of developing countries into account, their analysis represents an important advance of the globalization-tax debate. Two logical questions emerge from their findings: First, what happens when the sample is broadened to include the rest of the developing world? Second, what are the overall revenue impacts of trade liberalization?

Our insistence that the impacts of trade liberalization should be made more central to globalization-tax debates is not without basis. Economists Aizenman and Jimjarak (2009), Baunsgaard and Keen (2010), and Khattry and Rao (2002) present clear evidence of a link between trade liberalization and the erosion of the tax base in developing countries. We find it surprising that this finding has received relatively minor attention in broader discussions of globalization, particularly among those who debate the race to the bottom. Trade taxes

⁵ Note that, while some scholars do include trade openness in their tax models (Takashima 2007, Swank and Steinmo 2002, Plumper, Troeger, and Winner 2009, Garrett and Mitchell 2001, Adam and Kammass 2007), their analytic focus is on tax constraints unleashed by capital mobility. Therefore, the theoretical predictions made about the effects of trade per se are either vague (see Swank and Steinmo 2002: 645, fn. 7) or omitted altogether. The empirical results are decidedly mixed; although interestingly, a few studies show a negative relationship between trade and corporate tax rates.

⁶ For example, Wibbels and Arce (2003) argue that countries like Latin America face greater vulnerability to financial contagion.

have long been a critical source of revenue in developing countries, primarily because it is a tax that is easy to monitor and collect at a centralized location, i.e., border areas, and have low administration and capacity demands (Shalizi 1991, Aizenman and Jinjark 2009). Data from the World Bank indicates that trade tax revenue accounts for, on average, 26 percent of all total tax receipts in developing economies, reaching as high as 60 percent in very poor nations.

As markets expand, this dependence on trade taxes leaves developing countries in a serious predicament. Reducing trade taxes has been at the heart of IFI advice on the adjustment process for developing countries (World Bank 1990). Indeed, trade taxes have been steadily declining as a part and parcel of deliberate trade liberalization policies (Khattry and Rao 2002, Keen and Simone 2004). The standard policy prescription for recovery is to combine tariff reduction with increased consumption taxes, and, in particular, the value-added tax (VAT) (Keen and Ligthart 2002, World Bank 2007). The formidable challenge, however, is that most developing countries do not have the administrative infrastructure to effectively collect these “hard to collect” taxes, including resources for monitoring and enforcement (Aizenman and Jimjark 2009, Baunsgaard and Keen 2010, and Khattry and Rao 2002).⁷ The IFIs are on full alert that it will be difficult for these nations to successfully replace lost trade tax revenue; much of their operational lending and research is now focused on this issue (see Shalizi 1991, Cotarelli 2011). As recently noted by the International Monetary Fund (IMF) deputy managing director (2003-2006) Agustín Carstens:

Tariff reductions associated with trade liberalization naturally entail the risk of falling government revenues. ... Given heavy dependence on trade taxes in many developing countries, tariff reductions are likely to lead to significant revenue losses... *Early measures to offset potential revenue losses are needed*, such as strengthening tax administration, or reinforcing the consumption and income tax systems (emphasis ours, Carstens 2005).

⁷ Effective tax administration systems are beyond the reach of many developing countries for several reasons: extensive informal sector activities; large agriculture sectors that are hard to tax for practical reasons; evasion and rent-seeking activities associated with tax collection; and low individual compliance (see for example, Avi-Yonah and Margalioth 2007/2008, Keen and Simone 2004, Fuest and Riedel 2009, IMF 2005).

At bottom, IFIs are rightly concerned that the tide could soon turn against market openness if developing countries cannot soon remedy these difficulties (see Mitra 1992, Economic Commission for Africa 2004).

The IFIs, and economists such as those mentioned above, have thus identified a key variable that affects total government revenues in a globalizing economy: declining trade taxes. It is striking that this research and globalization-tax studies in IPE have co-existed in mutual isolation. We question, in particular, whether and to what extent *political* factors can mitigate the loss of the tax base in this current era of openness. More specifically, how might politics impact the ability of governments to raise taxes on capital (and individuals) in the existing globalizing climate? Indeed, the few studies mentioned that explore the impacts of declining trade taxes revenue lack a more explicitly political explanation for why some governments have successfully increased domestic taxes and replaced the lost revenue, and not others (e.g., Cambodia, China, Jordan, Nepal, Singapore, Tunisia). In the following section, we take our cue from the globalization-tax IPE debate and question what domestic political institutions might constrain (or strengthen) the ability of developing country governments to increase taxes as markets expand. These are critical questions since these nations have to do far more than simply replace the lost revenue from declining trade taxes; they must also continue to increase revenues to match their spending needs for development.

THEORY: *Regime type and government revenue generation post-openness*

Prior to openness, dependence on trade taxes helped keep tax reform from becoming a central political issue in both democracies and non-democracies.⁸ “Easy to collect” trade taxes had become a critical source of revenue in both regime types, leading Tanzi and Zee (2000: 300) to determine “many developing countries often ended up with too many small tax sources, too heavy a reliance on foreign trade taxes, and a relatively insignificant use of personal income taxes.” The widespread implementation of closed development policies--import substitution industrialization (ISI)-- encouraged the political embrace of trade taxes. The great advantages for governments were not only that these taxes protected domestic industry, but they were also less

⁸ Cottarelli (2011: 19) notes that it wasn’t until the 1990s --the post liberalization era-- that tax reforms were “more earnestly” pursued in developing countries.

visible to citizens, compared to direct (e.g. income taxes) and indirect taxes (e.g. sales taxes) (see Katsimi and Moutos 2010, Adam 2009).⁹

The implementation of trade liberalization, however, has unleashed heady political battles over tax reform, with great consequence to democracies. Developing countries are now in the difficult position of offsetting trade liberalization with domestic tax reform. Even if consumption increases alongside openness, positive impacts on government coffers may be negligible without necessary modifications to existing (and mostly ineffective) tax policies. Recall that IFIs have been urging developing countries to replace lost revenues by pursuing “hard to collect” broad-based corporate income taxes, and the value added tax (VAT) (Cottarelli 2011, Thirsk 1991).

We contend that developing democracies are facing far greater challenges in implementing (and collecting upon) these domestic tax reforms post-openness than nondemocracies. First, democratic policymakers have both weaker incentives and resources to propose and enforce reform. Second, citizens of developing country democracies tend to be less willing to accept tax reforms because of lackluster confidence in their government’s ability to supply broad-based public goods. As research in both political economy and public administration helps inform us, for citizens to support reform, the perceived benefits of tax reform (improved public services) must outweigh the costs (taxes).

Supply-side: Democratic leaders have fewer resources and incentives to raise taxes

To elaborate on the first point, we consider a supply-side perspective and why political elites in democracies might lack both institutional resources and incentives to expand tax revenues alongside trade liberalization. Most fundamentally, governing officials do not have at their disposal a key institutional tool held by dictatorships: the capacity to use force to pass tax laws and/or demand compliance with existing laws. In comparison to their nondemocratic counterparts, citizens of democracies incur minimal penalties (if any) for evasion and noncompliance. Whereas, common coercive tax-collection efforts in authoritarian regimes include fines, confiscation of property, physical punishment, and even death (see Bernstein and Lü 2000,

⁹ See Rodrik (1992) for a discussion on how trade taxes can benefit state and import-competing groups.

Easter 2002). In the instance that democratic and nondemocratic regimes have equally inefficient tax administration systems, the risk of severe penalty for noncompliance makes it far more likely that citizens of the latter will comply.

Additionally, constrained by electoral considerations, policymakers in democratic regimes have less incentive to impose and/or enforce taxes on businesses in the competitive global economic environment. Applying the logic of Bueno de Mesquita et al.'s (2005) selectorate theory to countries with fledgling tax administration systems, we anticipate policymakers in poor democratic nations will have weak incentives to police the tax behavior of firms who are key members of the winning coalition. The 'selectorate' represents all citizens that can influence policy outcomes, and a 'winning coalition' is a subset of the selectorate, which chooses and sustains the leader in office. Most systems with large winning coalitions and large selectorates are democracies, just as systems with small winning coalitions and selectorates tend to be non-democracies (Bueno de Mesquita et al 2005). The winning coalition is critical to sustain the incumbent, and importantly, enjoys privileges unavailable to nonmembers.

The caveat is that in poor democracies, the winning coalition is concentrated in the middle and upper quintiles (Ross 2006). The relative size of the winning coalition is still larger than in authoritarian regimes, but systematically smaller than in developed democracies. Bueno de Mesquita et al (2001) confirm that, in practice, democratic leaders in poor countries rely on more limited coalition sizes, contrary to what its free, competitive electoral system would suggest (Bueno de Mesquita, Morrow and Smith 2001: 64-5).¹⁰ Also, disenfranchised marginalized populations and poor information contribute to a smaller actual coalition size, further undermining the benefits of large-coalition, large-selectorate political systems (i.e, broad-based public goods).

¹⁰ Democracies in our developing country sample earn an average score of 0.79, using Bueno de Mesquita et al (2005) indicator of coalition size (the upper bound in the advanced industrialized democracies is 1.00).

Note that this average is still higher than nondemocracies in our sample, which generally score 0.47 on coalition size.

In consequence, incumbents increase his/her reelection prospects in democratic countries with weak institutions by pursuing inefficient public goods, i.e., low tax rates/compliance.¹¹ Evidence that democratic developing countries display a systematic propensity for pursuing socially inefficient public spending projects (e.g., “white elephants”) comes from econometric work (Filmer and Pritchett 1999, Manzetti and Wilson 2007), formal models (Robinson and Torvik 2005), and case studies (Keefer and Khemani 2005). Like Robinson and Torvik (2005), most scholars find this outcome to be “politically rational, even while they are socially disastrous” (Keefer and Khemani 2005: 198).

Incumbents thus cater to privileged groups dominating the relatively large winning coalitions in developing democracies-- particularly those with taxable assets, i.e., businesses-- by granting benefits, such as low compliance and/or low tax rates. Globalization pressures and the threat of capital exit provide additional incentive for policymakers to reward businesses with lower corporate income taxes, and a more permissive environment for evasions, and loopholes. We thus predict that *democracies will be particularly susceptible to race to the bottom pressures in taxation.*¹²

In contrast, as trade taxes decline with liberalization, it will be easier for authoritarian leaders to coerce businesses outside their small winning coalition to replace lost government revenues by paying higher corporate tax rates. Given that the winning coalition has fewer members in authoritarian regimes, compliance

¹¹ Low tax rates (and enforcement) represent a socially inefficient “public good” in poor democracies for two reasons. Not only do they yield negative surpluses (in countries desperate for revenue), but marginalized groups enjoy low taxes, primarily by default; they are exempt on the basis of weak tax administration systems.

¹² This scenario is distinct from the advanced industrialized democracies, where more developed tax administration institutions exist alongside greater transparency, monitoring, and a reliable supply of public services. Under these conditions, leaders of rich countries are considerably constrained from levying low tax rates on businesses at the expense of other (noneconomic) members of the winning coalition. This is arguably an additional reason why existing research finds tax revenues have been minimally impacted by globalization in developed economies.

will be demanded from firms (and individuals) who do not belong to this small, select group.¹³ According to Bueno de Mesquita et al (2005), leaders only need to dole out “private goods”—higher tax concessions in this case—to members of their relatively small coalition. Total tax receipts will thus be higher in nondemocratic economies. Even with capital mobility pressures, it is still politically costly for autocrats to lower taxes and reduce compliance pressures on nonmembers. Consistent with Bueno de Mesquita et al (2005), then, we surmise that autocrat’s chances for political survival will vastly improve when low taxes serve as a private benefit for their small winning coalition members.

Demand-side: Democratic citizens resist tax reform

Next, taking into account demand-side considerations, we predict citizens of democracies resist tax increases based on their perceptions of a higher cost-benefit ratio associated with such a policy change. A large body of theoretical and empirical research reveals successful tax reform hinges on high citizen confidence in government (Chappell 1990, Ross 2004, Bates and Lien 1985). Essentially, citizens will be more willing to accept the burden of higher taxes when they are convinced that the government will provide them with the benefits of improved services in exchange. This is because citizens simultaneously evaluate government performance and tax levels (Bates and Lien 1985). Ross (2004) labels this the cost-benefit model of taxes.¹⁴

In this regard, a pervasive irony afflicts many democratic developing nations; citizens may be willing to support incumbents that supply socially inefficient public goods (e.g., white elephants), but still maintain low overall confidence in government performance. First, given the (weak) institutional context, politicians can more easily manipulate government resources and promote attention-grabbing spending projects that disproportionately favor their supporters, and possibly the clients of the opposition as well (Robinson and

¹³ See, for example, Lim’s (1998) discussion of the privileges granted to certain big businesses (chaebols) in authoritarian South Korea. Certainly, however, all economic elites are not part of the authoritarian regime’s winning circle (see Satpaev 2007).

¹⁴ See also Levi’s (1988) discussion of quasi-voluntary compliance.

Torvik 2005, Manzetti and Wilson 2007). Robinson and Torvik (2005) argue that elected officials prefer that these projects are socially inefficient since otherwise, competing politicians can also operate the project and thereby, reduce support for the incumbent. The paradox is that the threat of political competition encourages the incumbent politicians to underperform (see Keefer and Khemani 2005). Second, the poor face information constraints--such as illiteracy, limited mobility, underdeveloped media-- that reduce their ability to hold individual politicians accountable (Keefer and Khemani 2005). Ultimately, individual politicians may get some credit for visible projects (roads, buildings, staffing schools, low taxes, etc), but little or no blame for the quality of services.

Given these political dynamics, even though political support for the incumbent might increase, overall citizen confidence in government is compromised. Empirical evidence reveals that ‘confidence in government’ hinges upon government’s capacity to deliver socially efficient public goods which help alleviate poverty and improve societal well-being (Espinal, Hartlyn and Kelly 2006, Bratton and Mattes 2001). The consistent pattern of underinvestment in broad-based public goods is then precisely why citizens of poor democracies may remain faithful to individual incumbents, but lose trust in government. According to the cost-benefit model of taxes, we thus predict that citizens of developing democracies will be more likely to object to higher taxes since they have less confidence that governments will deliver commensurate benefits.

In direct contrast, many authoritarian leaders might have institutional reasons to supply efficient public goods. The reason is autocrats must balance maintaining support from their small winning coalition, with preventing revolution (Bueno de Mesquita and Smith 2010). To do so, leaders may either repress *or* else ‘buy’ stability by investing in public goods (Bueno de Mesquita and Smith 2010). If an autocrat generally prefers the latter, he/she has a strong incentive to engage in relatively efficient redistribution. Parenthetically, the provision of socially efficient “general” public goods by nondemocracies does not counter selectorate

theory; democracies always supply higher levels of “core” public goods, such as civil and political rights (Bueno de Mesquita et al 2005: 179-187).¹⁵

The end result is that citizens of authoritarian regimes, somewhat paradoxically, may hold confidence in dictators that invest in socially efficient public goods. If so, according to the cost-benefit model of taxes, the populace in authoritarian regimes will be more accepting that higher taxes will result in better public services, such as improved primary health services and public schooling. Additionally, it is of no small import that the calculus of the cost-benefit tax model must work out in the citizens’ favor in non-democracies; otherwise, as history has shown, citizens become restive in response to the higher taxes, and autocrats are confronted with demands to democratize (Ross 2004).¹⁶

Of course, all dictators are not alike, and some may prefer to engage in repression to stifle rebellion, rather than invest in public goods. Such authoritarian regimes will rely on pure coercion instead of quasi-voluntary compliance to mobilize tax revenue (Wintrobe 1998, Levi and Sacks 2009).¹⁷ More specifically, kleptocrats notoriously impose punitive rates of taxation on any citizen who wants to depose the existing regime (Acemoglu, Robinson and Verdier 2004). Self-enriching despots are far less likely to devote precious resources towards building broad citizen confidence in government by delivering on expectations (e.g.,

¹⁵ General public goods “enhance the common welfare... [and are] subject to variation in tastes and needs as we move from society to society” (Bueno de Mesquita et al 2005: 186). Examples are education, health care, and social security.

¹⁶ For example, the *New York Times* recently reported that newly approved taxes in the West Bank have begun to erode support for the Palestinian Authority. Palestinians were being asked to pay “a Scandinavian level of taxation for a Somali level of government services.” (*New York Times*, “Support for Palestinian Authority Erodes as Prices and Taxes Rise” January 31, 2012.)

¹⁷ Quasi-voluntary compliance is the willingness to comply with existing (tax) laws, but backed by coercion (Levi 1988).

providing public goods). The tradeoff for this chosen tactic is greater repression, lower legitimacy, and poor government effectiveness (Levi 1988).

In sum, the cost-benefit theory of taxes sheds light on why democratic citizens may be less likely to accept tax reform post-openness. In cases where democratic leaders have bowed to IFI pressures and implemented tax reform post-liberalization, their incentives and resources (i.e., coercive tactics) for enforcement still remain limited. This is why democratic nations such as Ghana and Chile that have passed reforms, such as the VAT and/or raised corporate income taxes, have yet to experience concomitant increases in revenues. Whereas revenues have increased in response to similar tax reforms post-openness in non-democratic countries such as Egypt, Vietnam and Tunisia.

Our prediction that democratic developing economies are more likely to maintain lower government revenues than non-democracies (after liberalizing) is at odds with current scholarship. Levi (1988), Bates and Lien (1985), and Boix (2001), for instance, anticipate that democracies will be more successful at raising taxes, while Cheibub (1998) finds that both regime types have equal capacity to implement taxes.¹⁸ Interestingly, our argument that democracies maintain lower taxes than nondemocracies is consistent with Bueno de Mesquita et al (2005), but we emphasize different causal mechanisms, ones relevant to countries with weak tax administration systems and democracies with smaller actual coalition sizes. Our argument is ultimately distinct from previous literature in two ways: we take into account (1) the challenges marked by the

¹⁸ The bulk of these studies argue that democracies have higher tax receipts than non-democracies because the former are better at presenting the perception that they will receive public goods in exchange for tax compliance. Whether or not citizens of democracies have greater confidence in government is ultimately an empirical question, which we turn to in the next section (and not tested in previous work, to our knowledge). Other studies posit that democracies supply higher levels of the public good, and therefore assume that taxes will be higher. The problems are that (1) the literature is divided on whether democracies invest in public goods more than non-democracies (see Rudra 2008, Wintrobe 1998); and (2) these studies tend to observe the level of public good and not the extent of taxation.

steady decline of trade tax revenues in countries with weak (tax) institutions; and (2) the political constraints faced by developing country policymakers in a globalizing environment. In other words, our analysis posits that the political challenges of revenue mobilization differ markedly post-liberalization, and we incorporate these dynamics into our theory (and ultimately empirics). Our two hypotheses are thus:

H1: As trade taxes decline in a globalizing environment, democracies will be less able to successfully replace the lost revenue by increasing domestic taxes

H2: As trade taxes decline in a globalizing environment, authoritarian regimes will more successfully replace the lost revenue by increasing domestic taxes.

EMPIRICAL SECTION

We evaluate the authority of our two hypotheses in the following four steps. We first observe the raw data and compare revenue trends in democracies to non-democracies. Next, we apply an error-correction model to more rigorously assess our first two hypotheses. Third, to increase confidence in the theoretical underpinnings of both hypotheses and more directly assess the causal mechanisms underlying H1 and H2, we use survey data and cross-national time-series data, respectively.

Evaluating H1 and H2

Our analysis covers 105 countries, from 1990-2009. The data begins in 1990, since this is the first year that reliable time-series data on government revenues is available.¹⁹ This time frame is suitable to test our hypothesis, since most developing countries did not begin liberalizing until after the debt crisis in the late eighties and early nineties. As a consequence, prior to the 1990s, it is difficult to interpret whether a decline in trade tax revenue reflects a policy change or fluctuations in demand for exports and imports. Empirical evidence by several scholars suggests that the steady decline in trade tax revenue in developing economies

¹⁹ Historical IMF GFS data on government revenue from 1972 to 1989 is incompatible with recent IMF GFS data of 1990 to the present (see IMF 2011, personal email communication with IMF Data Dissemination and Client Services Team, 9 June 2011).

since the late eighties is the direct result of trade openness policies (Younas et al 2009, Aizenman and Jinjarak 2009).

Graph 1 provides *prima facie* evidence in support of H1 and H2. Non-democracies appear to be better at recovering lost revenues from trade liberalization than democracies.

INSERT GRAPH 1 HERE

As expected, trade tax revenues have been declining in both democracies and non-democracies. It is noteworthy that the level of trade tax revenue (as percent of GDP) is approximately the same for both regime types; trade tax revenues constitute on average 3.2% of GDP for the period under study. Trends in *total* government revenues, however, are quite distinct. Government revenues in authoritarian countries start at a much lower level than their democratic counterparts, but reach almost the same level as democracies by 2005 (22% of GDP); the average annual growth rate in revenues is 0.14 percentage points. Revenue levels in democracies, on the other hand, have been steadily declining at an average annual rate of -0.04 percentage points, approaching an average of 24 % of GDP in 2005-2009. Indeed, the trends suggest that democracies are having difficulty recovering from reductions in trade restrictions, relative to more repressive regimes. It certainly cannot be that government revenues have been declining in democracies because these nations had already reached the upper limits of revenue mobilization in the early nineties.²⁰ The downward revenue trend in democracies also cannot be attributed to privatization, i.e, the selling of state owned enterprises, and/or decline in foreign aid, since our data indicates that the growth rate of nontax revenue has been **increasing** in democracies.

Next, to more rigorously test our first two hypotheses, we estimate models of the domestic and international determinants of total government revenues. Based on data collected from the World Bank (2011), we use the fixed effects error-correction (EC) model, which is standard for estimating government finance models. The EC model is particularly appropriate for our analysis because it estimates both permanent

²⁰ The highest level of total government revenues in our sample is 67% of GDP (in Lesotho), while average government revenues in the advanced industrialized democracies are 36%.

and transitory relationships between tax reductions and total government revenue. It is critical that this model allows us to incorporate the dynamics of the Laffer curve (Laffer, Moore, and Tanous 2008, Wanniski 1978). The Laffer curve predicts that government revenues will initially *increase* after trade tax rates are cut. Since tariff rates were high pre-liberalization, reducing restrictions will immediately result in higher trade volumes, and more than compensate for the lower tax rate. However, in the long run, after the trade regime is further liberalized, additional reductions in taxes will not result in greater trade volumes to offset the lower tariff rate, and overall revenues will decrease (Khattry and Rao 2002, Khattry 2003). Data in Graph 1 seems to confirm this expectation; total government revenue increases temporarily in the early to mid nineties, and declines thereafter—in both regime types.

Our base model has the following form:

$$\Delta Y_{i,t} = Y_{i,t-1} * \beta_0 + \Delta X_{i,t-1} * \beta_k + X_{i,t-1} * \beta_j + D\delta + T\lambda + e_{i,t}$$

Y measures the change in total government revenues in country i at time t and X is the vector of independent variables. The parameter of the lagged levels of the dependent variable (β_0) provides information on the equilibrium properties of β , which should be between -1 and 0, suggesting that the effects of a shock to any of the endogenous variable diminish over time. The model includes both lagged levels and changes of all the independent variables. β_k represents the short-term relationship between X and Y, and β_j estimates the long run, or permanent, relationship between X and Y^{21} . We include country fixed-effects (D vector) to reduce possibility of omitted variable bias, and we apply panel-corrected standard errors to address heteroskedasticity and serial correlation (Beck and Katz 1995). We also control for time effects (T vector). The parameters for the lagged variables are of key interest to our analysis, since we want to know whether trade tax reductions are causally related to long-term trends in government revenues.

²¹ The long run effects are calculated by dividing the parameter of the lagged level of the independent variable of interest by the parameter of the lagged level of the dependent variable multiplied by negative one (DeBoef and Keele 2008, Iverson and Cusack 2000, Kaufman and Segura-Ubiergo 2001).

Our primary dependent variable is total government revenues as a percentage of GDP, but we also include three others: net domestic revenue; goods and service taxes; and income taxes (all as percent of GDP). Net domestic revenue is defined as total tax revenue minus taxes on international trade. Taxes on goods and services refer to (indirect) taxes on products and services, like the value-added, sales, and excise taxes. Income taxes include (direct) taxes on income, profits, and capital gains, and thereby include taxes on both individuals and corporations; however in developing countries, *the bulk of the income tax revenue is from corporate taxes* (Cottarelli 2011). The latter two domestic tax variables are particularly critical for testing our hypotheses. First, as discussed previously, both the goods and services tax (e.g. VAT) and the corporate income tax are targets for tax reform after trade liberalization. These dependent variables will thus directly capture if the lost trade tax revenue from trade liberalization has been effectively recovered by domestic tax reform. Second, these models represent a straightforward test of the race to the bottom hypothesis. After opening up to international markets, if governments feel pressure to maintain low taxes in order to promote exports and attract capital, domestic taxes in both domains (goods and income) will fall concomitant with trade liberalization. See Appendix E for detailed descriptions of the variables.

Our model builds on Bueno de Mesquita et al (2005)'s model of tax revenue. Our control variables are the log of GDP per capita (constant 2000 U.S. Dollars), the log of the total population, central government debt (as percent of GDP), IMF credits (as percent of GDP), net inflows of foreign direct investment (FDI) (as percent of GDP), and the degree of capital account openness. GDP per capita captures the level of economic development, which is positively associated with government revenue (Gupta 2007).²² Government debt and

²² Gupta (2007) explains that “according to Wagner’s Law, the demand for government services is income-elastic, so the share of goods and services provided by the government is expected to rise with income” (Gupta 2007: 4).

IMF credits both represent pressures on governments to increase revenue (Tanzi 1989)^{23 24}. Capital account openness represents the number of restrictions on cross-border transactions, controlling for the extent of financial liberalization. Net inflows of FDI account for a country's success in attracting foreign capital. It is worth emphasizing that the latter two controls capture the influence of financial liberalization on race to the bottom pressures in taxation, as posited by existing literature.

Our principal causal variable of interest is the interaction between trade tax revenues and regime type (trade tax rev*polity). Since our hypothesis is that democracies will face more difficulty replacing lost trade tax revenue than non-democracies *in the long run*, we expect that the coefficient on the lagged value of the interaction term will be positive and significant. That is, as trade tax revenue declines in democracies, total government revenue will also decline. More democratic nations (countries with higher scores on polity) will experience greater reductions in total government revenue than nondemocratic countries, in response to the same level of tariff reductions. Conversely, we anticipate that authoritarian regimes will be more successful at implementing tax reform to compensate for their losses. Total government revenues will, then, be unaffected (or increase) concomitant with trade liberalization, i.e., the conditional coefficients for non-democracies will either be insignificant, or negative and significant. While we use the continuous variable for polity in our main model, we check these results using dummy variables for different categories of regime type (see Appendix B.9).

To assess whether democracies will be more susceptible to race to the bottom pressures post trade liberalization, we focus on our three additional dependent variables—net domestic revenue, goods tax

²³ Our results are robust when using tax aid—the amount of multilateral and bilateral aid given for fiscal planning, improving public expenditure systems, and tax assessment procedures—in place of IMF credits. See Appendix B.12.

²⁴ Following Cheibub (1998), we use debt instead of government expenditure to measure the government's fiscal situation. However, it is important to emphasize that our results are robust to the inclusion of government expenditure. Results are available upon request.

revenue, and income tax revenue (NGI). A positive conditional coefficient for the interaction terms in each of these models would support the race to the bottom hypotheses, suggesting that democratic leaders are reducing taxes on NGI in response to the competitive pressures of openness. It is certainly conceivable that globalization pressures are inducing governments to put an array of tax incentives in place to promote competitiveness. We predict that the conditional coefficient in non-democracies will be negative, however; revenue-generating domestic tax reforms following liberalization will likely be successful, such as the highly recommended VAT. Table 1 presents a detailed description of the predicted outcomes from our theory.

INSERT TABLE 1 HERE

We estimate three models: (1) a base model which includes the interactions and the constituent terms only (model 1 in Table 2); (2) base model with the addition of key domestic-level control variables, building on Bueno de Mesquita et al (2005) (model 2 in Table 2); and (3) the full model (models 3-6 in Table 2).²⁵ Estimating all three models helps determine whether the different sample sizes affect the results. The base models, which have far more observations, reduce the possibility of type I and type II errors, but include less controls. The full model has the full set of controls, but has a smaller sample size due to lack of data availability on some of the variables.

As Table 2 reveals, the coefficients on all the lagged interaction terms are positive and significant in all five models, which is consistent with our theoretical expectations that democracies have more trouble replacing lost trade tax revenues, and are also more likely to respond to race to the bottom pressures. We evaluate the interaction across the full range of possible values for the conditioning variable polity, and use the appropriate corrected standard errors to assess the significance of the conditional effects (Brambor, Clark and Golder 2006). Graph B.1 in Appendix B applies model 3 and presents evidence in support of Hypothesis 1 and 2, confirming that non-democracies have relatively greater success at replacing lost trade tax revenues than democracies. Graph B.1 reveals that declining trade tax revenue has the largest negative effect on government

²⁵ Unlike Bueno de Mesquita et al (2005), we include debt in our base model because government debt has critical implications for a nation's tax rates (Tanzi 1989).

revenues in more democratic nations. We were a bit surprised that the conditional coefficient for non-democracies was still positive, suggesting that policy elites in these nations have not managed to completely replace the revenue loss from removing trade barriers. However, robustness checks (see Appendix B.5 and B.6) reveal that the conditional coefficient is indeed negative for non-democracies in alternative revenue models. We thus have critical evidence that more repressive regimes are better able to raise absolute revenue levels above and beyond what they have lost in trade tax revenue reductions. The findings for the interactions in the alternative models (NGI) in non-democracies further confirm our intuition that non-democracies are successfully implementing tax reform alongside trade liberalization.

Turning to race to the bottom assessments, Graph 2 further illustrates that domestic taxes (e.g., income taxes) are declining in response to trade liberalization *in democratic nations only*. Graphs B.2 and B.3 in Appendix B confirm similar trends for the goods tax and net domestic revenue models. According to these results, only non-democracies have been successfully implementing tax reform. The conditional coefficients are negative for non-democracies in the goods and services tax model, but positive for democracies. This finding is critical information for pundits and IFIs that have been encouraging developing countries to implement the VAT and other domestic taxes concomitant with trade liberalization; it appears that only more repressive governments are heeding their advice. Interestingly, although some democracies may have succeeded in implementing the VAT *de jure* (see Cotarelli 2011), our results suggest that compliance with these reforms have been weak, i.e., revenue collection from taxes on goods and services has been decreasing attendant with the adoption of trade liberalization policies.

INSERT TABLE 2 and then GRAPH 2 HERE

To provide some insight into the magnitude of the effect of race to the bottom effects (in Graph 2, model 6), a ten percent decrease in trade tax revenue in a democracy, like Chile, is associated with a reduction in income tax revenue (as % of GDP) by approximately 0.072 points. This is substantial since within our sample of countries, the average yearly change in income tax revenue is 0.03 points. In direct contrast, the same decrease in trade tax revenue in an authoritarian regime, such as China, corresponds to an increase in

income tax revenue by 0.034 points.²⁶ The results for total government revenue, domestic tax revenue, and goods tax revenue show a similar trend (see Appendix B.1, B.2, and B.3).

Robustness checks and alternative hypotheses

We subjected these results to a variety of robustness checks, all reported in the Appendix (Appendix B.4 through B.9). First, we check for the possibility that measuring revenue as a percentage of GDP may not capture actual increases in revenues, if GDP is increasing more rapidly than revenues. To address this, we include models with trade tax revenue as a percent of total government revenue and revenue in current LCU (logged) (see Appendix B.4 and B.5 respectively). Next, in case we overestimate the importance of the Laffer Curve, we run a model using a fixed effects, panel-corrected standard errors panel regression (Appendix B.7). Again, the interaction coefficient for the trade tax revenue*polity is positive and significant. We also substitute polity for Bueno de Mesquita et al's (2005) measure for the size of the winning coalition (see Appendix B.8). Recall that we argue low taxes represent a public good in developing economies with large winning coalitions; policymakers in these nations will be less willing to effectively implement domestic tax reform concomitant with liberalization—particularly in a globalizing economy where race-to-the-bottom pressures in taxes are increasing. Results show a positive and significant value for the winning coalition*trade tax revenue coefficient. Finally, we substitute polity for a three dummy variables representing different regime types: democracy, anocracy, and autocracy²⁷ (see Appendix B.9). The results from all the different models reveal a consistent pattern and increase our confidence in H1 and H2.

²⁶ Note that trade tax revenues have decreased by a total of 65% in our sample from 1990-2009.

²⁷ Regime type is coded: 1 for autocracy, 2 for anocracy, 3 for democracy based on Marshall and Gurr (2008). See Appendix E for details. Note that although the trade tax*regime interaction is not significant in the revenue or goods tax models, the conditional coefficients for all the regime types are significant in the revenue model and the autocracy conditional coefficient just misses significance with a pvalue of 0.13 in the goods tax model. Results are available upon request.

Next, we run several models to address alternative hypotheses. It is possible that the inclusion of countries with alternative revenue-generating capacity (i.e., access to nontax revenues) dampens government incentives to impose tax reform post-openness. Resource-abundant countries, for example, tend to rely upon revenues from state-owned oil companies to meet their fiscal needs (Morrison 2009). Alternatively, the positive correlation between declining trade taxes and domestic taxes may be spurious; a third variable, market transformation, could be placing downward pressure on both. More specifically, transitional economies are now struggling to simultaneously liberalize their markets while radically transforming their previously complex and “hidden” methods of (high) tax collection (Tanzi 1999). To check this, we drop transitional economies and resource-abundant countries from our sample. Results remain robust (see Appendix B.10 and B.11 respectively).

A third possibility is that governments receiving greater inflows of aid have less incentive to generate revenue (Remmer 2004). We thus add official development assistance and aid for tax reform—the amount of multilateral and bilateral aid given specifically for fiscal planning, improving public expenditure systems, and tax assessment procedures—in the model to account for this alternative source of revenue (see Appendix B.12). In our models, net official development aid is not statistically significant, corroborating Gupta et al’s (2003) analysis. We did find some evidence for positive effects of tax aid in the long run (Tierney et al 2011). The trade tax revenue*polity interaction, regardless, is consistently positive and significant.

Lastly, governments with greater institutional capacity may be able to collect taxes more effectively. Thus, to assess if polity is robust to the inclusion of a variable of capacity, we control for bureaucratic quality. Appendix B.13 shows that our results remain strong and that bureaucratic quality does not have a consistent impact on revenue levels. We exclude this variable and others listed above from our main model because of missing data, shorter time-series, and the consequent decrease in overall sample size.

Exploring the causal mechanisms

Next, to increase confidence in these results, we assess more closely the causal mechanisms underlying the models in Table 2 and discussed in our theory section. Recall that we predict policymakers in democracies

will be more averse to implementing and/or enforcing domestic tax reforms alongside tariff reductions because citizens of these nations have: (1) less confidence in their governments; and (2) are more likely to cheat on taxes. We collect survey data from the World Values Survey (WVS) Wave Four (1999-2000) to evaluate these claims.

To assess whether citizens of democracies are more likely to cheat on taxes than their counterparts in non-democracies, we refer to the WVS question entitled, “Justifiable: Cheating on Taxes.” Next, to gauge the level of government confidence, we rely on two related survey questions: government confidence and the view that the political system is doing well.²⁸ See Appendix E for specific survey questions and data descriptions.

We estimate our model using a multilevel, ordered probit estimation. Our model includes key controls at both the country and individual level. At the national level we account for GDP per capita, economic growth, and life expectancy. The latter is a proxy for population health—usually associated with availability of public goods—and by extension, productivity (Sen 1999b). At the individual level, we control for the survey respondent’s age, gender, income, and education level.

One potential drawback is that citizens in authoritarian countries may fear reprisals and thereby provide disingenuous responses to politically sensitive questions. To address this potential reporting bias, we follow Kenyon and Naoi (2010) and compare citizen assessments of government confidence and propensity to cheat on taxes with country-level estimates of the same underlying variable, which represents the ‘objective’ measure.²⁹ Put simply, the goal is to estimate the model with subjective and objective measures that are highly correlated. We use the size of the shadow economy (lagged), as well as the rule of law, as our objective

²⁸ Specific WVS questions are: (1) Government confidence: “Could you tell me how much confidence you have in the government: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?” (2) View that political system is doing well: “People have different views about the system for governing this country. Here is a scale for rating how well things are going: 1 means very bad; 10 means very good. Where on this scale would you put the political system as it is today?”

²⁹ See Kenyon and Naoi (2010) for a more detailed description of this method.

measure of cheating on taxes and government confidence, respectively (Schneider 2005, World Bank 2009). Please see Appendix E for variable definitions and descriptive statistics. To elaborate, a larger shadow economy is (objectively) associated with a higher propensity to cheat on taxes since a larger percentage of people will likely say it is justifiable to cheat on taxes. We logically expect countries with stronger institutions—i.e., rule of law—are associated (objectively) with greater confidence in governments of developing economies. Finally, it is arguable that higher levels of inequality are (objectively) associated with views that the political system is not doing well (i.e., a positive coefficient)³⁰.

As an added check, we replace the polity variable with a dummy variable representing kleptocracies³¹. Recall that we predict to extract taxes, kleptocracies will privilege coercion over efforts to encourage high citizen confidence in government by investing in efficient public goods. We thus anticipate a negative coefficient for the kleptocracy dummy for both cheating on taxes and government confidence. Interestingly, the raw data indicates that on average, compared to other regime types, citizens in kleptocracies have a lower propensity to cheat on taxes and lower government confidence³². To increase confidence in this result, we use

³⁰ As robustness checks, we used the shadow economy and rule of law as objective measures for political system doing well. We also used household income inequality as the objective measure for cheating on taxes and government confidence. All results remain robust. The results are available upon request. The University of Texas Inequality Project is the data source for household income inequality.

³¹ Kleptocracies are coded based on Transparency International's 2004 Global Corruption Report.

³² The mean response to the survey questions relating to cheating on taxes and government confidence indicate that citizens in kleptocracies are less likely to cheat on taxes (2.23) than citizens in democracies (2.28) and that citizens in kleptocracies have less government confidence (2.31) than citizens in democracies (2.37) and other nondemocracies (2.74). We could not run the "political system" model since, the only kleptocracies included in the political system survey were Peru and Indonesia, which are not representative of kleptocracies in general. Indonesia had high resource rents that were used to supply public goods (Eifert, Gelb, and Tallroth 2003); Alberto Fujimori in Peru ended hyperinflation and successfully combatted the Shining Path).

Bueno de Mesquita et al's (2005) measure of kleptocracies. The results are consistent—as the opportunity for kleptocracy increases, citizens have less confidence in government and are less likely to cheat on taxes (See Appendix C.1).

INSERT TABLE 3 HERE

These findings are provocative. Findings in all three models, taken together, provide support for our argument that tax reform is unlikely in democracies post-liberalization because citizens of these nations: (1) have less trust in government; and (2) are more likely to cheat on taxes. The consistently negative and significant coefficient on polity confirm our theoretical expectations, but obviously troubling from a broader perspective. These results suggest that as developing countries become less democratic, citizens tend to be more trusting of their government and less likely to cheat on taxes. For example, the probability of a citizen responding that he/she has a high confidence in government decreases by 33 percent (from 12% to 8%) as polity increases from 3 to 7. Kleptocracies are the exception amongst authoritarian regimes, where leaders rely primarily on (fear of) coercion to extract tax revenue; the outcome, however, is the same, i.e. higher tax revenues post-liberalization. See Appendix C.2 through C.4 for the predicted probabilities for all the models. Even we are struck by the strength of these findings. Policymakers in democratic nations should take note of the alarming repercussions of maintaining timid economic policies, such as limited domestic tax reform.

Further tests of causal logic: declining trade taxes and pro-poor public goods

Given our finding that citizens of democracies have low confidence in government defies conventional wisdom and is bound to be controversial, it is worthwhile exploring the robustness of our causal story. Recall past research presents clear empirical evidence that 'government confidence' hinges upon government's capacity to deliver socially efficient public goods and improve societal well-being. Our theoretical prediction that citizens of democracies have low confidence in government thus rests on their proclivity to underinvest in pro-poor public goods.

If this is true, we anticipate that declining revenue from trade taxes in democracies is adversely impacting social welfare in democratic nations, particularly for the large marginalized populations that depend

on the state for assistance. Indeed, the ‘starve the beast’ hypothesis—that reductions in government spending tend to follow decreases in taxes—is relatively well supported in the literature (see Ram 1988, Manage and Marlow 1986).³³ For precisely this reason, international financial institutions have long been advising developing countries to improve their tax ratio to fight poverty (IDB 1998: 7, Cottarelli 2011).

But post-trade liberalization, as political battles ensue over the distribution of now even more scarce government revenue, the least-organized and least-powerful interest groups in democratic nations are apt to lose (see Nooruddin and Simmons 2006). If it is indeed the poor in developing democracies who are the neglected part of the winning coalition because they are disorganized and wield limited political resources (Rudra 2002, Keefer and Khemani 2005), budget reductions post-openness ensure that elected government officials have even greater incentive to retrench pro-poor spending, while protecting socially inefficient programs. Nooruddin and Simmons (2006:1010) explain that explicitly pro-poor programs are “politically easy targets” since, “while certainly unpopular with citizens, [it] is less likely to hurt policymakers than cutting programs that are associated with well-organized and powerful lobbies.” Thus, developing democracies’ practice of supplying socially inefficient public projects to their limited coalition of enfranchised, better-off voters is expected to be exacerbated by declining trade tax revenue.

In contrast, declining trade tax revenues in authoritarian regimes will have either a positive or zero substantial impact on the poor. Recall that our results in the previous section revealed that declining tax revenues is not of major fiscal consequence in this regime type; authoritarian leaders appear to be more successful at implementing domestic tax reform to replace lost revenues. We are ambivalent, however, whether higher government revenues post-liberalization will result in greater spending on the poor. In the presence of more limited electoral pressures, transparency, and accountability, higher tax revenues may be used to enrich the political elites (McGuire and Olson 1996). At the same time, however, as we discussed, even authoritarian leaders may invest in public goods to prevent revolution, maintain stability and some

³³ While there is some variation on this hypothesis in the literature, the predominant causal flow seems to be from revenue to expenditure, at the federal level in particular (see Ram 1988 for a detailed discussion).

political legitimacy (see Desai et al 2009, Bueno de Mesquita and Smith 2010, Wintrobe 1998). Since trade liberalization gives rise to higher citizen risks and uncertainty (Wibbels 2006, Razin et al 2003), authoritarian elites may well dole out resources for the poor to ensure order and legitimacy. Unlike in democracies, we have no theoretical reason to predict that declining revenues will have a *negative* impact on marginalized groups in authoritarian regimes (as is likely in democracies). Put another way, if an authoritarian government's overall revenue-raising capacity is relatively unaffected by trade reform, why use this instance to penalize the poor?

The penultimate section of this analysis further addresses our causal logic of the cost-benefit model by assessing the changes in public good provision post trade liberalization. Operationalizing broad-based public projects in developing countries is a distinct challenge, since many social spending variables that are commonly assumed to be favorable to marginalized populations (e.g., social security and welfare, education) actually benefit middle and upper income groups that dominate the winning coalition in developing economies (Rudra 2008). To address this, albeit imperfectly, we regress in turn, both the social spending and outcome variables on our interaction variable-- trade tax revenues and democracies (trade tax revenue*polity).

If governments are investing in pro-poor programs despite falling revenues, we expect that the following proxies for welfare of the poor will improve with liberalization: the Gini coefficient, which approximates the level of inequality, the poverty headcount, the poverty gap, life expectancy, and health spending (as % GDP). We include health spending, since the poor are dependent on public health services, while the better off in developing countries turn to private healthcare (Mundle 1998, Oxfam 2009). We compare these results with how much declining trade tax revenues affect government resources allocated to higher income groups. These allocations would include social benefits spending (% of GDP) and education (% of GDP), as these are typically resources enjoyed by upper and middle classes in developing countries (e.g., pension, unemployment, tertiary education) (Huber and Solt 2004); although there is some evidence that education is slowly becoming more redistributive (Rudra 2008).

Our welfare models are estimated using World Bank (2011) and IMF (2011) data (see Appendix E for data descriptions). The data covers 104 countries from 1990 through 2009. We average the data over five

years to maximize the number of observations³⁴. The model is a fixed effects regression with robust standard errors. To best capture the budgetary process, we use percent change in trade tax revenue over the five-year period on poverty levels and social spending.³⁵ The independent variable of interest is the percent change in trade tax revenue *polity. We include the standard controls of GDP per capita and economic growth, since the overall level of development and rate of economic growth are important determinants of poverty (Ravallion and Chen 1997, Fields 1989).

Trade liberalization is proxied here again as declining trade tax revenue. If trade liberalization is adversely impacting resources allocated to the poor in democracies as we predict, then the coefficient for the interaction effect (% change in trade tax revenue *polity) will be negative and significant. As trade tax revenue declines in democracies, poverty-related variables (inequality, poverty headcount, poverty gap) will increase (worsen). The coefficient on the interaction term for life expectancy and health spending will be positive, however, since we expect that life expectancy and health spending will decrease in democracies if governments are retrenching pro-poor spending in response to lower trade tax revenues. In contrast, if our theoretical predictions are correct, the interactions terms in the education and social benefits model will be insignificant, suggesting that democratic governments are protecting the better-off from bearing the brunt of revenue losses, and therefore their resources will be unaffected.

INSERT TABLE 4 and then GRAPH 3 HERE

Turning to Table 4, it now seems somewhat less surprising that citizens of low-income democracies have low confidence in governments. Clearly, the unintended consequence of openness (i.e., lower revenues) further undermines the capacity of democracies to provide for the poor. As expected, programs benefitting the

³⁴ The World Bank reports many of the poverty indicators every five years.

³⁵ Governments tend to base budget allocation decisions on marginal annual changes in government resources: “Budget officials in all countries routinely estimate the ‘room’ available for new expenditures or the ‘gap’ between projected revenues and expenditures” (Schick 2009:8).

better-off are protected (i.e, no budget cuts) in the face of revenue losses; the coefficient on the interactions in the education and social benefits models are insignificant.³⁶

Remarkably, in direct contrast to democracies, policy elites in authoritarian regimes are making concerted efforts to ensure that the poor are better off with trade liberalization. The results from the conditional coefficients (see Graph 3 above and Appendix D) indicate that leaders of repressive nations are using their increasing revenues to assist marginalized groups and deter revolution, either for trade-related uncertainty and dislocations, and/or for basic needs. As the rate of growth in trade tax revenues slows by ten percent, a democracy, like Argentina, experiences higher levels of poverty (measured as poverty headcount at \$1.25) by 0.37 points; whereas, in more authoritarian regimes, like Vietnam, the same decrease in trade tax revenues leads to a reduction in poverty by almost the same amount (0.40 points). Put another way, trade liberalization in democracies (nondemocracies) slows (increases) the average rate of poverty reduction by almost eight percent.³⁷ Interestingly, when we replace the polity variable with ‘kleptocracy’, the results are decidedly mixed, suggesting that, as we would expect, kleptocrats do not systematically use the tax revenues generated post-liberalization to improve poverty (results available upon request).

Taken together, these results present an intriguing puzzle: how can elites in globalizing democracies continue to ignore the needs of the poor, far more so than their nondemocratic counterparts? While we cannot further investigate this question here, Sen (1999) provides some relevant insights. His analysis suggests that despite the disappointments, the poor are reticent to reject democracy. Perhaps this is because democracies offer basic political and civil rights to the poor (see Bratton and Mattes 2004). Accordingly, while the poor may have less confidence in their democratic leaders, it is unlikely that they would stage a wholesale revolt

³⁶ The latter finding appears to contrast previous research that finds governments retrench social security benefits in response to globalization pressures (Rudra 2008, Kaufman and Segura-Ubiergo 2001). But note that the IMF has recently revised the ‘social benefits’ variable to include social security benefits provided to government employees, which tend to remain protected (see Nooruddin and Rudra 2008).

³⁷ In our sample, poverty headcount declines by 2.8 points every five years on average.

against the system. Added to this, ‘white elephant’ projects in democracies are not just to impress the rich; temporary assistance programs targeted for the poor, such as public works, might increase their hope and buy public support, but still do little to improve their current situation (Lal, et al 2010). All in all, we wonder how long democratically elected leaders can ride on the coattails of (empty) promises of voice and change.

CONCLUSION

This paper is the first to analyze trade liberalization and the politics of revenue mobilization in the developing world. We provide a theoretical explanation for why repressive governments are better able to replace lost trade tax revenue with domestic tax reform. We hypothesize that democracies are more susceptible to the race to the bottom pressures in taxes. As trade tax revenue declines with liberalization, democracies find it harder than non-democracies to shift the tax burden to domestic constituents. Revenue generating tax reforms are less likely in democracies for two main reasons: citizens of these nations have less confidence in their governments and are thus less likely to support tax reform; and policymakers have less resources and less incentives to enforce reform. We confirm the validity of our hypotheses using a panel dataset of 105 developing countries from 1990-2007. Our findings are robust to different model specifications, permutations of our key independent variable, several alternative measures of polity, various sample sizes, and inclusion and exclusion of key controls.

Our most startling finding is that the poor in democracies ultimately suffer from trade liberalization and the loss in government revenue. Democracies may thus be in the midst of a vicious cycle: declining pro-poor public spending in liberalizing economies exacerbates low citizen confidence in democratic government, which further hinders their ability to raise taxes (and increase spending on public goods). If these trends continue, it may well be that democracies will be the first to turn against liberalization, contrary to recent predictions (Milner and Kubota 2005). Authoritarian leaders, on the other hand, are successfully increasing both taxes and spending on the poor, as openness advances. It is remarkable that under conditions of openness, repressive leaders are ostensibly finding it easier to address the two primary constraints of governing identified by Bueno de Mesquita and Smith (2010): (1) *maintaining support of their small winning coalition* in

a globalizing economy with lower taxes; and (2) *preventing revolution* by balancing higher taxes on the wider population with spending on public goods (i.e., maintaining favorable cost-benefit ratio). Policymakers in democracies, in contrast, are holding the support of their *relatively* larger coalition with low taxes, and improving their reelection prospects by balancing low tax receipts with socially inefficient spending projects.

The policy implications of these findings are relatively clear. IFIs would do well to avoid one-size-fits-all prescriptions for tax reform post-liberalization, and focus on challenges specific to regime type. Practitioners would be wise to pay closer attention to how liberalization is affecting democracies; both long-run stability and support for liberalization could be in jeopardy. By the same token, rich countries involved in global crusades for promoting open markets *and* democracy may want to take note of the inherent tensions involved between the two.

What measures might democracies take to mitigate such doomsday predictions? Findings from this study suggest policymakers might want to push on two fronts simultaneously: implement measures to improve citizen confidence in government; and pursue more rigorous enforcement of existing tax policies. If politicians use the higher revenue gains to invest in public goods, they can offset short-term losses in popularity. Finally, this analysis suggests that succumbing to race to the bottom pressures in taxes could, somewhat ironically, ultimately work against openness in the long run. Policymakers that care about maintaining openness should, then, think hard about viable, easy-to-collect taxes, such as increasing taxes on multinational corporations. These firms already possess certain advantages over domestic firms, and research suggests that higher taxes will not necessarily deter foreign investment (Klemm and Van Parys 2011).

To summarize, our paper provides some clarity on why trade liberalization may not necessarily translate into better welfare outcomes for the poor in low-income democracies. It complements the recent wave of literature that has raised eyebrows by suggesting democracies are not good for the poor. Our analysis spotlights the unfortunate reality that when faced with globalization pressures, democracies are struggling to generate critical government revenue that supports their development needs, and poverty reduction policies in particular.

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Graph 1: Revenue Trends in Developing Countries

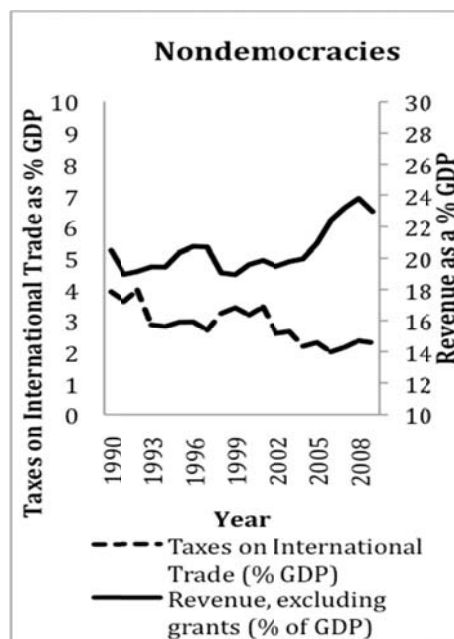
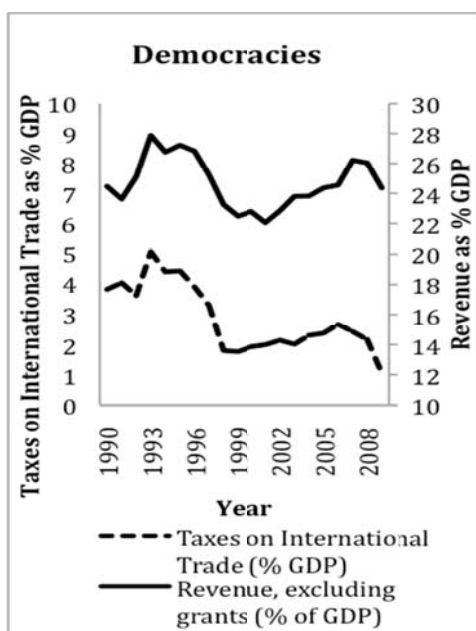


Table 1: Predicted Long Run Effects of *Declining* Trade Revenue

Support for H1 and H2 (predicted outcomes)	Trade Tax Revenue * Polity (effects of decline in trade taxes conditional on polity)	Description	Interpretation
Dependent Variable: Total Revenue			
Democracies	+	A one unit decrease in trade tax revenue leads to a one unit decrease in total revenue.	Domestic tax reform has been limited and/or unsuccessful; democratic governments unable to replace lost trade tax revenue.
Non-democracies	-	A one unit decrease in trade tax revenue leads to a one unit increase in total revenue.	Domestic tax reform has been successful; nondemocratic governments have been able to generate revenue over and above lost trade tax revenue.
Non-democracies	Insignificant	A one unit decrease in trade tax revenue has no effect on total revenues.	Domestic tax reform has been successful; nondemocratic governments have been able to replace lost revenue, but not over and above amount lost trade tax revenue.
Dependent Variables: Net Domestic Revenue, Goods Tax Revenue, Income Tax Revenue (NGI)			
Democracies (race to the bottom)	+	A one unit decrease in trade tax revenue leads to a one unit decrease in NGI.	Domestic tax reform has been unsuccessful <u>and</u> democratic governments have generated lower tax revenue from goods and income sources. Suggests race to the bottom pressures are real.
Non-democracies	-	A one unit decrease in trade tax revenue leads to a one unit increase in NGI.	Domestic tax reform (on goods and/or services) has been successful.
Democracies	Insignificant	A one unit decrease in trade tax revenue has no effect on NGI.	Democratic governments have not been successful at implementing tax reform concomitant with trade liberalization; but no evidence of race to the bottom effects.

Table 2: Error Correction Regression Results

(1) (2) (3) (4) (5) (6)

	Δ Revenue (% GDP)	Δ Revenue (% GDP)	Δ Revenue (% GDP)	Δ Net Dom Rev (% GDP)	Δ Goods Tax (% GDP)	Δ Income Tax (% GDP)
Revenue (% GDP) _{t-1}	-0.398*** (0.0603)	-0.411*** (0.0636)	-0.480*** (0.0683)			
Net Domestic Rev (% GDP) _{t-1}				-0.454*** (0.0593)		
Goods Tax (% GDP) _{t-1}					-0.562*** (0.0740)	
Income Tax (% GDP) _{t-1}						-0.547*** (0.0568)
Δ Trade Tax (% GDP)	0.833*** (0.0828)	1.019*** (0.113)	0.991*** (0.126)	-0.00529 (0.0933)	-0.182*** (0.0604)	0.0569 (0.0587)
Trade Tax (% GDP) _{t-1}	0.229*** (0.0727)	0.426*** (0.0906)	0.573*** (0.107)	0.0598 (0.0707)	-0.109** (0.0534)	0.0478 (0.0463)
Δ Polity	-0.0221 (0.0274)	-0.0156 (0.0414)	0.0558 (0.0438)	0.0637* (0.0364)	0.0515** (0.0241)	0.00218 (0.0244)
Polity _{t-1}	0.0188 (0.0139)	-0.0171 (0.0270)	-0.0211 (0.0310)	-0.124*** (0.0307)	0.00447 (0.0219)	-0.116*** (0.0253)
Δ Trade Tax (% GDP)* Polity	0.00465 (0.00585)	0.0111 (0.0159)	-0.0225 (0.0173)	-0.0319*** (0.0118)	-0.0134 (0.00854)	-0.00989 (0.00691)
Trade Tax (% GDP)* Polity_{t-1}	0.00671* (0.00407)	0.0361*** (0.0129)	0.0345** (0.0145)	0.0527*** (0.0103)	0.0250*** (0.00756)	0.0345*** (0.00659)
Δ GDP per capita		4.536** (1.803)	1.559 (1.896)	0.443 (1.701)	1.928* (1.154)	-0.139 (1.141)
GDP per capita _{t-1}		2.342*** (0.680)	1.551** (0.760)	1.319** (0.657)	1.514** (0.598)	1.629*** (0.489)
Δ Population		-4.589 (12.91)	-3.176 (17.51)	-2.477 (19.03)	-6.690 (10.84)	-5.252 (7.857)
Population _{t-1}		-0.214 (2.274)	-5.051* (2.596)	-0.242 (2.076)	-4.293** (1.721)	-1.274 (1.544)
Δ Government Debt		-0.00540 (0.00484)	-0.00517 (0.00627)	0.00337 (0.00488)	0.00277 (0.00298)	0.00446 (0.00296)
Government Debt _{t-1}		-0.00559 (0.00455)	-0.00576 (0.00599)	0.00584 (0.00587)	0.00111 (0.00352)	0.00513 (0.00330)
Δ FDI (% GDP)			0.0397 (0.0477)	0.0122 (0.0408)	0.0321 (0.0243)	-0.0337 (0.0249)
FDI (% GDP) _{t-1}			0.172*** (0.0591)	0.0476 (0.0526)	0.0238 (0.0360)	0.000588 (0.0394)
Δ Capital Account Openness			-0.359 (0.226)	0.117 (0.132)	0.358*** (0.0885)	-0.0315 (0.0930)
Capital Account Openness _{t-1}			-0.0781 (0.152)	0.309** (0.137)	0.482*** (0.0956)	0.144 (0.100)
Δ IMF credits			-7.502 (5.644)	-6.605 (4.595)	-5.060* (2.938)	-0.114 (2.570)
IMF credits _{t-1}			0.437 (5.017)	0.956 (4.153)	0.506 (3.006)	0.400 (2.390)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	No	No	Yes	Yes	Yes	Yes
Observations	1,091	540	388	388	388	386
R-squared	0.498	0.681	0.530	0.450	0.457	0.564
Number of countries	105	68	54	54	54	54

Standard errors in parentheses

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

Graph 2: Long Run Marginal Effects of (Declining) Trade Tax Revenue Conditional on Polity

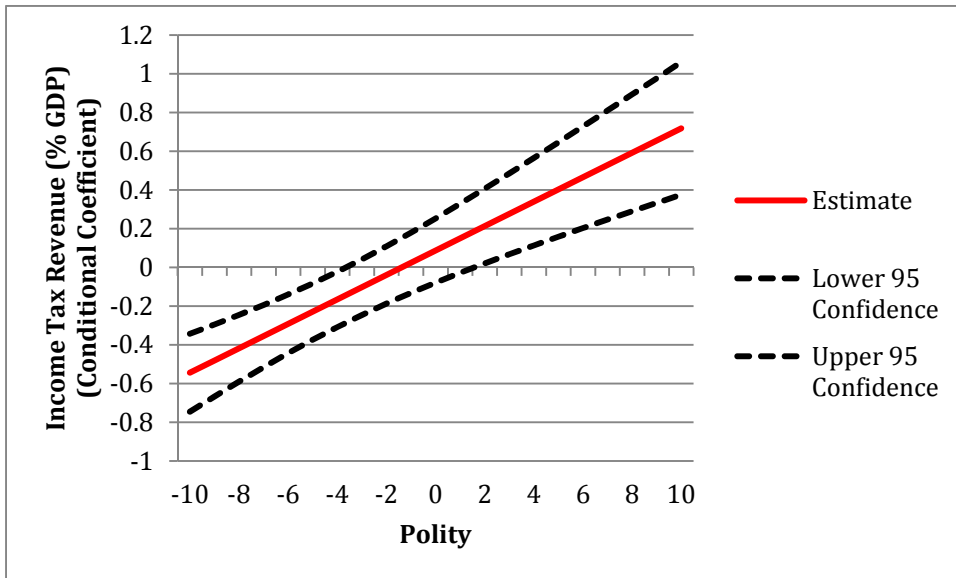


Table 3: Multilevel, Ordered Probit Estimation of Survey Responses³⁸

³⁸ Note that the cheating on taxes estimations include a transition country dummy variable. Tanzi (1999) explains, “because a tax culture never developed in the centrally planned economies, people reacted with hostility to the introduction of an explicit tax system” (22). We thus expect that citizens in these countries

Objective Measures in parentheses

	Cheat on Taxes (Shadow Economy)	Government Confidence (Rule of Law)	Political System is Doing Well (Income Inequality)	Cheat on Taxes (Shadow Economy)	Gov Confidence (Rule of Law)
<u>Country Level Indicators</u>					
Objective Measure	0.014*** (0.0006)	0.121*** (0.012)	-0.060*** (0.002)	0.007*** (0.0007)	0.241*** (0.012)
Polity	0.007*** (0.0012)	-0.078*** (0.001)	-0.032*** (0.002)		
Kleptocracy				-0.211*** (0.023)	-0.038** (0.016)
GDP Growth	-0.024*** (0.0025)	0.086*** (0.002)	-0.119*** (0.003)	-0.003 (0.002)	0.035*** (0.002)
Life Expectancy	0.004*** (0.001)	-0.019*** (0.001)	-0.037*** (0.002)	-0.002 (0.001)	0.001 (0.0008)
GDP per capita (Log)	0.098*** (0.008)	-0.104*** (0.008)	-0.244*** (0.011)	0.137*** (0.007)	-0.177*** (0.008)
<u>Individual Level Indicators</u>					
Age	-0.010*** (0.0004)	0.003*** (0.0004)	-0.0002 (0.0005)	-0.011*** (0.0004)	0.003*** (0.0004)
Education	-0.012*** (0.003)	-0.038*** (0.003)	-0.0152*** (0.003)	-0.009*** (0.003)	-0.034*** (0.002)
Male	0.115*** (0.011)	-0.034*** (0.011)	-0.024* (0.014)	0.116*** (0.011)	-0.032*** (0.011)
Income	0.0007 (0.002)	-0.022*** (0.003)	0.010*** (0.003)	0.0002 (0.002)	-0.027*** (0.002)
Random Variance	0.138 (0.005)	0.107 (0.003)	0.161 (0.008)	0.065 (0.002)	0.122 (0.003)
Model Deviance AIC	119760	97339	93522	121949	106344
Model Deviance BIC	119937	97450	93676	122127	106456
Observations Level 1 units	51196	38922	23423	52335	42435
Observations Level 2 units	41	29	17	42	32

Standard errors in parentheses

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

Table 4: Poverty Models³⁹

	Gini	Poverty Headcount	Poverty Gap	Life Expectancy	Health Spending, public (% GDP)	Edu Spending, public (%GDP)	Social Benefits (% GDP)
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would be particularly resistant to tax reform. Regardless, the results are robust without transition country dummy variable.

³⁹ The primary results are robust to the exclusion of country fixed effects, and with random effects.

%Δ Trade							
Tax	-2.919*** (0.768)	0.423 (0.952)	0.628 (0.596)	-0.465 (0.402)	0.0692 (0.0602)	-2.420 (1.543)	-3.315*** (1.130)
Polity	-0.119 (0.129)	-0.235 (0.366)	-0.151 (0.199)	-0.0324 (0.100)	0.00414 (0.0130)	0.113 (0.0951)	0.0183 (0.0747)
<i>%Δ Trade</i>							
<i>Tax* Polity</i>	-0.510** <i>(0.195)</i>	-0.509*** <i>(0.141)</i>	-0.279** <i>(0.108)</i>	0.182*** <i>(0.0640)</i>	0.0178* <i>(0.00925)</i>	-0.149 <i>(0.393)</i>	-0.0550 <i>(0.162)</i>
GDP Growth	-0.614*** (0.205)	-0.338* (0.187)	-0.389** (0.178)	0.00569 (0.0548)	-0.0444** (0.0220)	-0.268*** (0.0580)	0.0420 (0.0960)
GDP per capita	2.638 (4.652)	-20.26*** (7.540)	-6.944 (4.407)	4.174*** (1.350)	-0.144 (0.385)	0.318 (2.123)	0.161 (2.200)
Constant	-17.42 (110.4)	502.5*** (180.4)	173.9 (105.1)	-31.91 (32.15)	6.600 (9.112)	-2.382 (50.33)	2.066 (52.69)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	196	197	197	278	225	147	144
R - squared	0.212	0.412	0.354	0.348	0.113	0.144	0.246
Number of countries	91	87	87	104	101	68	61

Standard errors in parentheses

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

Graph 3: Marginal Effect of Percent Change in (Declining) Trade Tax Revenue Conditional on Polity

