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With the adoption of the trade liberalization agenda in the late eighties and early nineties, developing countries across the world faced a 'revenue shock' due to the dramatic loss in trade tax revenue. These countries are now tasked with implementing domestic tax reform to generate much needed revenue. International Financial Institutions (IFIs) are advising these late liberalizers to broaden the tax base by taxing more corporations. We argue that developing world democracies face the most resistance to this type of reform. These nations are particularly susceptible to business demands for low corporate tax rates (CTR), loopholes and acts of evasion. Drawing from New New Trade Theory (NNTT), we contend that the large population of *less* productive domestically-oriented sectors—particularly ones that received generous subsidies during the protectionist era—will be the most vociferous proponents of lower taxes, maintaining that it will 'compensate' them for liberalization by offsetting the costs of being new exporters. Our paper tests this empirically by analyzing CTR and corporate tax policies and practices in developing economies, using a new CTR dataset, as well as firm-level data from the World Bank's Business Environment Survey followed by case studies. As anticipated, less-competitive firms—even more so than large exporters—are key groups obtaining lower taxes in weak democracies, but *not* in authoritarian regimes. Our final section employs a difference-in-difference estimation to assess if indeed these critical vested interests are driving lower corporate tax revenues in weak democracies.

Globalization—or a side effect of it—is triggering a largely unrecognized revenue crisis in a substantial portion of the developing world. The heart of the issue lies in how the governments of developing economies that joined the third wave of globalization, or the 'late liberalizing' countries, raised their money prior to the 1990s.[1] Revenues were collected, in large part, from taxes on imports and exports. Specifically, tariffs on consumer goods, particularly luxury goods and intermediate goods produced domestically, as well as agricultural exports, led to high trade tax revenues. These tax revenues accounted for, on average, 40 percent of all total tax receipts in low-income economies, and 35 percent in lower-middle income countries.[2] Altogether, they comprised almost one-third of tax revenues in the full sample of developing economies.

Reliance on trade taxes persisted through the early nineties, in large part because they are 'easy to collect.' This class of taxes includes import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes. They are straightforward to monitor and solicit at a centralized location, such as border areas, and do not require a complex administration to manage. However, there are many arguments- some grounded in sound economic theory and others in market fundamentalism- against the extensive use of trade taxes.

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[1] Scholars and policymakers have identified three waves of globalization (via reduction in trade barriers and large flows of trade, capital, and migration): (1) 1870-1914, (2) 1945-1979, and (3) 1980-today (Collier and Dollar 2002). Collar and Dollar (2002) use the term 'new globalizers' to signify integration of developing countries in the 3rd wave.

[2] Khattry and Rao 2002.

From the late eighties and into the nineties, after the Latin American debt crisis, there was a shift toward more open international markets. The substantial lowering of tariffs was the critical component of this opening of markets, including membership in the World Trade Organization (WTO) and the provision of structural adjustment packages. With a general adoption of a more liberal stance towards trade, these 'late liberalizers' ostensibly lost permanent access to a primary source of tax revenue.[3]

In effect, liberalizing trade translated into a large and rapid loss of money—i.e., trade tax revenues—for governments across the developing world. We label this a 'revenue shock' because it is an event, often triggered in large part by exogenous factors, that produces a relatively sudden drop in government revenues. The repercussions are significant. Overall revenue levels in developing economies have always been far below that of advanced industrialized countries, and in spite of frequent, and sometimes extensive deficit spending, the provision of public goods is inadequate in many late liberalizing countries. Developing nations thus must urgently replace almost a third of their already low tax revenue base with 'hard to collect' domestic taxes. This is no easy undertaking.

Could one logical solution be taxing large corporations? After all, they are relatively easy to locate and subject to public reporting requirements. The economy of developing countries tends to be dominated by small producers operating outside the formal sector. It is therefore common for governments to rely on large corporations for tax revenue. This is especially the case post-liberalization, when tariffs become less viable sources of revenue. International financial institutions, such as the World Bank and

[3] Import taxes constituted 85 percent of trade tax revenues in 1990.

the IMF, insist that corporate tax contributions are vital to ensuring a stable revenue base for developing countries.[4] Indeed, corporate income taxes generally yield two-thirds of all income taxes in developing economies; in rich countries, it is only one-fourth. It makes sense that developing countries might lean on corporations to help overcome the revenue shock.

To broaden the revenue base post-shock, the World Bank and IMF have been advising developing countries to lower their corporate tax rates, while closing tax loopholes and other types of special exemptions. The conventional logic is that lower corporate tax rates increase revenues by increasing incentives for tax compliance, encouraging the emergence of new firms, and attracting foreign capital.[5] The challenge to all governments, however, is three-fold. First, firms – especially the more numerous, less-productive ones - are demanding lower tax rates and loopholes so that they can better compete in both import and export markets; second, financial liberalization provides mobile asset holders greater opportunities to avoid taxation; and finally, more productive exporting firms resist higher tariffs, which could mitigate the revenue shocks.

Developing countries are heeding IFI advice and lowering corporate rates; the problem is that in many developing countries, revenue generation has not risen in tandem. The revenue base has instead become narrower, *not* broader.[6] This raises concerns: since democracies are more sensitive to lobbying from a wide range of formal firms, lower corporate tax rates *and* lack of compliance (via loopholes, exemptions and

[4] UNCTAD 2015; Oxfam 2016; Lagarde 2016; World Bank 2016b.

[5] World Bank 2005b.

[6] United Nations 2002; Mascagni, Moore, and Mccluskey 2014.

evasion) are likely to occur. This article examines the role of firms in tax reform, and how the history of import substitution industrialization impacts today's political and economic incentives for industry.

We argue that large firms are less likely to engage in voluntary or compulsory compliance with higher taxes post-liberalization in democracies, especially in comparison to nondemocracies. In addition to disappointment with public goods, businesses have added reason for low government confidence post-liberalization: greater international market competition. Recall that the tax bargain prior to liberalization was beneficial to large domestic industrialists: these firms enjoyed import protection and other economic subsidies in exchange for (albeit still low) tax payments. After liberalization, firms from the once-protected sectors have lower confidence that the government's new tax bargain (i.e., higher taxes alongside lower import protections) will benefit them.[7]

We propose that democracies are experiencing a relatively rapid decline in corporate taxation rates and revenues in response to demands from a key interest group: *less producti e firms*. This is a distinct departure from current explanations, which contend that large, more productive exporting firms are the main lobbyists for declining corporate taxes in a global economy.[8] We posit, instead, that once-protected firms now struggling to compete dominate the economic landscape of developing countries and have the lowest confidence that the new tax proposals benefit them in the globalizing environment. They demand lower taxes and concessions as compensation for the greater

[7] Trust in political institutions is critical for affluent actors to support taxation (Berens and von Schiller 2016).

[8] Dur 2007; Yasar 2013; Krishna and Mitra 2005.

import and export competition, while ostensibly providing their support of liberalization in exchange. Their successful resistance has roots in the strong political coalitions that were formed with governments during the protectionist era. In contrast, while less productive firms in authoritarian regimes may experience the same drop in government confidence post-shock for similar reasons, their lobbying does not have the same influence on policymakers. The use of coercion and harsh punitive measures for tax violations are added tools that authoritarian regimes threaten to employ to solicit corporate tax compliance. In contrast, low corporate taxes are likely to be a lower priority for larger, more productive firms since they have more options to route around local taxes.

The logic of this article is as follows. We first analyze the decline of corporate tax rates (CTR) in developing economies. Since our focus is on if and how vested interests are lobbying governments in democracies, it is instructive to focus on both how tax *policies* and revenues aimed at firms are changing across regime types. We then turn to firm-level data from the World Bank's World Business Environment Survey to assess our intuition that less productive firms are key interest groups successfully driving lower corporate taxes in democracies, but *not* in authoritarian regimes. Our final section employs a difference-in-difference estimation to assess if indeed these critical vested interests are driving lower corporate tax revenues post-shock in developing world democracies.

While corporate tax rates have been steadily declining in countries all over the world, this trend appears to be particularly acute in developing economies. This should be good news, since low corporate tax rates can lead to higher compliance and entry of new firms. However, studies note the disappointing growth in income tax revenues in developing countries over the last few decades.[9] Declining corporate tax rate (CTR) is thus a problem worthy of investigation, since shortfalls in corporate tax revenues in many developing nations are producing significant losses to society as a whole. Yet most of the empirical research on corporate taxation per se has generally focused on rich countries. Only in recent years has the literature turned to developing economies.

The scholarly consensus is that corporate tax rates are declining globally.[10] Studies find that capital-scarce poor nations are more inclined to use tax incentives (tax holidays, free trade zones, loopholes, lower tax rates) to lure businesses.[11] Developing countries also struggle to introduce transfer-pricing legislation and monitor the tax compliance of multinational firms, which is quite complex and costly.[12] It is estimated that almost half of all foreign direct investment to developing countries flows through tax

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[9] World Development Report 2005; Carnahan 2015; Mascagni, Moore, and Mccluskey 2014.

[10] Zodrow 2010; Overesch and Rincke 2009.

[11] Queralt (2016) finds that states with weak fiscal capacity protect declining industries in exchange for tariff protections. However, note that developing countries discretion to use trade barriers has become increasingly difficult since structural adjustment policies in the late 1980s and WTO membership in the 1990s.

[12] Cooper et al 2016; Malesky 2015.

havens.[13] In consequence, rather than lower corporate rates contributing to a broader tax base and filling bare government coffers, growth in income tax revenues has been disappointing.[14]

Studies of corporate tax rates have thus been helpful in terms of showing the steady decline of taxes on capital, and identifying the susceptibility of developing economies to this trend. However, with the exception of Fairfield (2010, 2015), Hart (2010), and von Schiller (2016), they do little to help us understand the actors and political context driving this trend. Many scholars assume that large exporting firms are behind falling CTRs; they can successfully pressure the government for lower taxes because of the government's perceived threats of lower profits and disinvestment if they behave otherwise.[15] This assumption may be problematic. First, it has not been put to any kind of empirical test in developing economies. Second, lobbying for low tax rates may be less of a priority for large, more productive firms that are focusing on pursuing lower tariffs. [16] These already have extensive options for tax avoidance, such as transfer pricing. However, large, less productive firms struggling to compete in both local and/or export markets care about tax rates, and they have the advantage - in developing democracies, at least- for being high in numbers.

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[13] Malesky 2015.

[14] Crivelli, De Mooij and Keen 2015; Abbas and Klemm 2012; Abramovsky, Klemm,

This is precisely why it is imperative to explore which corporate interests are politically active on tax policies, and have direct connections to the government. Many urban industrialists, who are part of historically strong political coalitions formed during the protectionist period, have great incentive to lobby for lower business taxes.[17] Scholars often wrongly assume that domestic industrialists that thrived during the import substitution industrialization (ISI) era have become less viable post-liberalization. Instead, studies show these groups continue to maintain both political *and* economic influence on governments and extract benefits.[18] Many of these leading domestic industrialists from once-protected sectors can successfully demand rents – such as lower taxes- in exchange for their support of free trade policies, especially in countries that have a history of strong ISI policies.[19] We consider this possibility in the next section.

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We contend that large, less productive firms can hold strong political sway over governments in tax negotiations. As Kurtz and Brooks (2008: 245-7) explain, such firms are likely part of strong political coalitions that emerged during the protectionist period.[20]

[17] Some scholars do consider how politics impacts corporate tax rates (Hart 2010, Genschel, Lierse and Seelkopf 2016), but the historical political legacies linked to ISI are neglected.

[18] Schamis 1999; Kurtz and Brooks 2008; Zhou 2008.

[19] See Kingstone (1999), Etchemendy (2001), and Murillo (2001).

[20] Note that Kurtz and Brooks (2008) refer to potentially competitive firms.

This is especially true in nations where import substitution was once most advanced. Urban industrialists thrived in strong ISI legacy countries, benefitting from sharp increases in growth for the first few decades, rapid industrialization, infrastructure improvements, and the development of a relatively strong manufacturing sector. Import substitution industrialization was also a political bargain wherein urban industrialists worked in concert with governments to protect them from groups that could threaten them: foreign exporters, unskilled labor and rural producers.

Democratic governments are likely to respond to the interest of these less productive firms with lower tax rates for two reasons. First, a wide range of empirical studies in economics and political science find that 'losers' from globalization receive more government compensation.[21] As trade economists have been observing, liberalization spurs heterogeneous firm-level responses; and since exporting involves costs (e.g., transportation, information, marketing, distribution), it is the larger, more productive firms that can more easily enter international markets (i.e., the 'winners').[22] Studies show that firms that invest in new technologies, labor productivity, and product quality have a higher probability of survival in export markets.[23] Less productive large domestic-oriented firms that were created and sustained under heavy protectionism (ISI)

[21] Baldwin and Robert-Nicoud 2007; Kurtz and Brooks 2008; Rodrik 1997; Adsera and Boix 2002; Walter 2010.

[22] Melitz and Redding (2014); Bernard et al (2007); Melitz 2003.

[23] Lileeva and Trefler 2010.

may have more difficulty entering export markets (i.e., the 'losers'), and thus be the most threatened by more productive foreign competitors.[24]

Second, the literature on globalization suggests these demands will be most effective in countries where the losers are organized and have political power.[25] Once-protected large, less-productive domestic firms fall precisely into this category. The political coalitions they formed during the import substitution period continue to endure under the new market environment.[26] In consequence, they now receive government compensation to "level the playing field with companies in nations with more efficient credit markets and more developed infrastructure."[27] Less productive large-scale firms hereby may stay economically and politically viable by providing their tacit support of liberalization in exchange for government subsidies, such as provision of skills, access to finance, low taxes, and tax exemptions. These firms, particularly because they are relatively large in size and play a critical role in creating employment, are well positioned to lobby the government and demand compensation in the form of lower taxes. We ultimately expect these vested interests to wield strong political influence in democracies, which depend on a broad coalition of economic elites for campaign financing and electoral support.[28]

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[24] See Krueger (2002), Chen (1987), and Barkey (1989).

[25] De Figueiredo and Richter 2014; Rudra 2008.

[26] Kurtz and Brooks 2008.

[27] Kurtz and Brooks 2008: 247.

[28] See Weymouth (2012).

In Brazil, for example, we see that large beneficiaries of ISI are still key political players and, not surprisingly, often recipients of generous tax concessions. The 1956-61 Plano de Metas and other government policies throughout the 1970s supported manufacturing industries, such as auotomotives, petrochemicals, and steel, through subsidies, tariffs, and credit.[29] Government procurement (upwards of 80-100 percent) further financed these sectors.[30] With liberalization, previously protected import-competing sectors, such as Brazil's chemical industry, are struggling to be more globally competitive, slowly increasing their exports by 10 percent per year since the 1990s.[31] The Brazilian government continues to compensate these and other previously protected manufacturing firms with large tax breaks and incentives.[32] As anticipated, Brazil's corporate income tax revenues have been stagnant since the mid-2000s. Corporate tax evasion is rampant in Brazil- among both small and large corporations.[33]

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[29] Amann 2000.

[30] Amann 2000.

[31] Pinto 2011. The chemical industry now exports close to 9 percent - $9 billion in 2009 - of its sales (Pinto 2011). This contrasts with Brazil's cell phone industry, whose exports increased 900 fold between 1994 and 2006 from 0.3 billion to close to 3 billion dollars (Bonelli et al 2008). It now exports 8 percent of the world's cell phones (Bonelli et al 2008). Unlike the aforementioned sectors, the cell phone industry took off only in the 1990s with Motorola and Ericsson investing in Brazil (Bonelli et al 2008).

[32] Farah 2013, "Brazil to Extend Tax Breaks to All Manufacturers" 2013.

[33] The number of businesses involved in Brazil's informal economy is quite large: only 120 out of 6,000 firms with more than 250 employees are listed and traded on the Sao

The interests of more productive firms may be less unified in terms of spending resources lobbying for lower tax rates. On the one hand, they may have good incentives to demand lower taxes from governments in response to cost constraints and variations in market power over time. At the same time, exporters are already operating above the export productivity threshold (i.e., fixed and variable costs of exporting cut-off) and through self-selection, both participate in export markets and invest in future productivity (such as research and development), further reinforcing the selection effect.[34] These firms already have extensive options to route around corporate taxation, such as access to export processing zones, exporter tax exemptions and loopholes, transfer pricing.[35]

Paulo Stock Exchange (Kenyon 2008). Further, large firms typically conceal a quarter of their sales from tax authorities (Kenyon 2008).

[34] Aw, Roberts, and Xu 2011.

[35] Tax avoidance is common for MNCs in the form of transfer pricing (Grantley, Richardson, and Lanis 2015; Conover and Nichols 2000; Bernard, Jensen, and Schott 2006), and large exporters who tend to populate export processing zones that offer a host of tax concessions (e.g, Abidoye, Orazem, and Vodopivec 2014). Granting low CTR and loopholes for exporters is historically common in developing countries. For example, Brazil's recently reinstated Reintegra program grants corporations income tax credits equivalent to 0.3 percent of their export value (Soto 2014). India, as well, has several policies to promote exports such as free trade zones, technology parks, customs, income tax, and excise duty exemptions, refunds, or rebates for manufactured exports (see http://www.indianindustry.com/trade-information/export-incentives.html, Pillay 2011).

More productive firms may also be willing to pay *domestic* taxes in the new global economic environment if they believe, in equilibrium, it will result in greater productivity or lower costs, i.e., government investment in public goods such as financing skill development, healthcare and infrastructure. We have no reason to assume that the correlation between public goods and the willingness to pay taxes does not apply to corporations. Empirical research suggests, for instance, that foreign firms are willing to accept higher tax rates if they are associated with public good provision.[36] In another example, when asked about Singapore's 2016 budget, President Chew of Fujitsu Singapore- a Fortune Global 500 firm- indicated that, "It was great to see that the 2016 Budget included educational programmes to help develop a stronger workforce."[37] Other executives in this survey pointed to the importance of government investment in other public goods such as infrastructure, healthcare, and family care. The difference is that the stakes of paying higher taxes may be more costly for less productive firms and incentivize them to more actively mobilize.[38] Overall, more productive firms may uniformly view lower tariffs as beneficial, but show less unanimity on lobbying for lower corporate tax rates.

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[36] Benassy-Quere, Fontagne, and Lahreche-Revil 2005:591.

[37] Bittleston 2016.

[38] Interestingly, Fairfield (2015) distinguishes between firms with structural (or investment) power and instrumental (or political) power. She explains, "structural power requires no organization… instead, market signals coordinate their behavior… instrumental power entails engagement within the political arena and deliberate actions to influence policy such as lobbying" (Fairfield 2015: 2).

In democracies, this is a death knell for raising CTR. Interest groups commonly compete for influence over government policies, and those who have both the government connections and highest stake in the policy outcome (i.e., less productive firms) win.[39] Less-productive firms represent the majority of businesses in developing economies (70 percent of firms, on average) and can form strong interest groups.[40] In both types of nondemocratic regimes, however, we expect to see greater government success in pressuring corporations for more taxes, since not all economic elites are included in their loyalist coalition. Firms connected to the ISI legacy may or may not be part of the loyalist coalition.

We thus explore the following hypothesis:

1 In the liberalizing environment, businesses are more successful resisting taxes in democracies than they are in authoritarian regimes.

Because we anticipate that it is the influence of less productive industrialists who are behind this resistance in democracies, we also propose the following:

2: The decline in corporate taxes will be more acute in democracies with strong ISI legacies.

To assess H1, we begin by analyzing the decline of corporate tax rates in developing countries. We focus on CTR in this chapter to in order to more closely assess

[39] Bertrand et al 2014; Baldwin and Robert-Nicoud 2007.

[40] Baldwin and Robert-Nicoud (2007). See also Yackee and Yackee (2006).

how interest groups are directly impacting government *polic* . We expect that democracies will experience steeper declines in corporate tax rates than authoritarian regimes because they are more susceptible to demands by less productive firms, as well as large exporters.

In general, cross-national tax policy data in developing economies is extremely complex and has limited availability.[41] However, Genschel, Lierse, and Seelkopf (2016) built the largest, newly compiled dataset on corporate tax rates covering developing countries for close to 18 years. The CTR is the statutory rate collected from the KPMG corporate tax survey. We employ both the rate of change and level of CTR as dependent variables. Once critical control variables are included, our models cover 37 developing countries between 1995 and 2010.[42]

To begin, we check if IFI expectations that lower tax rates will be accompanied by greater compliance and thereby, higher corporate tax revenues. Table 1 below suggests that low corporate tax rates are generally associated with low revenues in democracies (i.e., a positive correlation). A sample of low and middle-income nondemocracies seem to be an exception. Even then, low correlations overall suggest corporate tax rates are not perfect indicators of how good the government is at raising

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41 Bahl and Bird 2008.

[42] Note that Swank (2016) has also recently put together an excellent dataset on CTR that includes developing countries. This dataset is 0.90 correlated with Genschel et al (2016) and incorporates slightly fewer countries. We run our models using both datasets, and there is little variation in our primary findings. We focus on Genschel et al (2016) because we maintain the maximum of observations when adding necessary controls.

revenues. For our purposes, however, it is a useful proxy of political bargaining: lower tax rates may reflect government responsiveness to business pressures- allowing at least some corporations to pay less taxes and access loopholes so they can better compete in the global economy.

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Democracies	0.16 (0.004) N=309	0.09 (0.06) N=472
Nondemocracies	-0.27 (0.001) N=164	-0.01 (0.85) N=200

Data Source: ICTD 2017 and Genschel, Lierse, and Seelkopf 2016

Pvalues in parentheses

Corporate tax rates have been declining over time in both democracies and nondemocracies. However, the average rate of corporate tax rate reductions in nondemocracies is slower (1 percent annually) than it is in democracies (2 percent annually). Democracies are also experiencing slower growth in corporate income tax revenue. In the 2000s, for instance, corporate income tax revenues grew rapidly in middle-income nondemocracies (2.4 percent annually) compared to democracies (a reduction of 0.002 percent). Taken together, this suggests nondemocracies are reducing CTR *and* broadening their tax base, consistent with IFI predictions.

Next, we focus on the impact of the trade liberalization revenue shock on corporate tax rates in democracies and nondemocracies. Our primary independent variable is *trade ta re enue*polit* , and we use both a continuous measure (polity) as well as a democracy dummy. We predict a positive coefficient on this interaction; as trade tax revenue decreases (suggesting that liberalization is expanding), CTRs also decrease in democracies. We also estimate the impact of capital account openness on corporate tax rates since governments of all regime types face incentives to compete for international investment by reducing the corporate tax burden. This coefficient should be negative.

We apply a fixed effects statistical model. All models include panel-corrected standard errors to address heteroskedasticity and serial correlation. For model specification, we build on recent academic work on corporate taxation in developing countries, specifically Genschel, Lierse, and Seelkopf (2016) and Wibbels and Arce (2003). We first estimate a simple model controlling for the key variables of IMF credits (percent of GDP), the World Bank's investment profile, and portfolio investment inflows (percent of GDP). IMF credits captures the extent to which international financial institutions, through their market-oriented loan conditions and policy advice, are influencing tax policy (see also Wibbels and Arce 2003). A country's investment profile can have a major impact on their CTR as politicians seek to attract capital in risky environments with lower tax rates.[43] Finally, net portfolio investment inflows (percent of

[43] See Genschel, Lierse, and Seelkopf (2016). More precisely, the investment profile measures investment risk associated with contracts, profit and payment (scale from 0-12 with higher values indicating lower risk) (ICRG 2012).

GDP), which measures the importance of liquid investments on national policymaking,[44] should increase the power of capital relative to labor and be associated with lower corporate tax rates.[45] Portfolio investors are expected to have a relatively strong influence on politicians, in comparison to foreign direct investment, because of the mobility of these assets. We also include country dummies and control for time effects. Appendix A.1 contains variable sources and descriptions.

Appendix A.2 details the additional control variables in the full model: GDP per capita, GDP growth, fuel exports (percent of exports), population (logged), foreign direct investment inflows (percent of GDP), government spending (percent of GDP), agricultural employment (percent of total employment), and regime durability, and the regression results, respectively. Appendix A.3 presents the full model estimation results. Appendix A.4 contains the results for the rate of change of CTR. The baseline model results in Table 2 lend support to H1.

2

DV:	(1) CTR	(2) CTR
. (%) -1	**-0.1 (0.22)**	**0.1 2 (0.1)**
(1 0) -1	**-1. 10** (0.)**	
. (%)*		
(1 0) -1	**0. *****	

[44] World Bank 2016.

[45] Wibbels and Arce 2003.

	(0.31)	
-1		**-0.1 0****
		(0.0 23)
. (%)*	**-1**	**0.0 1 *****
		(0.030)
Kaopen $_{t-1}$	-0.322	-0.383
	(0.322)	(0.315)
Investment Profile $_{t-1}$	-0.200**	-0.197**
	(0.0896)	(0.0863)
Portfolio Flows (percent GDP) $_{t-1}$	0.0156	0.0104
	(0.0372)	(0.0367)
IMF credits (% GDP) $_{t-1}$	0.0701*	0.0531
	(0.0401)	(0.0399)
Observations	280	280
R-squared	0.982	0.984
Number of countries	37	37

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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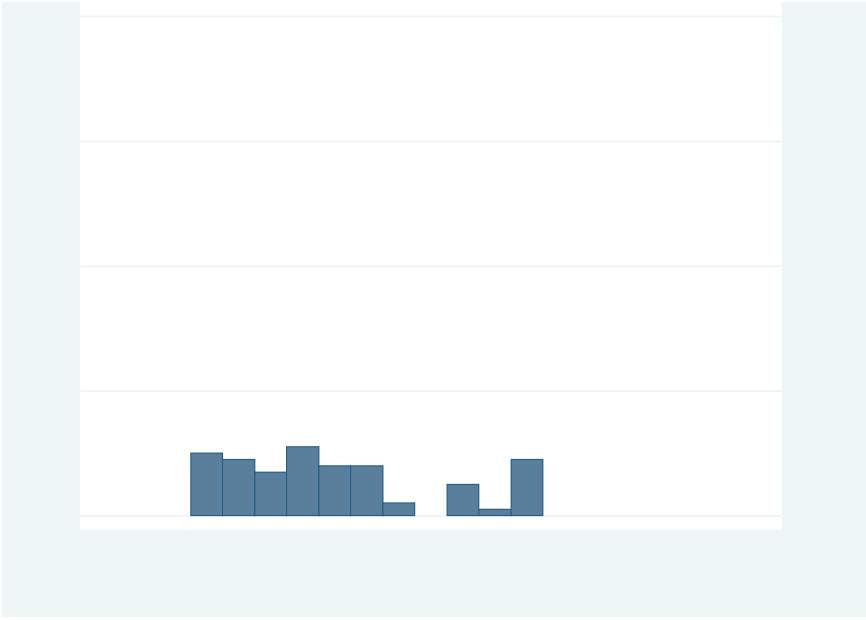

In democracies, an increase in openness (measured as the reduction in trade taxes) is associated with declines in corporate tax rates. This is true regardless of how democracy is measured. Graph 1 highlights the marginal effect of decreases in trade tax revenue on corporate tax rates in democracies and nondemocracies. For example, in a democracy (polity=10), a ten percent decrease in trade tax revenue is associated with 0.10 decline in the corporate tax rate. To put this in perspective, given that the average trade tax revenue decline across developing world democracies was 57 percent between 1997 and 2011 (from 3.3 percent of GDP to 1.4 percent of GDP), our model predicts in corporate tax rates would decline over this same period from an average of 31 percent to 13 percent.[46] In contrast, declines in trade tax revenue in authoritarian regimes have no statistically significant impact on changes in CTR. Interestingly, capital account openness, once again, appears to have less of an impact on tax rates than trade. This finding for capital account openness is broadly consistent with patterns found by scholars analyzing financial liberalization and corporate taxation in the OECD countries.[47]

This statistically insignificant effect in authoritarian regimes is not surprising because it is likely that tax reforms – such as lowering the corporate tax rate – were implemented soon after the initial trade tax revenue shock; but henceforth, we do not anticipate that there will be a more rapid decline in tax rates in response to openness since nondemocracies are less susceptible to interest group pressures. To check this, we reran the models by splitting the sample and comparing CTRs in the 1990s, which is the decade

[46] The average CTR for democracies was 31 percent in 1997 and 23 percent in 2011 (a 26 percent decline).

[47] See, for example, Garrett and Mitchell (2001) and Takashima (2007).

that most tax reforms were first introduced, to the 2000s.[48] As expected, despite the reduction in sample size, trade tax changes showed a positive and statistically significant relationship with corporate tax rates in the early decades of liberalization, but not thereafter. Trade tax revenue in democracies, on the other hand, had a positive and significant impact on CTRs across the entire time frame.

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We need firm-level data to assess H2, which focuses on vested interests that emerged from strong IFI legacies. We ask if *less producti e firms* have critical influence on the tax bargain post-liberalization. Turning to World Bank Enterprise Surveys (WBES) data between 2006-2015, we select the most objective question on taxation, i.e., the number of tax inspections, as our dependent variable to proxy firm's ability to avoid government taxation.[49] We expect that, in democracies, less productive large firms will have the least tax inspections (i.e., greatest tax avoidance) because of their relative bargaining position vis a vis the government. The variable of interest is: "Over the last 12 months, was this establishment visited and/or inspected by tax officials (value of: 1 if there was a visit, 0 if no visit)?" Although local governments have some autonomy in this domain, it is important to emphasize that national agencies are primarily responsible

[48] We estimated a fixed effects regression of trade tax revenue (percent of GDP) on CTR across a sample in the 1990s and then the 2000s.

[49] We do not use the WBES questions on if the tax administration or tax rate is a "major constraint" because they are subjective measures.

for tax enforcement and inspections, with local branches reporting directly to central government bodies.[50]

We operationalize less productive firms using the WBES variable: "In fiscal year X, what percent of this establishment's sales were: direct exports?" Following WBES coding, exporting firms maintain 10 percent or more of sales from exports. We thus code 'less productive firms' as firms that have less than 10 percent direct exports, while productive 'export oriented' have 10 percent or more sales from exports. Firms with less than 10 percent of sales as direct exports are considered 'less productive' as they primarily serve the domestic market.[51]

We first compare the numbers of productive to less productive large firms in the different regime types. We limit our sample to large firms because these firms are the easiest to monitor and tax in developing economies, and they have the resources and capacity to influence politicians. According to Table 3, both democracies and authoritarian regimes have similar numbers of productive (about 30 percent) and less-productive large firms (about 70 percent). The difference is that we predict that the sizeable population of large, less productive firms is likely to have greater political importance in democracies.

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La [redacted] **(** **)**	***La*** [redacted] **-** **)**

[50] Blanc 2012.

[51] Following World Bank research, exporting firms have 10 percent or more of sales from exports (Dinh, Mavridis, and Nguyen 2010).

All Countries	28% (N= 5,722)	72% (N=15,066)
Democracies	29% (N=3,627)	71% (N=8,915)
Nondemocracies	26% (N=1,821)	74% (N=5,061)

Data Source: WBES 2016

Sample includes large, domestic, private firms only. Large firms have 100 or more employees (see Ayyagari, Demirguc-Kunt, and Maksimovic 2015).

If our intuition is correct, we would find that the average number of tax inspection visits for less productive firms is lower in democracies than it is in authoritarian regimes.[52] We also compare the treatment of less productive firms with more-productive firms in both regimes types, exploring whether government officials in democracies will be more 'forgiving' to less productive firms, as we predict. We also drop the high-income countries so that the included countries are more comparable with each other.[53] Interestingly, firms in democracies experienced a lower rate of tax inspections than nondemocracies across all samples (Table 4).

[52] We focus on domestically owned, private firms, rather than government owned ones, as a hard test of our prediction that large less-productive firms have undue influence over tax policies and practices. Nonetheless, we compare the rate of tax inspections in samples including government owned firms, excluding small firms (less than 100 employees), and excluding high-income countries.

[53] In Table 4, middle and low-income countries have a GDP per capita below the sample mean.

4 **,**

					-
All	All	All	0.54	0.67	0.00
All	All	Low & MI	0.59	0.71	0.00
Less Productive	Large	All	0.63	0.71	0.00
Less Productive	Large	Low & MI	0.63	0.72	0.00
Export-Oriented	Large	All	0.66	0.73	0.00
Export-Oriented	Large	Low & MI	0.64	0.72	0.00

Data Source: WBES 2016

But perhaps more interestingly for our analysis, we find that large, less productive firms in democracies consistently receive less tax inspections than export-oriented firms (Table 5). There appears to be minimal difference in tax inspections across these firms within the sample of nondemocracies. This pattern holds in samples that include foreign owned firms, government owned firms, and manufacturing firms only.

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				-
Large Firms	Democracies	0.63	0.66	0.00
Large Firms	Nondemocracies	0.71	0.73	0.16

Data Source: WBES 2016

To further assess our argument, we estimate a logit model on the WBES survey data. Our dependent variable is the same as in the above table: tax inspections (1= visited

by an official in the past year, 0= not visited). Our independent variable of interest is democracy. As before, we operationalize democracy using a democracy dummy as well as polity. We also interact democracy dummy with firms that have higher export sales to check if it is a conditional relationship. If democracy*export sales is positive and statistically significant, then this suggests less-productive firms (firms with lower export sales) in democracies are experiencing fewer tax inspections, or pressures to pay taxes, than more competitive firms.

We control for GDP per capita and bureaucratic quality on the country level and firm size (log of total employment), and sales (log of total sales) on the firm level.[54] Statistical estimations also include a regional dummy variable and year dummies, and have robust standard errors clustered by country. Appendix B.3 contains the variable definitions and descriptive statistics for the WBES dataset. Appendix B.4 lists the countries represented in the sample.

Table 6, below, presents the results of tax inspections in a sample of all domestic firms, which are consistent with our expectations. Democracy is negatively associated with tax inspections and the interaction is positive and statistically significant. Table 7 presents the predicted probabilities for the regression in Table 6, column 3.

DV:	(1) Tax Inspect.	(2) Tax Inspect.	(3) Tax Inspect.	(4) Tax Inspect.
(1 0)	**-0. *** (0.14)**	**-0.4 * (0.2)**	**-0. 1 ** (0.2 1)**	

[54] Firm profit is not available in the WBES dataset.

(%)		**-0.00031**	**-0.0101*** **	**-0.00 ** **
		(0.001)	**(0.00231)**	**(0.0023)**
(%)*				
(1 0)			**0.013 *** **	
			(0.0024)	
				-0.0213
				(0.02 0)
**** (%)**				**0.001****
				(0.000)
GDP per capita (logged)		-0.244**	-0.259**	-0.2729*
		(0.124)	(0.122)	(0.1403)
Bureaucratic Quality		-0.0630	-0.0480	-0.1267
		(0.166)	(0.164)	(0.1673)
Sales (logged)		0.00217	0.00279	0.0084
		(0.0363)	(0.0361)	(0.0379)
Employment (logged)		0.264***	0.269***	0.2622***
		(0.0561)	(0.0549)	(0.0548)
Region control	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Observations	94,039	42,675	42,675	42,675

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

(, 3)

(%)		
0	0.55	0.68
5	0.56	0.66
10	0.56	0.65
25	0.57	0.62

Table 7 indicates that, as a firm's exporting capabilities (i.e., their competitiveness) increases, it is slightly more likely to receive tax inspections. Democratic governments thus appear to be compensating less productive firms with looser tax monitoring.

As robustness checks, we limit the sample to large firms to assess our contention that it is the large, less productive firms that are the key interest group driving the low tax rates and revenues in democracies. We also limit the sample to less productive firms, or those firms that export less than 10 percent of their annual sales, to test if they have greater political influence in democracies than nondemocracies. See Appendix B.1. Finally, we employ polity*exports as the independent variable of interest (see Appendix B.2).

As expected, in a sample of large firms, the democracy*export interaction is positive and significant. In essence, in democracies, as large firms increase their exports, the likelihood of a tax inspection also increases. Looking at this another way, in a sample of less productive firms only, democracy is negatively associated with tax inspections.

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The intuition behind H2 is that less productive firms formed during the import substitution period have both the greatest incentive and political resources to lobby democratic governments for a favorable tax bargain. Following Brooks and Kurtz (2008), we measure ISI legacy as countries with above the median manufacturing value added as a percent of GDP in 1980. Countries with more entrenched import substitution policies were associated with advanced capital-intensive manufacturing by the early 1980s. Indeed, amongst low and middle income democracies, those with a legacy of ISI have a higher percentage of large, private, unproductive firms (75 percent in our sample) in

comparison with similar democracies with a weaker ISI legacy (68 percent). Next, we use WBES to observe the average number of tax inspections in *democracie*s with and without an ISI legacy. We focus on large, domestically owned, private firms. Table 8 shows that tax inspections are indeed lowest (0.61) for less productive firms in democracies with a strong ISI legacy; but this is not the case in authoritarian regimes.

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Less Productive Firms	Democracies	0.61	0.69	0.00
Less Productive Firms	Nondemocracies	0.72	0.73	0.30

Data Source: WBES 2016

The findings thus far complement the statistical pattern uncovered in Chapter 4, which was that citizens and elite resistance to tax reform hampers revenue recovery post-shock in democracies. If this is true, then democracies with strong ISI legacies—or those with large, politically powerful less productive firms—will be most vulnerable to a revenue trap post-liberalization.

As a harder test of this logic, we now use a difference-in-difference modeling strategy on a sample of democracies to determine the effect of a trade revenue shock on corporate income and total domestic tax *re enues,* respectively, in a 'treatment' group and a 'control' group. The treatment group – the strong ISI legacy countries – should be highly susceptible to liberalization shocks. This means that countries with strong ISI legacies had higher tariffs (especially on manufactured goods) and are thus experience

more intensive revenue shocks upon liberalizing. The control group – countries with a weak ISI legacy – had lower tariffs prior to liberalization and relatively more insulated from the effects of the shock. Countries in this category should have weaker vested interests, a smaller manufacturing base (pre-liberalization) and thus, relative to the treatment group, less successful resistance to revenue mobilization post-shock. Unfortunately, we could not estimate difference-in-difference models using CTRs because of limited data availability (pre-WTO, which is our measure for 'shock' in these models) for a large number of countries (Genschel, Lierse, and Seelkopf (2016) dataset starts in 1995). However, if our results from these models confirm our predictions, the broader pattern (from all the models taken together) suggests that lower CTRs are indeed associated with declining, rather than increasing corporate tax revenues.

Ultimately, the control group in a difference-in-difference estimation can assess whether democracies would still have faced grave problems mobilizing revenue in the absence of large trade tax shocks. If such shocks are indeed driving a downward trend in revenue generation, then we should observe a statistically significant difference in tax revenues in the treatment and control groups. Our treatment group, or countries that are relatively more vulnerable to a negative trade tax shock, are democracies with a historical legacy of import substitution industrialization. Our intuition is that previously protected large, less productive firms in democracies with a strong ISI legacy will successfully oppose the higher taxes necessary to recover from the shock for three reasons: (1) vulnerability to import competition; (2) pressure to become more competitive exporters; and (3) the rent-seeking behavior sustained from the import substitution era. We thus apply 'ISI legacy' to proxy for the presence of organized interests that have long colluded

with policymaking elites (for tax subsidies in particular). We argue that firms in strong ISI legacy countries have long held deep political connections with the regime, and thereby have leverage to effectively advance widespread tax concessions and privileges, resulting in comparatively lower tax revenues.

We assess the difference in corporate tax revenues between the treatment and control groups (i.e., ISI legacy countries and non-ISI countries) across two time periods: pre- and post-trade tax revenue shock.[55] In these models, we identify the years before a country's date of entry into the World Trade Organization (WTO) as pre-shock. We also employ income tax revenue and domestic tax revenue as dependent variables.[56] In effect, we are comparing ISI and non-ISI country tax revenue differences before and after WTO participation. The difference-in-difference model is:

$$\Delta\text{Tax Revenue}_{it} = \beta_0 + \beta_1\ \text{WTO}_{it} + \beta_2\ \text{ISI Legacy}_{it} + \beta_3\ \text{WTO*}\ \text{ISI Legacy}_{it} + \beta\ \text{Controls}_{i,t-1} + \varepsilon_{it}$$

In this model, β_1 represents the effect of the revenue shock in the 'control' group and β_3 in the 'treatment' group. We control for the same controls as the revenue models in Chapter 3: GDP per capita (logged); capital account openness; total population (logged); GDP growth; aid (percent of GDP); fuel exports (percent of exports); IMF credits (percent of GDP); and central government debt (percent of GDP). The Appendix in Chapter 3 contains the variable definitions. We run our model on a sample of late-liberalizing democracies. To address missing observation concerns and ensure we have sufficient observations before and after the treatment, we estimate our models on imputed data. We

[55] Prichard, Cobham and Goodall 2014.

[56] World Bank 2016.

follow Honaker King, and Blackwell 2015 and use Amelia II, which uses an "EMis" algorithm to generate datasets to account for missing observations.

One challenge with this strategy is that we may not be comparing groups (democratic countries) with similar probabilities of having a treatment effect - a strong ISI legacy. Strong ISI legacies may be the result of confounding variables, such as country size or resource endowments, which could drive the difference in outcome (tax revenues), rather than ISI per se.[57] Selection into the treatment group is thus a concern. We need a statistical strategy that allows us to determine - with some level of confidence - that lower government revenues is associated with ISI democracies that have a history of strong, rent-seeking interest groups, rather than its size and/or its natural resource endowments. We can do so by matching a treatment group member democracy (with an

[57] Country size (population or wealth per capita) and resource endowments are often cited as important determinants of ISI; smaller and resource-poor countries have been historically more export oriented (e.g., South Korea) (Nomi 1997, McGuire 1994). Foreign aid and IMF assistance are also critical components of the import-export orientation of developing countries because of (1) the liberal policies promoted by Bretton Woods institutions and (2) the need for foreign exchange by the recipient country (Nomi 1997). Capital account openness is associated with trade policymaking of developing countries (Nomi 1997, Biglaiser and Brown 2005): because relative capital abundance is often associated with more export capacity and less ISI. Countries may also engage in structural reform (i.e., less ISI) to attract more capital. Debt and growth are macroeconomic variables that are associated with government need for structural reform (Biglaiser and Brown 2005).

ISI legacy) with a control group member democracy (with no ISI legacy) where the two countries have similar (natural resource or population) profiles. In other words, applying matching techniques to eliminating systematic differences between the treatment and control groups may be critical.[58] We expect that ISI legacy democracies will generate less corporate tax revenue post-liberalization than non-ISI legacy democracies and the resulting difference-in-difference will be negative and statistically significant.

Table 9 below presents the results of the difference-in-difference (diff-in-diff) kernel propensity score estimation for a sample of democracies. We find that democracies with ISI legacies have lower corporate tax revenues post liberalization: the difference-in-difference is negative and statistically significant. Essentially, the 'treatment' group ha

	-	-	- -
Difference (treated-control)	-0.018	-1.658***	-1.640***
SE	(0.174)	(0.322)	(0.366)

Pre-liberalization, ISI legacy countries did not bring in a statistically significant difference in corporate income tax revenue than non-ISI legacy countries. Post-liberalization, ISI legacy countries have more difficulty taxing once-protected sectors, thus generating less corporate income tax revenue. Overall domestic tax revenue suffers. In particular, post-liberalization, the difference in corporate tax revenue in ISI legacy democracies compared to non-ISI legacy countries was -1.7 units. The standard deviation of corporate income tax is 2.2, thus this difference is nearly three-quarters of a standard deviation. And, the difference across the time periods is statistically significant: corporate tax revenue pre-liberalization in ISI vs. non-ISI democracies minus post-liberalization corporate tax revenue in ISI vs. non-ISI democracies is -1.64 units.

This chapter focuses on the role that strong corporate interests can play in resisting efforts by democratic governments to implement tax reforms post-shock. We look closely at corporate income tax revenue and corporate tax rates, since this has been a critical area of tax reform, and, at least in a technical sense, easier to implement than the

VAT.[59] In democracies, we argue that powerful urban industrialists that received generous government support during the protectionist period will be the strongest advocates of lower taxes in the global economy. Given their political ties to the government, they can negotiate support for liberalization policies in exchange for tax concessions that will help them compete in the new global environment.

We explore data on corporate tax rates and revenues and government tax policy to assess our intuition. Our findings support the contention that democratic nations with strong legacies of import substitution industrialization are particularly susceptible to revenue shock and the impact this has on tax revenues. This is in stark contrast to existing research that assumes - but does not actually prove - that governments are responding to large exporters' demands for lower taxes. Our finding is that the impetus comes, rather, from less productive firms that emerged from the import substitution period, though they may form broader coalitions with exporters in their resistance to tax reforms.

Democratic policymakers are thus in a bind with globalization. As we show in this chapter, less productive – yet still relatively large- firms are likely to successfully lobby for lower taxes. It is increasingly common for such businesses to pressure the government for lower corporate income taxes to reduce their "disadvantage" in the global economy. At the same time, more productive firms demand low tariffs. The Philippines, for example, is currently lowering its corporate tax rate in response to business demands

[59] The VAT involves higher compliance, monitoring, and administration expenses relative to other types of taxes because the VAT involves both taxes and deductions (on taxed inputs) at multiple stages of production (Keen 2013). Even developed economies have been struggling to raise government revenue vis-à-vis the VAT (Keen 2013).

that the government set rate "equal to the current corporate income tax rate of China, Indonesia, Malaysia, and Myanmar" and make the Philippines "a desirable place to do business."[60] Tariff rates were also reduced in response to industry lobbying to "help manufacturers grow their competitiveness by reducing the cost of their inputs."[61] Ultimately, democracies can neither easily resort to increasing domestic taxes nor rely as before on grater tariff revenues to fill government coffers.

[60] Cacho 2016.

[61] Vera 2014.

Abbas, S.M. Ali and Alexander Klemm. (2012). "A Partial Race to the Bottom. Corporate Tax Developments in Emerging and Developing Economies." IMF Working Paper. WP/12/28. Accessed March 21, 2017 at: https://www.imf.org/external/pubs/cat/longres.aspx?sk=25675.0

Abidoye, Babatunde O., Peter f. Orazem, and Milan Vodopivec. (2014). "Madnatory Costs by Firm Size Thresholds: Firm Location, Growth and Death in Sri Lanka." *IZA Journal of Labor and De elopment*. 3: 36.

Abramovsky, Laura, Alexander Klemm, and David Phillips. (2014). "Corporate Tax in Developing Countries: Current Trends and Design Issues." *Fiscal Studies*. 35(4): 559-588.

Adsera, Alicia and Carles Boix. (2002). "Trade, Democracy, and the Size of the Public Sector: The Political Underpinnings of Openness." *International Organi ation*. 56(2): 229-262.

Amann, Edmund. (2000). *Economic Liberali ation and Industrial Performance in Bra il.* Oxford: Oxford University Press.

Aw, Bee Yan, Mark J. Roberts, and Daniel Yi Xu. (2011). "R&D Investment, Exporting, and Productivity Dynamics." *The American Economic Re ie* . 101(4): 1312-1344.

Bahl, Roy W., and Richard Bird. (2008). "Subnational Taxes in Developing Countries: The Way Forward." *Public Budgeting and Finance*. Winter: 1-25.

Baldwin, Richard E. and Robert-Nicoud, Frédéric (2007) "Entry and asymmetric lobbying: why governments pick losers." Journal of the European Economic Association. 5(5): 1064-1093.

Barkey, Henri J. 1989. "State Autonomy and the Crisis of Import Substitution." *Comparati e Political Studies*. 22(3): 291-314.

Benassy-Quere, Agnes, Lionel Fontagne, and Amina Lahreche-Revil. (2005). "How does FDI React to Corporate Taxation?" *International Ta and Public Finance.* 12: 583-603.

Berens, Sarah and Armin von Schiller. 2016. "Taxing Higher Incomes: What Makes the High-Income Earners Consent to More Progressive Taxation in Latin America?" *Political Beha ior*.

Bernard, Andrew B., J. Bradford Jensen, Stephen J. Redding, and Peter K. Schott. (2007). "Firms in International Trade." *The Journal of Economic Perspecti es*. 21(3): 105-130.

Bernard, Andrew B., J. Bradford Jensen, and Peter K. Schott. (2006). "Transfer Pricing by U.S.-Based Multinational Firms." NBER Working Paper 12493. Accessed October 8, 2017 at: http://www.nber.org/papers/w12493.pdf

Bertrand, Marianne, Matilde Bombardini and Francesco Trebbi. (2014). "Is It Whom You Know or What You Know? An Empirical Assessment of the Lobbying Process." *American Economic Re ie* . 104(12): 3885-3920.

Biglaiser, Glen and David S. Brown. (2005). "The Determinants of Economic Liberalization in Latin America." *Political Research Quarterl* . 58(4): 671-680.

Bittleston, John. "What other measures, if any, should Singapore's 2016 Budget also have included?" *The Business Times Singapore*. April 4, 2016. Accessed October 5, 2017 at Lexis Nexis Academic.

Blanc, Florentin. (2012). "Inspection Reforms: Why, How, and With What Results." OECD. Accessed October 10, 2017 at: https://www.oecd.org/regreform/Inspection%20reforms%20-%20web%20-F.%20Blanc.pdf

Bonelli, Regis and Armando Castelar Pinheiro. (2008). "New Export Activities in Brazil: Comparative Advantage, Policy or Self-Discovery?" Inter-American Development Bank. Research Network Working Paper R-55. Accessed March 21, 2017 at: http://www.iadb.org/res/publications/pubfiles/pubR-551.pdf

Cacho, Katlene O. "Tax reforms 'Long Overdue.'" *Sun Star.* August 31, 2016. Accessed August 9, 2017 at: http://www.sunstar.com.ph/cebu/business/2016/08/31/tax-reforms-long-overdue-494912

Carnahan, Micahel. (2015). "Taxation Challenges in Developing Countries." *Asia and Pacific Polic Studies*. 2(1): 169-182.

Chen, Tain-jy. (1987). "Comparing Technical Efficiency between Import-Substitution-Oriented and Export-Oriented Foreign Firms in a Developing Economy." *Journal of De elopment Economics*. 26(2): 277-289.

Collier, Paul and David Dollar. (2002). "Globalization, Growth, and Poverty: Building an Inclusive World Economy." *World Bank Polic Research Report 23591*. Accessed March 21, 2017 at: http://documents.worldbank.org/curated/en/954071468778196576/Globalization-growth-and-poverty-building-an-inclusive-world-economy

Conover, Teresa L. and Nancy B. Nichols. (2000). "A Further Examination of Income Shifting Through Transfer Pricing Considering Firm Size and/or Distress." *The International Journal of Accounting*. 35(2): 189-211.

Cooper, Joel, Randall Fox, Jan Loeprick, and Komal Mohindra. (2016). "Transfer Pricing and Developing Economies." World Bank Group. Accessed March 16, 2017 at: https://openknowledge.worldbank.org/handle/10986/25095

Crivelli, Ernesto, Ruud De Mooij, and Michael Keen. (2015). "Base Erosion, Profit Shifting and Developing Countries." IMF Working Paper WP/15/118. Accessed March 21, 2017 at: https://www.imf.org/external/pubs/ft/wp/2015/wp15118.pdf

De Figueiredo, John M. and Brian Kelleher Richter. (2014). "Advancing the Empirical Research on Lobbying." *Annual Re ie of Political Science*. 17: 163-85.

Dinh, Hinh T., Dimitris A. Mavridis, and Hoa B. Nguyen. (2010). "The Binding Constraint on Firms' Growth in Developing Countries." World Bank Policy Research Working Paper. 5485. Accessed March 27, 2017 at: http://documents.worldbank.org/curated/en/966571468137388733/pdf/WPS5485.pdf

Dur, Andreas. (2007). "EU Trade Policy as Protection for Exporters: The Agreements with Mexico and Chile." *Journal of Common Market Studies*. 45(4): 833-855.

Etchemendy, Sebastián. (2001). "Constructing reform coalitions: the Politics of compensations in Argentina's Economic liberalization." *Latin American Politics and Societ* . 43 (3): 1-35.

Fairfield, Tasha. (2015). *Pri ate Wealth and Public Re enue*. Cambridge: Cambridge University Press.

Farah, Ana Gabriela Verotti. "Tax Reduction for the Oil Industry in Brazil." *The Bra il Business.* August 28, 2013. Accessed March 16, 2017 at: http://thebrazilbusiness.com/article/tax-reduction-for-the-oil-industry-in-brazil

Garrett, Geoffrey, and Deborah Mitchell. (2001). "Globalization, Government Spending, and Taxation in the OECD." *European Journal of Political Research.* 39(2): 145-177.

Genschel, Philipp, Hanna Lierse, and Laura Seelkopf. (2016). "Dictators don't compete: Autocracy, Democracy, and Tax Competition." *Re ie of International Political Econom* . 23(2): 290-315.

Grantley Taylor, Grant Richardson, and Roman Lanis (2015) "Multinationality, Tax Havens, Intangible Assets, and Transfer Pricing Aggressiveness: An Empirical Analysis." *Journal of International Accounting Research*. 14(1): 25-57.

Hart, Austin. (2010). "Death of the Partisan? Globalization and Taxation in South America, 1990-2006." *Comparati e Political Studies*. 43: 304.

International Country Risk Guide. 2012. https://www.prsgroup.com/about-us/our-two-methodologies/icrg

Kenyon, Thomas. (2008). "Tax Evasion, Disclosure, and Participation in Financial Markets: Evidence from Brazilian Firms." *World De elopment*. 36(11): 2512-2525.

Khattry, Barsha, and J. Mohan Rao. (2002). "Fiscal Faux Pas? An Analysis of the Revenue Implications of Trade Liberalization." *World De elopment*. 30(8): 1431-1444.

Kingstone, Peter. (1999). *Crafting Coalitions for Reform: Business Preferences, Political Institutions, and Neoliberalism in Bra il.* Princeton: Princeton University Press.

Krishna, Pravin and Devahish Mitra. (2005). "Reciprocated Unilateralism in Trade Policy." *Journal of International Economics*. 65: 461-487.

Krueger, Anne O. (2002). *Political Econom of Polic Reform in De eloping Countries.* Cambridge: MIT Press.

Kurtz, Marcus J. and Sarah M. Brooks. (2008). "Embedding Neoliberal Reform in Latin America." *World Politics*. 60(2): 231-280.

Lagarde, Christine. (2016). "Revenue Mobilization and International Taxation: Key Ingredients of 21st-Century Economies." International Monetary Fund. Accessed March 16, 2017 at: https://www.imf.org/en/News/Articles/2015/09/28/04/53/sp022216

Lileeva, A., and Trefler, D. (2010). "Improved access to foreign markets raises plant-level productivity… for some plants." *The Quarterl Journal of Economics*, *125*(3), 1051-1099.

Malesky, Edmund. (2015). "Transfer Pricing and Global Poverty." *International Studies Re ie* . 17(4): 669-677.

Mascagni, Giulia, Mick Moore, and Rhiannon Mccluskey. (2014). "Tax Revenue Moblisation in Developing Countries: Issues and Challenges." European Parliament. Accessed February 7, 2017 at:

http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/433849/EXPO-DEVE_ET(2014)433849_EN.pdf

McGuire, James. (1994). "Development Policy and Its Determinants in East Asia and Latin America." *Journal of Public Polic* . 14(2): 205-242.

Melitz, Marc. 2003. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." Econometrica 71: 1695-1725.

Melitz, Marc and Stephen J. Redding. (2014). "Heterogeneous Firms and Trade." *Handbook of International Economics*. 4th edition. 4: 1-54.

Murillo, m. Victoria. (2001). *Labor Unions, Partisan Coalitions, and Market Reforms in Latin America.* New York: Cambridge University Press.

Nomi, Tomoaki. 1997. "Determinants of Trade Orientation in Less Developed Countries." *Polic Studies Journal*. 25(1): 27.

Overesch, Michael and Johannes Rincke. (2009). "Competition from Low-Wage Countries and the Decline of Corporate Tax Rates: Evidence from European Integration." *The World Econom* . 32(9): 1348-1364.

Oxfam. (2016). "Tax Battles." Oxfam Policy Paper. 12 December. Accessed March 16, 2017 at: https://www.oxfam.org/en/research/tax-battles-dangerous-global-race-bottom-corporate-tax

Pillay, Amritha. "Exempt Export Profits from Income Tax." *Dail Ne s and Anal sis.* January 5, 2011. Accessed October 10, 2017 at: http://www.dnaindia.com/money/interview-exempt-export-profits-from-income-tax-1490396

Pinto, Jose M. (2011). "Challenges and Perspectives on the Chemical Industry in Brazil." American Institute of Chemical Engineers. Accessed March 16, 2017 at: https://www.aiche.org/sites/default/files/cep/20110857.pdf

Prichard, Wilson, Alex Cobham and Andrew Goodall. (2014). *The ICTD Go ernment Re enue Dataset*. ICTD Working Paper 19. Brighton: International Centre for Tax and Development. Accessed March 16, 2017 at: http://www.ictd.ac/datasets/the-ictd-government-revenue-dataset

Queralt, Didac. (2016). "Protection not for Sale, but for Tax Compliance." *International Studies Quarterl* . Forthcoming.

Rodrik, Dani. (1997). *Has Globali ation Gone too Far?* Washington DC: Peterson Institute for International Economics.

Rudra, Nita. (2008). *Globali ation and the Race to the Bottom in De eloping Countries*. Cambridge: Cambridge University Press.

Schamis, Hector E. (1999). "Distributional Coalitions and the Politics of Economic Reform in Latin America." *World Politics*. 51(2): 236-268.

Swank, Duane. (2016). "The New Political Economy of Taxation in the Developing World." *Re ie of International Political Econom* . 23(2): 185-207.

Soto, Alonso. "Brazil Extends Tax Aid to Sugar and Ethanol Sectors." *Reuters*. September 10, 2014. Accessed October 10, 2017 at: http://af.reuters.com/article/commoditiesNews/idAFL1N0RB0WQ20140910

Takashima, Ryo. 2007. "The Impact of Trade and Factor Flows on Domestic Taxation." *International Journal of Business and Economics*. 6(1): 47-62.

UNCTAD. (2015). World Investment Report: Reforming International Investment Governance. Accessed March 16, 2017 at: http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf

United Nations. 2002. "Improving Resource Mobilization in Developing Countries and Transition Economies." Accessed February 7, 2017 at: https://publicadministration.un.org/publications/content/PDFs/E-Library%20Archives/2002%20Improving%20Resource%20Mobilization%20in%20Developing%20Countries%20and%20Transition%20Economies.pdf

Vera, Ben O. de. "Lower Import Duties Seen to Boost PH Output." *Philippine Dail Inquirer*. June 26, 2014. Accessed August 9, 2017 at: https://www.pressreader.com/philippines/philippine-daily-inquirer/20140626/282205123974531

Walter, Stefanie. (2010). "Globalization and the Welfare State: Testing the Microfoundations of the Compensation Hypothesis." *International Studies Quarterl* . 54: 403-426.

Weymouth, Stephen. 2012. "Firm Lobbying and Influence in Developing Countries: A Multilevel Approach." *Business and Politics*. 14(4): 1-26.

Wibbels, Erik, and Moíses Arce. (2003). "Globalization, Taxation, and Burden-Shifting in Latin America." *International Organi ation.* 57: 111-36.

World Bank (2005b). "World Development Report 2005: A Better Investment Climate for Everyone." Accessed March 16, 2017 at: http://elibrary.worldbank.org/doi/abs/10.1596/0-8213-5682-8

World Bank. (2015). "Goods and Fiscal Impact." Accessed March 16, 2017 at: http://go.worldbank.org/0W9S7MGVC0

World Bank. (2016b). "Winning the Tax Wars: Global Solutions for Developing Countries." Accessed March 16, 2017 at: http://www.worldbank.org/en/events/2016/04/29/winning-the-tax-wars-global-solutions-for-developing-countries

World Bank (2005b). "World Development Report 2005: A Better Investment Climate for Everyone." Accessed March 16, 2017 at: http://elibrary.worldbank.org/doi/abs/10.1596/0-8213-5682-8

Yackee, Jason Webb and Susan Webb Yackee. 2006. "A Bias Towards Business? Assessing Interest Group Influence on the U.S. Bureaucracy." *The Journal of Politics*. 68(1): 128-139.

Yasar, Mahmut. (2013). "Political Influence of Exporting and Import-Competing Firms: Evidence from Eastern European and Central Asian Countries." *World De elopment*. 51: 154-168.

Zhou, Yu. (2008). "Synchronizing Export Orientation with Import Substitution: Creating Competitive Indigenous High-Tech Companies in China." *World De elopment*. 36(11): 2353-2370.

Zodrow, George R. (2010). "Capital Mobility and Capital Tax Competition." *National Ta Journal*. 63(4): 865-902.

.1

Aid (% GDP)	WB 2016	Net official development assistance is disbursement flows (net of repayment of principal) that meet the DAC definition of ODA and are made to countries and territories on the DAC list of aid recipients. Net official aid refers to aid flows (net of repayments) from official donors to countries and territories in part II of the DAC list of recipients.
Bureaucratic Quality	ICRG 2012	Institutional strength and quality of bureaucracy. Coded 1 (low quality) through 4 (high quality).
Capital Account Openness	Chinn and Ito 2015	KAOPEN is based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).
Debt	WB 2016	Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government.
Democracy (Boix et al)	Boix, Miller, and Rosato 2012	Dichotomous Democracy Measure (1 Democracy, 0 Not Democracy).
Democracy (Freedom House)	FH 2016	Sum of political rights. Data is rescaled so 0 lowest level of freedom and 7 is highest level of freedom.
Democracy Dummy (Polity)	Marshall and Gurr 2016	Polity scores converted to dichotomous regime categories: nondemocracies (-10 to 5) and democracies (+6 to +10). Coded as 1: democracy and 0: nondemocracy.
Domestic Tax Revenue	WB 2016	Tax Revenue minus Taxes on International Trade
Fuel exports	WB 2016	Fuels comprise SITC section 3 (mineral fuels).
GDP growth	WB 2016	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2000 U.S. dollars.
Goods Tax Revenue	WB 2016	Taxes on goods and services include general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies.
Gross Domestic Product per capita	WB 2016	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.
IMF Credits	WB 2016	Use of IMF credit denotes members' drawings on the IMF other than those drawn against the country's reserve tranche position. Use of IMF credit includes purchases and drawings under the Extended Credit Facility, Standby Credit Facility, Rapid Credit Facility, Stand-By Arrangements, Flexible Credit Line, and the Extended Fund Facility.

Income Tax Revenue	WB 2016	Taxes on income, profits, and capital gains are levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets. Intragovernmental payments are eliminated in consolidation.
NSPTAs	Dur et al 2014	Binary variable equal to one when a country has signed a NS PTA in that year.
Polity	Marshall and Gurr 2016	Democracy is conceived as three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. Other aspects of plural democracy, such as the rule of law, systems of checks and balances, freedom of the press, and so on are means to, or specific manifestations of, these general principles.
Population	WB 2016	Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin.
Revenue	WB 2016	Revenue is cash receipts from taxes, social contributions, and other revenues such as fines, fees, rent, and income from property or sales. Grants are also considered as revenue but are excluded here.
Tax revenue	WB 2016	Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.
Trade Tax Revenue	WB 2016	Taxes on international trade include import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes.
WTO	WTO 2017	Binary variable equal to one when a country is a member of the World Trade Organization

.2

Just as in Chapter 3's revenue models, we control for: GDP per capita, GDP growth, fuel exports (percent of exports), and population (logged). See Chapter 3 appendix for details on the variable definitions, sources, and descriptive statistics. High growth should "mitigate demands by capital that it be liberated from onerous tax burdens" (Wibbels and Arce 2003). Richer countries should be more attractive to capital

and therefore less susceptible to downward tax rate pressures by corporations (Wibbels and Arce 2003). We control for oil wealth with fuel exports as natural resource rich countries have a different tax structure due to their non-tax revenue (Kenny and Winer 2006). As Genschel, Lierse, and Seelkopf (2016) indicate, country size is a strong predictor of CTR as it reflects the size of the country's labor endowments.

Then, we add additional global market integration and domestic fiscal and investment profile controls from Wibbels and Arce (2003) and Genschel, Lierse, and Seelkopf (2016). Building on Wibbels and Arce (2003), we include foreign direct investment inflows to capture the role of long-term investments on national taxation policy. Following Genschel, Lierse, and Seelkopf (2016), we include government spending (percent of GDP), agricultural employment (percent of total employment), and regime durability. Government spending captures both the expenditure requirements of the government as well as revenue buoyancy. The extent of agricultural employment proxies for the taxability of the economy, more agriculture should be associated with higher CTRs. The institutional control of regime durability addresses the political incentives and capabilities to implement CTR policy.

.3

DV:	(1) CTR	(2) CTR
. (%) $_{-1}$	**-0.3**	**-0.31**
	(0.)	**(0.4)**
$_{-1}$	**-2.2 ****	

(1 0)		
	(1.01)	
. (%)*		
	-1	
(1 0)	**0. ++**	
	(0. 03)	
-1		**-0.2 *** **
		(0.103)
. (%)* -1		**0.13 ** **
		(0.0 2)
Kaopen $_{t-1}$	-0.233	-0.330
	(0.268)	(0.248)
Investment Profile $_{t-1}$	-0.265**	-0.273***
	(0.108)	(0.102)
Portfolio Flows (% GDP) $_{t-1}$	0.0113	0.00941
	(0.0388)	(0.0390)
IMF credits (% GDP) $_{t-1}$	-0.0969	-0.0791
	(0.147)	(0.141)
GDP growth $_{t-1}$	0.0474	0.0453
	(0.0387)	(0.0382)
GDP pc (logged) $_{t-1}$	-3.127***	-2.878***
	(0.758)	(0.726)
Population (logged) $_{t-1}$	12.04*	11.58*
	(6.261)	(6.164)
Gov't Spending (% GDP) $_{t-1}$	0.147	0.204**
	(0.110)	(0.0996)
FDI inflows (% GDP) $_{t-1}$	-0.0781**	-0.0702**
	(0.0358)	(0.0350)
Regime Durable $_{t-1}$	0.0119	0.0177
	(0.0251)	(0.0238)
Agr. Employ (% Employ) $_{t-1}$	0.0270	0.0247
	(0.0589)	(0.0583)
Fuel exports (% Exports) $_{t-1}$	-0.00759	-0.0133
	(0.0245)	(0.0232)
Observations	208	208
R-squared	0.980	0.984
Number of countries	34	34

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
++ Conditional coefficients are statistically significant for democracies

.4

DV:	(1) ΔCTR	(2) ΔCTR	(3) ΔCTR	(4) ΔCTR

		-0. 41* **	**-0. 2*** **	**-0. 4*** **	**-0. 3*** **
		(0.0 4)	**(0.0 3)**	**(0.0)**	**(0.100)**
	. (%) -1	**-0.3**	**-0.303**	**-0. 1**	**-0.**
		(0.32)	**(0.30)**	**(0.4)**	**(0.)**
(1 0)		**-1. 01****			**-2.3 4****
		(0.)			**(1.031)**
	. (%)*				
(1 0)		**0. *** **			**1.12 ***
		(0.3)			**(0. 40)**
			**-0.20 ** **	**-0.2 4****	
			(0.0 0)	**(0.104)**	
	. (%)*				
			0.123* **	**0.1 4****	
			(0.04 4)	**(0.0 41)**	
Kaopen $_{t-1}$		-0.261	-0.303	-0.215	-0.118
		(0.266)	(0.264)	(0.273)	(0.281)
Investment Profile $_{t-1}$		-0.175*	-0.165	-0.253**	-0.255**
		(0.0955)	(0.106)	(0.111)	(0.109)
Portfolio Flows (% GDP) $_{t-1}$		0.0210	0.0110	0.000973	0.00469
		(0.0377)	(0.0372)	(0.0454)	(0.0445)
IMF credits (% GDP) $_{t-1}$		0.0591	0.0510	-0.0507	-0.0759
		(0.0506)	(0.0557)	(0.136)	(0.139)
GDP growth $_{t-1}$				0.0306	0.0236
				(0.0378)	(0.0383)
GDP pc (logged) $_{t-1}$				-1.853**	-2.091***
				(0.733)	(0.759)
Population (logged) $_{t-1}$				6.418	7.749
				(6.267)	(6.093)
Gov't Spending (% GDP) $_{t-1}$				0.186*	0.153
				(0.0976)	(0.0975)
FDI inflows (% GDP) $_{t-1}$				-0.0558	-0.0586*
				(0.0355)	(0.0342)
Regime Durable $_{t-1}$				0.00973	-0.00236
				(0.0220)	(0.0234)
Agr. Employ (% Employ) $_{t-1}$				0.0419	0.0400
				(0.0522)	(0.0506)
Fuel exports (% Exports) $_{t-1}$				-0.0137	-0.0132
				(0.0172)	(0.0189)
Observations		262	262	198	198
R-squared		0.405	0.413	0.534	0.523
Number of countries		36	36	33	33

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

.1

DV:	(1) Tax Inspect.	(2) Tax Inspect.
Sample:	Large Firms	Less productive firms
(1 0)	**-0.11**	**-0.4 ***
	(0.2)	**(0.2 2)**
(%)	**-0.00301**	
	(0.00204)	
(%)*		
(1 0)	**0.00 2 *****	
	(0.0023)	
GDP per capita (logged)	-0.159	-0.265**
	(0.115)	(0.126)
Bureaucratic Quality	-0.0443	-0.0612
	(0.170)	(0.166)
Sales (logged)	0.0234	0.00516
	(0.0315)	(0.0369)
Employment (logged)		0.266***
		(0.0590)
Region control	Yes	Yes
Year dummies	Yes	Yes
Observations	8,524	37,707

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

.2

	(1)
DV:	Tax Inspect.
Sample:	Large Firms
	0.00313
	(0.0224)
(%)	**0.00024**
	(0.00134)
*** (%)**	**0.0003 ****
	(0.0001 1)
GDP per capita (logged)	-0.176

	(0.132)
Bureaucratic Quality	-0.0587
	(0.165)
Sales (logged)	0.0259
	(0.0315)
region control	Yes
year dummies	Yes
Observations	8,524

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

.3

Tax Inspections	WBES 2016	Over the last year, was this establishment visited or inspected by tax officials? Response coded: 1 if yes, 0 if no.	0	1	0.59	0.49
Exports (% Sales)	WBES 2016	Sales exported directly as percentage of total sales.	0	100	5.71	19.28
Polity	Marshall and	Democracy is conceived as	-10	10		

	Gurr 2016	three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation.				
Democracy Dummy	Marshall and Gurr 2016	Polity scores converted to dichotomous regime categories: nondemocracies (-10 to 5) and democracies (+6 to +10). Coded as 1: democracy and 0: nondemocracy.	0	1	0.59	0.49
Sales (logged)	WBES 2016	Total annual sales (logged) of last fiscal year	0	35.53	16.71	3.07
Employment (logged)	WBES 2016	Sum of number of full-time temporary and permanent employees (logged) of last fiscal year	0	11.07	3.28	1.32
GDP per capita (logged)	WB 2016	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	4.05	12.17	7.95	1.12
Bureaucratic Quality	ICRG 2012	Institutional strength and quality of bureaucracy. Coded 1 (low quality) through 4 (high quality).	0	4	1.88	0.79

.4

Albania	Latvia	Angola	Armenia
Argentina	Liberia	Bangladesh	Azerbaijan
Bolivia	Lithuania	Ecuador	Belarus
Botswana	Malawi	Ethiopia	Burkina Faso
Brazil	Mali	Gabon	Cameroon
Bulgaria	Mexico	Iraq	Congo, Dem Rep.
Chile	Moldova	Madagascar	Congo, Rep.
Colombia	Mongolia	Mozambique	Cote d'Ivoire
Costa Rica	Namibia	Niger	Gambia
Croatia	Nicaragua	Nigeria	Guinea
Czech	Panama	Pakistan	Kazakhstan
Republic	Paraguay	Sri Lanka	Russia
Dominican	Peru	Suriname	Togo
Republic	Philippines	Tanzania	Uganda
Ecuador	Poland	Zambia	Venezuela
El Salvador	Romania	Zimbabwe	Vietnam
Estonia	Senegal		Yemen

Ghana	Serbia	
Guatemala	Sierra Leone	
Guinea-Bissau	Slovak	
Guyana	Republic	
Honduras	South Africa	
Hungary	Trinidad and	
Indonesia	Tobago	
Jamaica	Turkey	
Kenya	Ukraine	
	Uruguay	

.1 - -

	-	-	- -
Difference (treated-control)	3.118***	-1.702***	-4.820***
SE	(0.689)	(0.480)	(0.840)

.2 - -

	-	-	- -
Difference (treated-control)	-0.512	-1.864***	-1.352*

SE	(0.622)	(0.348)	(0.713)