Explaining Changes in Tax Burdens in Latin America:

Does Politics Trump Economics?

Mark Hallerberg
Carlos Scartascini

Inter-American Development Bank
Department of Research and Chief Economist

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Mark Hallerberg*
Carlos Scartascini**

* Hertie School of Governance
** Inter-American Development Bank

Abstract[*]

This paper examines whether elections, which are generally held on fixed dates, and banking crises explain the timing of tax reforms and the allocation of the additional tax burden. Using an original fine-grained dataset of tax reforms, the paper finds support for the role of these two sources of variation. In particular, the probability of reform is higher during banking crises. During electoral periods, increasing taxes becomes highly unlikely, even if the government is facing financing problems. Interestingly, politics seem to trump economics: banking crises do not affect the probability of having a reform during electoral times. Moreover, the presence of an IMF program affects the tax instruments chosen: countries with a program increase the value-added tax, while those without raise the personal income tax. Finally, the ideology of the president does not explain who bears the additional tax burden.

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1. Introduction

An issue economics has considered for at least half a century is why developing countries do not tax more (Kaldor 1963, as cited in Bird, Martínez and Vázquez, 2008). Indeed, governments in such countries may have several reasons why they may *want* to pass legislation to increase revenues. Public initiatives that cost money, be they improved infrastructure projects or higher salaries for teachers, require funding. Own sources of revenues may be especially important in developing countries where access to world capital markets is limited, which in turn limits the ability of governments to rely on large-scale deficit financing (Kaplan, 2013). During financial crises in particular, the state is usually the main source of funding to address both the causes of the crisis in the banking sector and the consequences of the crisis for the general economy. It also has to compensate for the drop in revenues that the crisis entails (Reinhart and Rogoff, 2009a). There are political reasons for why these governments may want to increase tax burdens; for example, they may face increasing demands for redistribution (Hart 2010). Indeed, there is a growing policy literature that calls for developing countries to increase their "tax effort" (e.g., Le, Moreno-Dodson and Bayraktar, 2012) that harkens back to an earlier literature (e.g., Musgrave 1969).

Countries in Latin America are part of that group of developing countries that collect less revenue than would be expected given their level of development and socioeconomic structure: in spite of significant progress in terms of increasing tax revenues in the last two decades (almost 3 percentage points of GDP) a recent study suggests that the tax pressure gap for Latin America is still at 2.3 percent of GDP (Corbacho, Fretes and Lora, 2013). This means that, for its level of development, tax revenues should on average be more than 2 percent of GDP higher than they currently are.[1] Interestingly, the tax gap is not constant across taxes. VAT revenue levels are similar to those in OECD countries. In contrast, the collection of income taxes—and in particular, personal income taxes—is very low (Corbacho, Fretes and Lora, 2013, Figure 1.3). Differences like these are not only common across taxes but also across countries. While some of the countries in the region are collecting revenues well beyond what would be expected (e.g.,

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[1] The tax gap is computed by taking into account tax revenues controlling for economic development, the populations age distribution, openness of the economy, the levels of self-employment, and the share of revenues coming from natural resources (Corbacho, Fretes and Lora, 2013.). Of course, the tax gap is an "ideologically charged" measure, as it assumes that there is an optimal government size to which countries converge as they develop.

Brazil collects more than 5 percentage points of GDP than would be expected), the tax gap for other countries is large (e.g., Mexico collects less than 10 percentage points of GDP of what is expected; see Corbacho, Fretes and Lora, 2013: 5). These differences can be traced back to the number, type, and direction of reforms each country has decided or been able to implement. There is a positive correlation between reforms and revenues, which is strong for reforms to the major taxes, such as to the personal and corporate income taxes as well as to the value-added tax. (Focanti, Hallerberg and Scartascini, 2013b).

In this paper, we make what may at first seem like a counterintuitive argument. We contend that reforms that increase revenues are more likely during banking crises. These are periods where economic growth contracts and where a standard policy prescription could be to cut taxes to stimulate the economy. However, in the case of countries that are financially constrained from raising funds internationally and affected by a severe reduction in revenues, and where the government is the only one in a position to resolve the banking crisis, policy prescriptions have to react to fiscal reality. This reaction has not only been true for LAC, as we argue, but there is evidence of a similar policy response by U.S. states in the 1930s, and many countries in the 2008 crisis, as we discuss later.

Looking at specific tax instruments, the increase is especially evident for value-added taxes. This is also potentially counterintuitive given that Latin America moved leftward politically towards the end of our period of study, 1990-2004, and one would expect a greater reliance on potentially more progressive income taxes. Still, there are plenty of reasons to make the VAT the instrument of choice. First, the VAT commands a larger share of revenues in the region, it is easier to control and collect, and the effect of a rate increase is more immediate than for income taxes. Second, increases to the VAT may be easier to implement politically because of fiscal myopia: the tax is included in the prices of goods and services and those who pay ultimately pay the tax, consumers, are not those who deal with the tax authority. Third, because of relatively low bancarization rates in the region, increases in the VAT would have a lower impact on the financial sector than increases to other taxes. For many of these reasons, including the search for efficiency in the tax system, increases to the value-added tax were often included in the memorandums of understanding with the International Monetary Fund. We explore this connection in detail below, and we find empirically that countries under an IMF program during

a banking crisis were more likely to increase the value-added tax while countries that were not under a program were more likely to increase the personal income tax.

While banking crisis had a commanding role on leading reforms, political considerations have been even stronger at the moment of passing reforms. Even in the midst of a crisis, governments do not raise taxes before elections. Therefore, crises seem to motivate reform in non-electoral years, but not during electoral years.

To evaluate our argument, we make use of a unique database of tax reforms for Latin America and the Caribbean that focuses on the date of actual legislation that changed the tax code, which allows us to evaluate the relative burden of the reforms. Our database indicates when countries passed reforms, which ones intended to raise or decrease revenues, which taxes were affected, and whether the change introduced modified the rate, the base, or other aspects of the law. It covers the time period 1990-2004, when all the countries in LAC but Cuba and Haiti, which are not included in the analysis, had become full-fledged democracies.[2] These data allow us to narrow our focus to the intent of governments and the actual political feasibility of moving ahead with those reforms rather than having to extrapolate intent from changes in revenues. There are many reasons why revenues in practice could go up or down, including levers the government controls, such as enforcement, and changes in the economy the government does not control, such as increases in the price of commodities. We seek to explain the causes of tax reforms themselves.

In terms of cases, Latin America provides the appropriate background to study the role of crises and political incentives. First, the region has experienced a succession of financial crises, indeed, the most of any region (IDB, 2005). Second, compared to other developing countries, Latin America has had fully working democracies for more than two decades with plenty of elections. Consequently, the conditions are ideal for studying the determinants of reforms in normal and crises times, and in electoral and non-electoral periods.

Our results are in line with evidence coming from country studies (Bonvecchi et al., 2014; Magar, Romero and Timmons, 2009; Melo, Pereira and Souza, 2010; Olivera, Pachón and Perry, 2010), and with evidence coming from the 1930s and 2008 global financial crises

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[2] The database can be downloaded from: http://www.iadb.org/en/research-and-data/publication-details,3169.html?pub_id=IDB-DB-111. See Focanti, Hallerberg and Scartascini (2013b) for sources, definitions, and coding criteria. The list of the 18 countries included in the sample is available in Table 1.

(Gillitzer, 2015; World Bank, 2015).[3] This way, the paper expands on the results coming from the crises and political business cycle literatures by combining them in a unique framework. It also expands our knowledge regarding the determinants of reforms from some previous cross-country based research (such as Mahon, 2004; Profeta and Scabrosetti, 2008; and Castanheira, Nicodème and Profeta, 2012). Finally, it adds to our knowledge about the mechanisms behind the workings of democratic institutions on tax levels and composition, which complements the results in Profeta, Puglisi and Scabrosetti (2013) on the determinants of spending and taxation after transition.

Our findings are important for developing and for developed countries alike. First, they explain recent patterns of reforms and non-reforms. Second, they confirm that crises make reforms more likely but only if they are in the appropriate political context. Crises during electoral periods do "go to waste."

We begin with an overview of tax reforms in Latin America over our 15-year time period. Section 3 presents the main analytical argument, Section 4 the literature, Section 5 the empirical methodology and data sources, Section 6 the empirical results, and Section 7 the evidence coming from country studies. Section 8 concludes.

2. The Pattern of Tax Reforms in Latin America

We use a new database that codes reforms included in the Coopers&Lybrand International Tax Summaries (1989-1991) and the Corporate and Individual Worldwide Tax Summaries of PriceWaterhouseCoopers (1992-2004/05). For tractability, we concentrate on the three major taxes, namely value-added tax (VAT), personal income tax (PIT) and corporate income tax (CIT). PwC is the leading provider of tax services worldwide both in terms of the size and scope of the tax practice and its reputation.[4] The information contained in each publication is provided by their country-based network of associates. Because the publication suffered a hiatus after the 2004/05 our database ends with the reforms that took place in 2004. The coding of the reforms through a common source allows us to construct a homogeneous, and therefore comparable,

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[3] In a context in which the US States could not access financial markets, Gillitzer (2015) finds that crises are a good predictor of the adoption of the sales tax by the states in the US during the 1930s. World Bank (2015) shows that there has been "increasing changes to tax policies during the crisis. Among the most common changes as measured by the indicators were those cutting the corporate income tax rate while increasing VAT rates…" World Bank (2015, 89).
[4] See http://www.pwc.com/tax for references about this statement.

source of data that covers the countries in the sample (with the exception of El Salvador after 1997). To ensure the quality of our data we compared it with the data collected by Mahon (2004) and Lora (2007), and we looked into the country legal tax codes when there was any discrepancy between the sources.[5]

The coding of the reforms was inspired by the work of Mahon (2004) and Lora (2007) but it includes some refinements. Following Mahon, we code each reform according to whether we expect that it would increase or decrease tax revenues. For example, we consider a tax rate increase as a reform geared towards increasing revenues while a narrowing of a base would produce the opposite effect.[6] Table 1 in Appendix A presents a summary of the reforms that we have coded. We summarize the information in three ways. First, we provide an ordinal variable that takes a value equal to -1 when the reforms were aimed at reducing the overall tax burden, 1 when the reforms were aimed at increasing the overall tax burden, and 0 otherwise. Second, we construct a dummy variable that takes the value of 1 when the reform intended to increase the tax. We use these coding criteria for the individual taxes, and we also construct summary variables that take into account every reform as well as reforms to "major" taxes (VAT, PIT and CIT).

Table 1 presents a summary of tax reforms by country. It aggregates the data by summarizing the share of years in which each one of these variables takes a positive value. For example, the first line indicates that Argentina had some sort of tax reform in 80 percent of the years in the sample. In 47 percent of the years, Argentina reformed one of the major taxes, mostly in the direction of increasing them.[7] If one looks at the averages for Latin America and the Caribbean, in almost two-thirds of the country-years there was a reform, and in about 40

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[5] We also try to estimate whether the data may be biased based on PwC interest in the country in question. After controlling for the level of economic development of each country, neither the number of PwC offices in a country nor the relative economic relevance of each country to the United States (measured as exports to the United States in dollars and as percentage of the GDP and the existence of a trade agreement with the United States) were statistically significant to explain the number of reforms identified by PwC; the estimations available upon request. Additionally, as we show later, results are robust to including fixed effects, which would help to control for country-specific characteristics that may have affected PwC data collection.

[6] We have taken extreme care on the coding mechanism as well as on the evaluation of the direction and balance of reforms. Focanti, Hallerberg and Scartascini (2013a, 2013b) explain the procedures in detail, which involved reading not only PwC reports but also the actual laws, news reports, and consulting with experts about coding decisions. The more detailed classification we have followed, along with the inclusion of reforms to tax incentives and social security contributions, means that for years where our dataset overlaps with Mahon (2004) we measure 50 percent more individual changes to tax laws, or 313 against 206.

[7] Percentages in the table across categories do not necessarily add up because more than one reform could take place in any individual year.

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percent of the cases these reforms affected one of the major taxes. The reforms have split almost evenly between increases and decreases. At the individual tax level, however, reforms were mostly aimed at increasing the VAT while they usually tended to decrease the income taxes. Of course, averages hide important variations across countries that we exploit in the empirical analysis in this paper. For example, countries like Argentina, Brazil, and Mexico have been active reformers, while countries such as Nicaragua, Honduras, and Paraguay have not. Within the reformers, substantial differences exist. For example, Argentina's reforms have been geared mostly towards increasing taxes (40 percent vs. 7 percent for the major taxes). On the other hand, Mexico has introduced more reforms decreasing than increasing major taxes. Regarding individual taxes, some countries (e.g., Argentina, Colombia) have passed more increases than decreases while others have passed increases in some taxes but decreases in others (e.g., Chile, Brazil).

Table 1. Average Number of Years by Type of Reform

Country	Any Tax Reform	Major Tax Reform			VAT Reform		PIT Reform		CIT Reform	
		Reform	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
Argentina	80%	47%	40%	7%	20%	7%	20%	7%	20%	7%
Bolivia	67%	27%	27%	0%	7%	0%	7%	0%	13%	0%
Brazil	87%	53%	33%	20%	13%	0%	13%	7%	13%	20%
Chile	53%	47%	33%	27%	13%	0%	0%	27%	27%	0%
Colombia	73%	47%	40%	7%	33%	7%	20%	0%	13%	0%
Costa Rica	73%	53%	20%	33%	13%	20%	7%	7%	7%	7%
Dominican Rep.	53%	40%	13%	33%	13%	0%	0%	33%	0%	27%
Ecuador	67%	33%	7%	27%	7%	0%	7%	27%	7%	13%
El Salvador**	43%	29%	29%	0%	29%	0%	0%	0%	0%	0%
Guatemala	73%	53%	27%	27%	13%	0%	13%	13%	13%	20%
Honduras	47%	33%	13%	20%	13%	0%	0%	13%	0%	13%
Mexico	93%	73%	27%	47%	7%	7%	13%	20%	7%	33%
Nicaragua	27%	20%	0%	20%	0%	7%	0%	13%	0%	13%
Panama	53%	40%	0%	40%	0%	0%	0%	7%	0%	40%
Paraguay	47%	7%	7%	0%	7%	0%	0%	0%	7%	0%
Peru	80%	53%	33%	27%	20%	7%	13%	20%	13%	13%
Uruguay	53%	20%	20%	0%	7%	0%	0%	0%	13%	0%
Venezuela	73%	60%	47%	27%	33%	20%	13%	7%	13%	13%
Average LA	64%	41%	23%	21%	13%	4%	7%	11%	10%	13%

**El Salvador's data is available for seven years (1990-96) while all other countries' data is available for 15 years (1990-2004).

Source: Authors' compilation based on data from Focanti, Hallerberg and Scartascini (2016).

In terms of temporal evolution, while the total number of reforms has remained relatively stable over time the intention of the reforms has changed. While at the beginning of the decade reforms tended to be "revenue neutral" on average—that is, the number of reforms in which the

intent was to increase taxes was approximately the same as those which intent was to decrease taxes—in later years the balance tilted in favor of reforms that increase taxes (see Figure 1).

Figure 1. Evolution of Tax Reforms

While our focus is on the introduction of tax reforms, one can ask whether the reforms we measure have any relationship to changes in rates and changes in revenues over our time period. Indeed, the reforms we observe in the VAT were accompanied by a steady increase in the VAT rates, which increased by almost 20 percent on average during the period. In terms of changes in VAT revenue, it grew by about 100 percent over the period. The mismatch between increases in rates and revenues is explained in part by the fact that some countries introduced the tax during the period and others broadened the base. The correlation between the rate and revenues is very high (close to 0.90), as shown in Figure 2. In terms of countries, for example, Argentina increased the rate from 13 percent to 16 percent, then to 18 percent, and finally to 21 percent. During the same period, VAT revenues more than doubled in the country.

Figure 2. Evolution of VAT Rates and VAT Revenues
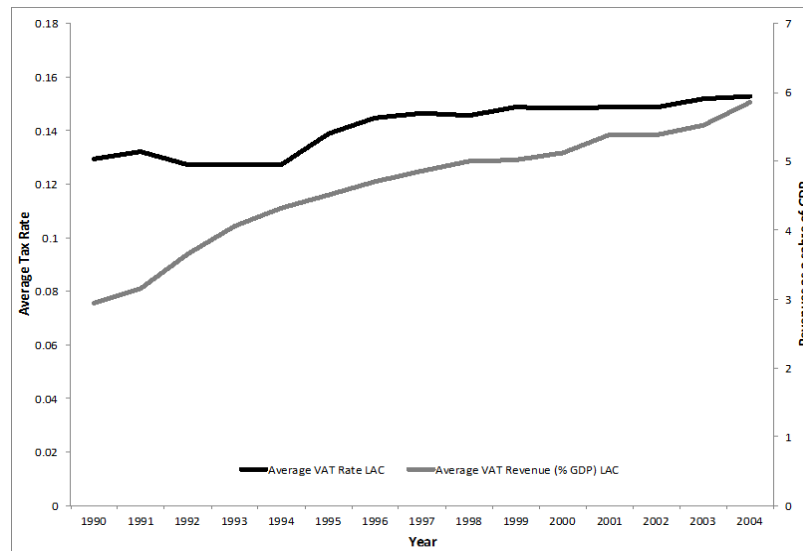
The story for income taxes seems to be different. There was a tendency to reduce marginal top rates in most of the countries, particularly at the beginning of our period of analysis. On average, the personal income top marginal rate went from about 35 percent to 25 percent, and the corporate income top tax rate went from 32 percent to 27 percent (Focanti, Hallerberg and Scartascini, 2016). Revenues nonetheless increased because, among other reasons, tax bases were broadened. Our data focused on reforms tracks very well changes in rates and the legislation-induced base broadening reforms. It may also track well what happened to revenues coming from the highest quintiles of the income distribution but not so well the evolution of overall revenues.

3. Determinants of Tax Reforms

In order to exploit as much as possible quasi-exogenous sources of variation, we concentrate on the effects of crises and elections while controlling for other remaining determinants usually considered in the literature, such as ideology.

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3.1 Banking Crises

There are reasons to expect governments to introduce reforms as a response to crisis. A well-known model is Alesina and Drazen's (1991) "war of attrition." During normal times, key groups in society whose assent is needed to initiate reform refuse to bear the costs of economic adjustment. During crises, however, the costs of the crisis become larger than the costs of the adjustments (see also Drazen and Grilli 1993), and reform is the possible.[8] A similar line of argument comes from the literature on "window of opportunity" (e.g., Kingdon, 1984). A crisis enables policymakers to introduce more fundamental reforms that have been planned but not executed during "normal" times.

While these arguments predict reform, they do not explain how one type of crisis, namely a banking crisis, would affect tax policy. A strict economic argument would consider when governments most need additional revenues. In a standard economic downturn, one might expect some easing of the tax burden as part of a countercyclical strategy. One might at first suppose the same holds in crisis situations where the economy is in even greater trouble. We argue, however, that these countries face a different environment for raising capital than developed countries. The region has been known to have had a hard time raising debt in international markets and has been repeatedly hit by "sudden stops" in capital flows (Calvo and Talvi, 2005; Cavallo and Izquierdo, 2009). This means that international investors refuse to lend money to governments. This causes trouble, especially for countries undergoing a banking crisis; as Reinhart and Rogoff (2009a) as well as Laeven and Valencia (2010) note, the costs to the government from banking crises are often high, and work from the IMF suggests that it is important to have enough fiscal space to stabilize the financial sector in order to end crises (Ghosh et al., 2009). Not only are crises more frequent in these countries, but their macro conditions may also dictate different policy responses to them. Kuralbayeva (2013) argues that developing countries are likely to increase consumption taxes, such as the VAT, because they are not able to borrow from abroad to smooth private consumption. They are also very likely to be affected by decreases in revenues as economic activity falls.

Following Alesina and Drazen (1991) for the logic and Kuralbayeva (2013) for the tax instrument, we expect that crises would lead to an increase in the VAT. There are additional reasons why the VAT may be the instrument of choice. The first is practical: the VAT has been

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[8] The cause of crisis in their model is high inflation. One adjustment strategy they describe is a tax increase.

the main source of revenue in the region, it is easier to control than other taxes, and reforms to the tax enter into effect almost immediately, while reforms to the income taxes take a year to have revenue effect. The second is political: the burden of the tax is more widespread in the population than income taxes, particularly in Latin America, where few people pay the income tax, and taxpayers tend to be more myopic about its burden. The VAT is included in prices and those who actually bear the burden of the tax are not the ones having to declare and fulfill the payment to the tax administration. Finally, the introduction and expansion of the VAT has often been part of IMF policy prescriptions as a way to increase the efficiency of the tax system in developing countries, usually accompanied by reductions in top marginal personal and corporate income rates (Keen and Lockwood, 2007).

As explained in more detail later, we operationalize crises by identifying banking crises. This type is most likely to be exogenous with respect to changes to tax policy (Demirgüç-Kunt and Detragiache, 1998; IDB, 2005). While it is true that the structure of a tax system may have an effect on the level of risk that the financial sector takes, marginal changes to a tax would hardly have a systemic effect driving a crisis. The degree of exogeneity of the crisis to a change in a tax would also be more pronounced when looking at VAT taxes in countries with low levels of bancarization of the middle and low-income population. For example, total deposits as a share of GDP were at 25 percent or below for all countries in LAC except Chile, but it was about 80 percent in high-income countries in the period 1999-2003 (Anastasi et al., 2006).

3.2 Elections

Another exogenous variable for the timing and content of tax reforms is the electoral calendar. Unlike in parliamentary systems, the date of elections in the presidential systems of Latin America is fixed ahead of time and can be considered exogenous (see Cermeño, Grier and Grier, 2010). Because there is imperfect information about the competence of candidates, incumbent politicians may use certain policy instruments at hand in order to make the economy look better and to signal their competence (see Alesina, Roubini and Cohen, 1997; Drazen, 2001; Franzese, 2002; and Eslava, 2006 for comprehensive summaries). Politicians running for re-election may also want to avoid raising taxes on anyone in a pre-electoral year. The likelihood of reforms that raise taxes in the year leading up to elections should be lower than in other years. We also expect

a higher likelihood for tax cuts in a pre-electoral year.[9] Interestingly, while the political business cycle literature is extremely large and complex, as far as we know nobody has looked at the effect of elections on the passage of actual tax legislation.

We also expect elections to have a conditioning effect on other variables and constraints, which means that elections should affect how relevant crises and other political constraints are for engaging in reforms.

3.3 Ideology

While we concentrate on crisis and elections, another issue that has got the attention of researchers is the role of ideology for explaining the distribution of the tax burden. The expectation would be that parties would want to increase taxes on their opponents and decrease taxes on their supporters. If workers and lower income voters more generally mostly support the left while capital owners and higher income voters more generally mostly support the right, one would expect the left to raise income and corporate income taxes while the right would raise the valued-added tax. Evidence from OECD and European countries tends to find higher taxes on capital under leftist governments (Osterloh and Debus, 2012; Angelopoulos, Economides and Kammas, 2012). So far for Latin America, however, the evidence is mixed. On the one hand, Caro and Stein (2012) show that the recent ideological movement to the left in Latin America helps to explain part of the change in the size of the tax gap, with the left more likely to increase the take on income taxes. Their result is in direct contrast with Hart (2010), who contends that right governments in Latin America are most likely in general to increase revenues. Capello (forthcoming) argues that partisan differences vanish during currency crises, when it is important for the government to attract scarce foreign capital. This suggests no difference across presidents because of ideology during a crisis. In the empirical analysis we control for ideology. We also concentrate particularly on the interaction of ideology with our main variables of interest. We consider whether the effect of crises differ according to the ideology of the government and whether left and right governments behave differently during electoral times. Because most of the publicized movement to the left in the region took place after our period of study, or after 2004, we do not expect to find significant evidence for the effects of ideology on their own.

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[9] Literature on the relevance of political business cycles in taxation includes Case (1994) at the U.S. state level and, more recently, Foremny and Riedel (2013) for German municipalities.

4. Previous Literature on Tax Reform in Latin America

Beyond the research cited above, the previous literature provides a guide for what additional variables we should consider in our empirical work, although work specifically on tax reforms in Latin America is thin and, as Santos de Souza (2013) notes, is often focused on the effects of taxation on specific variables like social cohesion (e.g., von Haldenwang 2008) rather than on explaining the reforms themselves. There are some exceptions. One comprehensive work that addresses this question is Mahon (2004). He studies reforms in the region, concentrating on the period of structural reforms up to 1995.[10] He finds that past inflation, IMF conditionalities, changes in government administration, more authoritarian regimes, and some proxies for electoral systems affect the likelihood of reform. His analysis covers the period 1977-1995, however, which means that only the latter time period of his study includes democracies. Additionally, concentrating on the existence of reforms but not on the distribution of the tax burden misses an important part of the picture.[11] Lora (2007) provides a comprehensive account of the reforms that took place in the region through the early years of the 2000s. While he does not explain those developments, he gives a detailed description of tax reform trends and outcomes. Biglaiser and DeRouen (2011) find that their set of variables—which include ideology, GDP per capita, and the presence of IMF standby agreements—do not explain tax reform in the region. Profeta and Scabrosetti (2008) advance some of the hypotheses that help explain the low levels of taxation that characterized the region after the democratic transition, which are a good starting point for explaining the growth in taxation that has taken hold in the region more recently.

There is a broader literature outside Latin America. Timmons (2010) considers the period 1970-98 for 100 countries and 1990-98 for 75 democracies and finds that democracies are more

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[10] In a more recent paper, Mahon (2012) focuses on the distributional impact of Latin American tax systems. He notes that there was an increase in the reliance on more regressive value-added taxes across Latin America. In this paper, however, he does not try to explain why reliance on value-added taxes increased.

[11] Focanti, Hallerberg and Scartascini (2016) make use of the database developed by the authors and used in this paper to test Mahon's hypotheses. It shows that some of the trends previously identified, such as the relevance of the IMF as a determinant of reforms, are not as salient in this period, and it provides some stylized facts that arise from the use of the new database: the number and scope of reforms differ significantly by country; the main goal of the reforms has indeed evolved over the years, from the search of more efficient taxes following the Washington Consensus to a more concentrated focus on increasing revenues, even at the expense of less neutral systems; efforts to increase revenue from major taxes have focused on VAT rather than income taxes; and there have been many reforms to minor taxes. These reforms were designed to increase efficiency at the beginning of the period (e.g., through the elimination of excises) but switched to increasing revenues later on (e.g., by the introduction of taxes on financial transactions.)

likely to increase consumption taxes. Profeta, Puglisi and Scabrosetti (2013) consider the effect of democracy on the determinants of spending and taxation after transition for several regions of the world. Because they do not find significant and consistent results for the democratic proxies, they call for renewed efforts to trace the exact public policy channels through which political institutions affect economic development, an endeavor we attempt in this paper.[12]

In this paper, we consider the lessons from the literature in terms of what variables we should control for, expanding on some of the remaining issues already identified in Mahon (2004) and Focanti, Hallerberg and Scartascini (2016) for LAC, the literature on political business cycle, yardstick competition and the role of crises as recently advanced by Castanheira, Nicodème and Profeta (2012). We also use a fine-grained database on reforms, as the main story for the period is the passage of tax reforms that, in aggregate, did increase tax burdens across the region. This way, we can pick up the challenge left by Profeta, Puglisi and Scabrosetti (2013) regarding the need to uncover the exact public policy channels that affect tax reforms and the distribution of the their burden in Latin America's democracies from 1990 to 2004.

5. Empirical Model and Data

Our baseline model specification is the following:

$$Y_{i,t} = \beta_0 + \beta_1\, BCrises_{it} + \beta_2\, Elections_{it} + \theta X_{it} + \gamma Z_{it} + \delta P_{it} + \varepsilon_i \qquad (1)$$

where *X* and *Z* are vectors of economic and political variables that we use as controls and *P* is a vector that takes into account the fact that we are modeling an event history specification. Because some models include controls that do not vary either across countries or time, some models include these controls while other models drop them and include country and time fixed effects.

Data on banking crises are based on Reinhart and Rogoff (2009b) and come from their maintained web page.[13] Nicaragua has the most years under a banking crisis, with crises in 1990-96 and 2000-02, while Chile, Colombia, and Panama are the only countries in the sample without a banking crisis in the period. For the whole sample period, the average country-years under a crisis is 0.20.

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[12] Other non-Latin American work includes Castanheira, Nicodème and Profeta (2012), which exploits a new and fine-grained database for the European Union and presents a very detailed account of the determinants of reforms of labor taxes.

[13] Data downloaded from http://www.reinhartandrogoff.com/data/ on March 2014.

Regarding elections, we measure electoral periods according to the proportion of the current year that is part of a pre-electoral year. This means that an election on July 1, 2000, is measured as 0.5 in 2000 and 0.5 in 1999. We have compiled this data using the World Bank's Database of Political Institutions 2012 (DPI). In an alternative specification, we lag this variable to account for post-electoral cycles and we forward it to measure pre-electoral cycles. As an example, an election in a given country on December 31, 2000 would be coded 1 in that year in the electoral variable, a 1 in 1999 in the pre-electoral year variable, and a 1 in 2001 in the post-electoral variable. We consider both presidential and legislative elections. While they usually overlap (simple correlation is 0.70), there are more legislative elections because some of the countries have midterm elections.

The political controls include the following:

1. **Ideology** (or *partisanship*). One objective of policymakers is to advance policies that correspond to their political views and, perhaps more importantly, to the interests of the people they represent (e.g., Hibbs, 1977). As described in more detail above, one would expect the left to raise income and corporate income taxes and cut value-added tax while the right would adopt the reverse. The source of data is DPI, which identifies the party of the government as (Left, Center, Right).[14]

2. **Veto players**. Governments may have difficulty pushing through their preferred policies even if they want to institute a change (Tsebelis, 2002). We operationalize this concept in two ways. First, we incorporate a measure of the number of institutional checks (*checks and balances*), from DPI. It varies in our dataset from 2 (e.g., Chile 2002-04, among others) to 7 (Dominican Republic 1991-94), with the mode 4.[15] Second, we introduce a dummy variable that is coded "1" if one political party controls the relevant houses of Congress as well as the Presidency (*One-party control*). The data come from

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[14] We have updated this dataset for the few cases where there are missing values. For more details on the update, see Hallerberg and Scartascini (2013a).
[15] The coding increases by one each time if each of the following is true: legislatures are competitively elected; there is a chief executive; a chief executive competitively elected; the opposition controls the legislature; each chamber of the legislature unless the president has a lower house majority and there is a closed list electoral system; and to each allied party that is coded as closer ideologically to the opposition than to the government. We thank Phil Keefer for recommending this variable as a better proxy for the concepts we are trying to capture.

DPI. The average for this variable is 0.33, which means that 33 percent of the time the president had a legislative majority in the relevant houses of congress.

3. **Personal vote**. Another possible determinant is the institutional reasons for the extent of fragmentation of preferences, which, in turn, should increase the size of the common pool (CPR) problem inherent in a country's budget system (Hallerberg, Strauch, and von Hagen, 2009). To measure incentives alignment with a CPR problem we focus on the legislature and consider the extent to which the electoral rules encourage a personal vote versus a party vote. The greater the personal vote, the greater the CPR problem within the legislature (Hallerberg and Scartascini 2013b), and the greater the pressure to increase the total tax take. To proxy how personalistic the electoral systems is (*personal vote*), this paper uses Hallerberg and Marier's (2004) coding scheme,[16] updates it, and ranks the electoral systems in Latin America according to how party-centered they are. The index theoretically ranges from 0 (pure party system) to 1 (pure personalistic). In our sample, the country with the lowest index score is Mexico (entire time period) at 0.03 while the highest scores are for Colombia (1990-2001) at 0.78 and Brazil (entire time period) at 0.73.[17] The average is 0.25.

4. **Bureaucratic capacity**. More capable bureaucracies may provide the technical support for more reforms and better policies (Tommasi, 2011; Franco Chuaire, Scartascini and Tommasi, 2014). Moreover, there may be a minimum technical capacity needed to introduce certain types of taxes. Most countries have made some progress improving their bureaucracies during this

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[16] Based on the discussion in Carey and Shugart (1995), the index factors in construction of the ballot (whether one votes for a person or party), whether votes are pooled across the party level, and the number of votes cast, and to look at these factors in the context of the district magnitude of a given country, which we measure as the size of the median electoral district. If a country has a closed ballot, which means that people vote only for a party, increasing district magnitude decreases the personal vote. If the country has an open ballot, then increases in district magnitude mean that a candidate has to appeal to an ever-smaller proportion of the population to get elected. The index runs theoretically from approximately 0, where there is a complete party vote, to 1, where there is a complete personal vote.

[17] Data for this variable come from Hallerberg and Marier (2004), which in turn is updated (and sometimes corrected) with Payne, Zovatto and Mateo Díaz (2007) and with a dataset posted on John Carey's website (http://www.dartmouth.edu/~jcarey/Data%20Archive.html).

period (Echebarría and Cortázar 2007; Zuvanic, Iacoviello and Rodríguez Gusta, 2010). This also extends to tax bureaucracies (Corbacho, Fretes and Lora, 2013; von Haldenwang, von Schiller and García, 2014).[18] Better bureaucracies may provide opportunities not only for higher revenues but also for a different composition of revenues (e.g., more reliance on income taxes than countries with lower capacities). For proxying the *quality of the bureaucracy*, the measure of this variable that is most widely available across country-years comes from the ICRG.[19] The average of this variable, which runs on a 0 to 6 scale when including most countries in the world, is 1.8 in our sample, with the low of 0 (e.g., Guatemala and Panama in the early 1990s) to 3 (e.g., Argentina and Brazil in the early 2000s).[20]

5. **Reforms elsewhere**. As a given factor of production becomes more mobile, it may move to a jurisdiction where the tax on it is lowest. If governments anticipate this, there may be a spiral downward as they compete with each other for the mobile factor. This "race to the bottom" model has been applied mostly to capital taxation (e.g., Lee and McKenzie 1989; Hines, 1999), but evidence in support of it has been mixed. Plümper, Troeger and Winner (2009) maintain that governments with tight budget constraints and governments that have populations with equity norms do not race down to the bottom. Basinger and Hallerberg (2004) find that OECD countries are sensitive to increases and decreases in other OECD countries. The inclusion of which tax reforms other countries are doing in the region in terms of reforms is also a way to capture diffusion of tax reforms. Leaders may "learn" from the examples set in different countries. Statistically, the reforms can be

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[18] The introduction of SARAs extends to the municipal level; see, for example, the study of the effects of municipal SARAs in Peru in Haldenwang, von Schiller and García (2014).
[19] An alternative is the World Bank's measure of "government effectiveness." These two variables are highly correlated at 0.85, however, and we use the ICRG measure because of its more general coverage.
[20] Data for this variable comes from ICRG dataset, which covers the period 1960–2005 on an annual basis. The bureaucratic quality index takes values from 0 to 6, where 6 represents that the country has a strong and expert bureaucracy. Becerra, Cavallo and Scartascini (2012) show the relevance of this variable for enabling reforms that foster credit development using a logic very similar to the one we follow here. Note that we rescale this variable to run 0-1 in the empirical section.

weighted according to whether they are contiguous with the given state (Weyland, 2007)

6. **Reform elsewhere, contiguous**. Alternatively, and following Basinger and Hallerberg (2004), governments may care most about what the economically more powerful states in the region are doing with their rates. For taxation, given that capital is rather mobile, we weigh the lagged changes in other countries in the region by the size of a given country's GDP (Reform elsewhere, GDP weighted).

The economic controls include the following:

1. **Trade openness**. Exposure to world markets constrains the options of policymakers (Kaplan, 2013; Wibbels and Arce, 2003). At the same time, it provides non-tax sources of financing that can be tapped in cases of financial distress. In the analysis we include a variable for lagged trade openness, which we code as the sum of imports plus exports as a percentage of GDP (from WDI.) The average for the sample is 64 percentage points of GDP.

2. **IMF programs**. The international organization may require tax reforms if a country is to receive loans. In terms of the direction of reform, one can anticipate that the tax changes may increase revenues so that a country can repay the money it borrows. This is a focus on conditionality. Sánchez (2006) argues that IMF involvement was more important in the 1980s and 1990s as governments needed international loans to deal with problems in their external accounts, and he cites Bird (1992), who comments that "explicit tax changes" occur only "when the International Monetary Fund really puts on the pressure."[21] The IMF has also historically been a big backer of reforms that lead to more efficient tax systems even when there is no explicit conditionality.[22] The IMF backed VAT increases in particular according to Sanchez (2006), and the prediction would be that we find significant effects of being under an IMF program. Mahon (2004) focuses on such reforms as well,

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[21] Bird (1992: 23, note 26), as cited in Sánchez (2006: 785).
[22] Note that the two motives may contradict one another—reforms aimed at increasing revenues may very well undermine efficiency.

and he codes whether the IMF set explicit performance targets for a given country, be it in an Article IV consultation or in a stand-by agreement, with calls for tax reform receiving the highest score. He finds that IMF recommendations increased the likelihood of reform. In contrast to Sánchez (2006) and Mahon (2004), Biglaiser and DeRouen (2011) do not find confirming evidence that the IMF affected tax reform. We follow Sánchez (2006) to focus on conditionality to reduce the probability that results may be driven by endogeneity. Conditionality suggests that the Fund may demand increased taxes not otherwise planned so that the government can repay the loans it receives. In our analysis, we include a dummy variable that picks up whether a country was under an IMF agreement (*IMF program*). For the period under analysis, 56 percent of the country-years have been under an IMF agreement, with the highest percentage of time at 85 percent in Argentina, Bolivia, and Nicaragua. Chile, in contrast, has had an agreement just 10 percent of the time.[23]

3. **Economic development**. The level of economic development affects the feasibility of some sorts of taxes. Economic development has two effects, one direct and another indirect. Developing countries by definition have less capital than developed ones, and capital taxes consequently will generate less revenue. Countries with lower levels of economic development also are less likely to have the ability to levy certain types of taxes. Governments will tend to rely on taxes that are the easiest to collect and monitor. This is one of the reasons behind the popularity of VAT taxes in Latin America: they are easier to collect than personal income taxes, and they provide incentives for cross-reporting, which allows an easier control of other direct taxes that rely more on self-reporting. We include the lagged income in purchase price parity (PPP) as a natural log in the analysis. The variable comes from DPI.

4. **Revenues from natural resources** and other windfall taxes. High revenue potential from natural resources may allow countries to avoid reforming their

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main taxes during economic downturns but they may also have to become more active as international prices fluctuate (Tanzi, 2013). Anshasy and Katsaiti (2013) note that resource-rich countries are usually plagued with weak tax bases and have more volatile responses to economic shocks. We test explicitly whether higher amounts of revenue from natural resources means that countries exert less effort to improve other tax bases. The variable has been constructed by adding fiscal resources collected from taxes on natural resources, fuel taxes, international transactions and other similar taxes, with data from Corbacho, Fretes and Lora (2013).

5. **Tax burden and marginal tax rates**. The overall tax burden as a percent of GDP in the previous period may affect the pressure on the government to introduce reform. There may be limits to how much tax a government can levy, so higher tax burdens may lead to tax reforms that lower the tax burden. In the analysis we use total tax revenue, excluding social security contributions, as percentage of GDP, again from Corbacho, Fretes and Lora (2013). This may be particularly true in cases in which the marginal tax rates are too high, which may at least put a ceiling on how much they can increase. Additionally, adding tax revenues at the beginning of the period should help to control for some innate heterogeneities across countries in terms of tax policy.

6. **Inflation**. As Mahon (2004) among others has noted, an important macro-economic variable is the inflation rate. Inflation pushes incomes above statutory rates without the individual or company necessarily increasing their real incomes, and this in turn may lead individuals to pressure the government to reform rates. Of course, inflation may be a proxy for the existence of unfunded obligations. As such, it may increase the probability of having reforms to increase taxes, which one would expect particularly in the context of stabilization packages.

Summarizing, we expect that economic conditions will affect the likelihood of reform and the direction of reforms. For example, those countries in worse fiscal conditions will likely increase taxes more often than those that are in better shape or those that can extract revenues

from natural resources. What other countries do is also important. We anticipate that because of diffusion or yardstick competition, tax changes in other countries will increase the chances of domestic reforms. Political institutions should also matter. Having control of the legislature (or a larger share of the majority) should increase the likelihood of reforms. Moreover, reforms may not be independent of ideology. Most importantly in the context of this research, the two variables that identify exogenous shocks, crises and elections, should matter as well. First, banking crises would increase the probability of reform, particularly for financing the costs associated with them. As such, they would likely tend to favor tax increases, particularly for taxes that are easier and faster to collect. Second, during elections, politicians may be less likely to raise taxes, even during a crisis.

We proxy the event we want to explain—tax reforms that pass through the legislative process to become law—using different dependent variables to make sure we fully capture the reform logic. As we mentioned before, we use an ordered variable that takes the value 1 when there is a tax increase, 0 when there are no changes (or changes are considered to be balanced), and -1 if reforms were in the direction of reducing taxes. We use the same coding mechanism for an unordered variable, where we assume that reform decisions may be independent. Finally, we include a dummy variable that takes the value 1 when the country passed any tax increase. The main specification is run using the ordered variable, as the logic behind this paper is one of understanding changes in the tax burden following crises and elections. For this, we run a BTSCS (Binary Time-Series Cross Section data) ordered logit model. For the other variables we run multinomial and conditional logit (with fixed effects at the country level).[24] Our dependent variables have 262 observations, which represent data on tax reforms during the time period 1990-2004 in eighteen countries.[25] Some modeling issues remain with this specification, and with standard event history models more generally. Whether a country introduces a reform may depend upon what reforms it has introduced before. We include a variable that counts the time

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[24] Given our interest in variables that change little over time and the inherent biases estimating ordered logit fixed effects models in finite samples we opted for the BTSCS. See Beck, Katz, and Tucker (1998) for more details. We report robust country-specific clustered standard errors and when the dependent variable takes the form of a dummy variable we include time splines.

[25] In the reported results, the number of observations is smaller because of missing values in one or more of the independent variables. There is no single independent variable that accounts for most of the loss in the number of observations with one exception, namely revenues from natural resources. This variable is usually significant and makes good theoretical sense to include.

since the last reform (*Time since last reform*) as well as the number of previous reforms (*Number of previous reforms*).

6. Results

We begin with the ordered coding of tax reforms as the initial dependent variable and we focus on the baseline specification for the individual taxes as dependent variables (VAT, PIT, CIT).[26] As a reminder, we anticipate that during electoral years, politicians would prefer to decrease taxes if possible as a stronger signal to their constituents. If that were not possible, then they would most likely prefer for taxes to remain the same rather than increasing them. When countries are under financial distress, and politicians need to finance the drop in revenues and added demands on the public purse, they prefer to increase taxes.

As can be seen in the results presented in Table 2, reforms that increase the VAT and personal income taxes are more likely during financial crises, and reforms that decrease VAT taxes are less likely. These results suggest that countries that are in financial need are more likely to increase taxes, particularly the VAT. PIT results, however, are statistically significant at only the $p<0.1$ level for tax increases (only), while crises do not seem to affect the CIT.

During electoral years, reforms that increase VAT and CIT taxes are less likely, and more likely those that decrease taxes.[27] In terms of the magnitude of the effects, in an electoral year a VAT decrease is 4 percent more likely and a CIT decrease is 10 percent more likely. The probability of decreases of these taxes during electoral years hovers around 10 percent. In contrast, we find no statistically significant effect for change in the PIT.

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[26] The additional specifications and the results for the dependent variables at higher levels of aggregation (Any Tax, Major Taxes) are included in Appendix B. Looking only at the determinants of reforms without looking at the direction of those reforms would provide a first glimpse to the logic behind reforms. This type of analysis hides as much as it uncovers because it does not identify the *direction* of the change, and mixes together reforms that attempted to increase and decrease taxes. Still, for completeness, we have run the analysis looking at the determinants of reform (any type of reform and in any direction). Results are presented Appendix B. Summarily, they show that reforms are less likely during electoral years. For example, having any type of tax reform is 20 percent less likely in an electoral year than in a non-electoral year. Financial crises seem to have a non-significant effect in the probability of reform in every tax except the VAT. During a financial crisis, reforming the VAT is 15 percent more likely than during non-crisis years. These preliminary results are in line with our expectations.

[27] In additional specifications, we find no significant effects for the pre-electoral year variable (shown in the tables) and a post-electoral year variable (not shown in these tables).

Table 2. Determinants of the Direction of Tax Reforms in LAC, Ordered Logit

VARIABLES	Ordered variable. Observed values marginal effects.					
	VAT Reform		PIT Reform		CIT Reform	
	Increase	Decrease	Increase	Decrease	Increase	Decrease
	(1)	(2)	(3)	(4)	(5)	(6)
Banking Crisis	0.076**	-0.024*	0.048*	-0.060	0.036	-0.040
	(0.034)	(0.012)	(0.028)	(0.045)	(0.027)	(0.033)
Electoral Year, Legislature	-0.124***	0.039**	-0.029	0.036	-0.092**	0.104**
	(0.034)	(0.018)	(0.037)	(0.042)	(0.038)	(0.044)
Pre-electoral Year, Legislature	-0.086	0.027	-0.019	0.023	-0.036	0.041
	(0.063)	(0.025)	(0.037)	(0.045)	(0.029)	(0.031)
Fixed Effects	No	No	No	No	No	No
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes	Yes
Political Controls	No	No	No	No	No	No
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	215	215	215	215	215	215
	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	0.094**	-0.031*	0.056*	-0.069	0.039	-0.044
	(0.041)	(0.018)	(0.030)	(0.050)	(0.030)	(0.036)
Electoral Year, Legislature	-0.120***	0.039**	-0.029	0.036	-0.097***	0.109**
	(0.035)	(0.018)	(0.037)	(0.042)	(0.036)	(0.046)
Pre-electoral Year, Legislature	-0.071	0.023	-0.012	0.014	-0.041	0.046
	(0.069)	(0.026)	(0.039)	(0.047)	(0.030)	(0.033)
				0.023		
Fixed Effects	No	No	No	No	No	No
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes	Yes
Political Controls	Yes	Yes	Yes	Yes	Yes	Yes
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	209	209	209	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Previous Reforms controls include: Time since last reform, Number of previous reforms
Political controls include: Partinsanship, Margin of majority, Checks and balances, and Personal vote
Economic controls include: Quality of the bureaucracy, IMF program, Inflation (lag), Log GDP per capita (lag), Trade (% of GDP) (lag), Tax revenues (lag), Tax revenue in 1990, Winfall taxes (lag), Reform elsewhere (GDP weighted), Reform elsewhere
Full regression results are included in the online appendix

Source: Authors' calculations based on data from in Focanti, Hallerberg and Scartascini (2013a).

Additional specifications using this ordered logit specification appear in Appendix B, and we would like to summarize those results. They are stronger for legislative than for presidential elections. The rest of the controls behave as expected. Reforms that increase the VAT are more likely when other neighbors are also reforming the VAT, and when the margin of majority in Congress for the government party is higher. Conditions that make it less likely to increase the VAT include higher openness to international trade, access to other sources of financing (windfall taxes), a higher number of previous reforms, and a shorter time-span since the last reform.

Interestingly, and counter to the literature on partisan differences on taxation, we find no statistically significant effects for the role of ideology in reforms, adding to the existing mixed

evidence for this for Latin America. There are several reasons why this could be the case. First, political parties in Latin America are hardly programmatic and may not differ in practice on tax matters (Saiegh, 2010). Second, most of the movement to the left that Caro and Stein (2012) identify as a driver for changes in revenues in the region took place mostly after our time period. For more than half of our sample years there were no leftist presidents according to their definition, and only about 20 percent towards the end of our sample, which provides very little variation to be captured in our analysis. Finally, as Capello (forthcoming) notes, partisan differences dissolve in crisis settings, and crises are an important driver in our analysis.

While our base model appears in Table 2, we consider two alternative sets of dependent variables and estimations in Table 3. The top block of the table shows the results for a multinomial logit; we show the results for predictions of increases in taxes for brevity. Unlike the results in Table 2, this estimation assumes that there is no specific order between the choices of increasing or reducing taxes. As can be observed in the table, the results confirm the patterns previously described. The probability of a reform that increases the VAT during a banking crisis is just below 10 percent. However, the probability of such a reform during an electoral year is reduced by around 15 percentage points. A similar pattern in electoral years emerges for increases in both income taxes. Again, controls behave as expected. For example, reforms that increase the VAT are more likely when past inflation has been higher, and less likely when trade openness, tax revenues, revenues from natural resources, and the number of previous reforms are higher (full results in Appendix B).

The second panel shows the results of running a logit (using the controls described above) and a conditional logit (which includes country fixed effects as well as time splines) on a variable that takes the value 1 when there is reform that increases taxes (which may be concurrent with a reform decreasing the same or other taxes.) The overall pattern is similar to the one above, with banking crises increasing the probability of reform and elections decreasing it.

Table 3. Determinants of the Direction of Tax Reforms in LAC

VARIABLES	VAT Reform		PIT Reform		CIT Reform	
	Increase	Increase	Increase	Increase	Increase	Increase
	(1)	(2)	(3)	(4)	(5)	(6)
	Directional variables. Observed values marginal effects. Predictions for increase of taxes					
Banking Crisis	0.090**	0.078**	0.027	0.016	0.011	0.013
	(0.037)	(0.039)	(0.029)	(0.031)	(0.043)	(0.048)
Electoral Year, Legislature	-0.143***	-0.166***	-0.082*	-0.099*	-0.139**	-0.149***
	(0.047)	(0.054)	(0.045)	(0.057)	(0.059)	(0.057)
Pre-electoral Year, Legislature	-0.076	-0.065	-0.034	-0.052	-0.046	-0.056
	(0.048)	(0.052)	(0.030)	(0.040)	(0.042)	(0.047)
Fixed Effects	No	No	No	No	No	No
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes	Yes
Political Controls	No	Yes	No	Yes	No	Yes
Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	215	209	215	209	215	209
	Increase variable. Observed values marginal effects. Predictions for increase of taxes					
Banking Crisis	0.161*	0.102***	0.040	-0.007	-0.018	-0.009
	(0.086)	(0.039)	(0.121)	(0.036)	(0.105)	(0.047)
Electoral Year, Legislature	-0.251***	-0.178***	-0.177	-0.068	-0.310***	-0.161***
	(0.083)	(0.052)	(0.126)	(0.055)	(0.112)	(0.056)
Pre-electoral Year, Legislature	-0.136	-0.048	-0.110	-0.005	-0.160	-0.062
	(0.086)	(0.042)	(0.125)	(0.036)	(0.102)	(0.053)
Fixed Effects	Yes	No	Yes	No	Yes	No
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes	Yes
Political Controls	No	Yes	No	Yes	No	Yes
Economic Controls	No	Yes	No	Yes	No	Yes
Observations	232	209	150	209	195	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Upper panel includes regression results for a multinomial logit and the predictions for tax increases.
Lower panel includes regression results for a conditional logit. These regressions include also time-splines.
Previous Reforms controls include: Time since last reform, Number of previous reforms
Political controls include: Partinsanship, Margin of majority, Checks and balances, and Personal vote
Economic controls include: Quality of the bureaucracy, IMF program, Inflation (lag), Log GDP per capita (lag), Trade (% of GDP)
(lag), Tax revenues (lag), Tax revenue in 1990, Winfall taxes (lag), Reform elsewhere (GDP weighted), Reform elsewhere
Full regression results are included in the online appendix
Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

As can be observed in the previous two tables and in additional tables presented in Appendix B, the results are quite consistent across dependent variables and estimation methods. Concerning the theoretical logic we explore above for why elections and banking crises should affect the timing of reforms, we find strong evidence for the election prediction across the board, while the banking crisis effect is found especially for the VAT. There is a lower probability of increasing taxes during electoral years. This result is relatively constant across taxes and specifications but more robust for the VAT and the CIT than the PIT. Banking crises increase the

probability of increasing the VAT, which is the main source of revenues in the region and may suffer the most when the economy goes sour.

Other variables meant as controls also have significant results, which increases our confidence that we included relevant variables in the specification (see Appendix B). The pattern of reforms is highly dependent on past reforms, as the number of previous reforms and length of time since the last reform tend to affect the probability of further reforms. Local reform activity, moreover, is affected by what other countries have been doing. A reform to the VAT in a neighboring country increases the probability of increasing the VAT, while reforms in the largest countries promote local PIT reforms. Having additional sources of revenues, such as higher windfall taxes, reduces the probability of increasing the VAT. Among the political controls, presidential party control of the chambers of Congress increase the probability of reforms and that of increasing the VAT.

6.1 Effects of Crises Conditional on Elections, IMF Programs, and Ideology

We find that elections make reforms that increase tax burdens less likely, while banking crises have the opposite effect. We do not have theoretical priors on whether elections would trump crises or vice versa when both are present. This leads to a general comment, that there are two other variables that may condition the effects of crises, namely IMF programs and the ideology of the president in power. In this section, we present models with relevant interaction terms (regression results appear in Appendix B).

Concerning banking crisis and elections, Figure 3 summarizes the results graphically for VAT and PIT. As shown in Figure 3, which summarizes the marginal effects, the positive effect of crises for increasing taxes is only significant during non-electoral years. As elections near, the marginal positive effect of a crisis dissipates. This means that, even if a government is facing potential financial hardship, it will not raise taxes as elections approach.

Figure 3. Marginal Effect of Crises on the Probability of Increasing Taxes According to the Electoral Calendar

Figure 3a. VAT Taxes
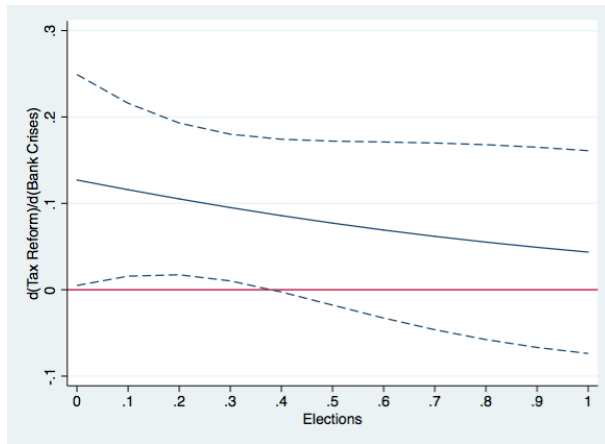
Figure 3b. Personal Income Taxes
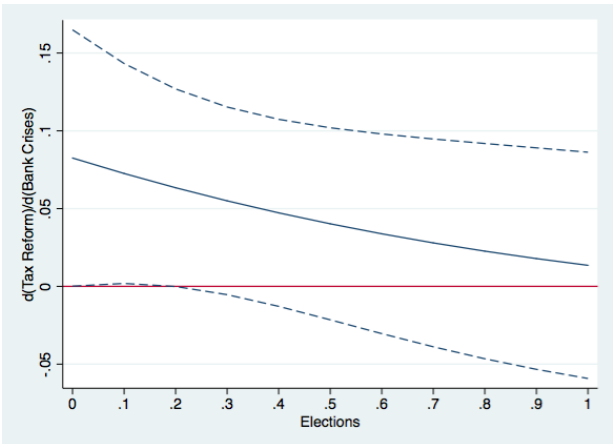
Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2016).

Interestingly, and in line with arguments that show that the IMF was very keen into the expansion of the VAT in those countries that were under an IMF agreement and also quite adamant on the decision of keeping top marginal income rates low, we find that whether a country is under an IMF program has a significant effect on how governments react to a financial crisis. As it can be observed in Figure 4, the marginal effect of a banking crisis in the probability of increasing the VAT is positive and significant only under an IMF program. Inversely, it is positive and significant for the personal income taxes under no program. As can be observed, in both cases probabilities amount to about 20 percentage points, which is a big increase in the probability of a reform.

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Figure 4. Marginal Effect of Crises on the Probability of Increasing Taxes
According to IMF Programs

Figure 4a. VAT Taxes
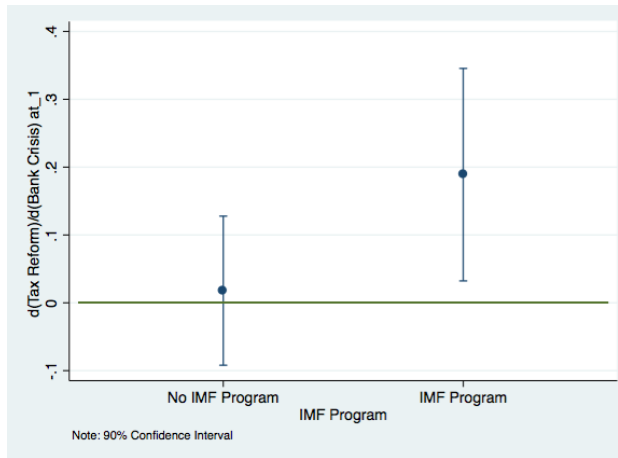
Figure 4b. Personal Income Taxes
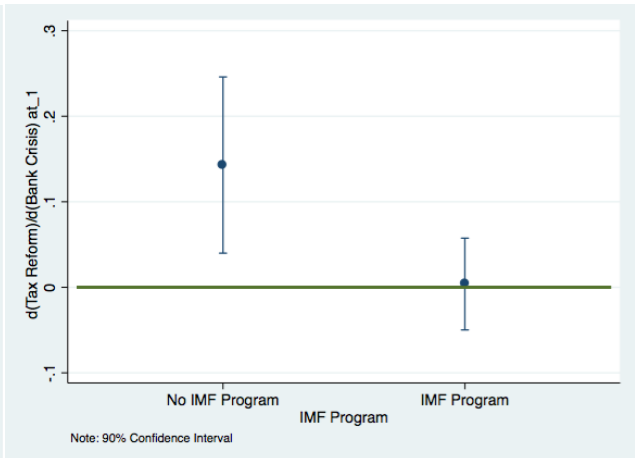
Finally, we interact crisis with ideology to see if different parties react differently to crises, but there are no statistically significant results. This finding is consistent with Capello's (forthcoming) arguments that there are no partisan differences when it comes to introducing seemingly neo-liberal reforms during a crisis.

Hence the conditional effects of other variables are important. Elections trump crises; there are no tax increases of any kind as elections approach.

6.2 Evidence from Revenues and Rates Instead of Reforms

As we have argued above, there are many reasons why looking at legislative activity makes more sense than looking at revenues for understanding the role of crises and elections. While legislative activity shows a clear intent by the government to affect revenues (and to signal to citizens), there are many reasons why revenues in practice could go up or down. This is particularly relevant when we are considering an economic context where crises abounded.

Similarly, looking at changes in marginal tax rates provides a partial picture because there are many cases when countries changed both, and in some instances these changes when in the opposite directions. There are a few cases where a country lowered rates but increased the base to the point where the reform represented a true tax increase. This complexity cannot be captured by existing standard analysis, which is why we created a more comprehensive database that

would provide a true account of a government's policy direction. Still, for completeness we have run our models on the revenue of each tax as a share of GDP and on the marginal top tax rate. Full results are included in Appendix B. As expected, little new is added by this approach. There are lower revenues during crises, which is consistent with our expectation that countries need to raise revenue because revenues fall drastically as a consequence of the crisis. Regarding rates, the results are similar to those for tax reforms. Rates seem to be higher for the VAT during crises, but they are either constant or lower for income taxes. Elections have the opposite effect. VAT rates remain constant during elections, and income tax rates show some movement.

7. Beyond Regressions

The results presented so far are consistent with more anecdotal evidence from specific cases. U.S. States introduced the sales tax following the great depression, and many countries have increased the VAT after the 2008 crisis. These patterns from outside of the sample fit what we find in Latin America. For example, in 1995, in the midst of the Tequila Crises, most countries in the region decided to increase taxes. As can be observed in Table A.1 in Appendix A, Argentina, Costa Rica, Dominican Republic, El Salvador, Mexico, and Venezuela increased VAT rates, Colombia, Guatemala, and Venezuela increased personal income tax rates, and Bolivia, Colombia, Guatemala, and Venezuela increased corporate income tax rates.

These simple correlations, and the results of our empirical results, mimic some of the evidence coming from country studies. One of the key factors explaining why Argentina is one of the countries in LAC with the most reforms is the numerous negative shocks experienced by the country, some of which have pushed the country into deep crises (Bonvecchi et al., 2014). Large crises have also triggered or facilitated difficult reforms in other countries. In Mexico, in the midst of the Tequila Crisis in 1995, the government was able to increase VAT rates from 10 to 15 percent, which helped revenues remain constant despite the economic slowdown. Politicians still cared about electoral considerations, however, as food and medicines remained exempt in order to limit the negative impact on the popularity of the government (Magar, Romero, and Timmons, 2009). In Colombia, periods of economic and fiscal crises have also coincided with the approval of revenue-enhancing reforms. For example, in the 1990s, President Pastrana was able to pass several reforms even though his party did not hold a majority in

Congress (Olivera, Pachón, and Perry 2010). In Brazil, crises also favored increasing revenues, with the VAT and PIT reformed at the onset of the crisis (Melo, Pereira, and Souza, 2010).

8. Conclusions

In this paper, we consider why Latin American governments increase or decrease tax burdens. We have built on a profuse literature on reforms using a fine-grained database of reforms for a period in which the region had consolidated its democratic regimes and was subject to plenty of economic shocks. As such, this database provides a good canvass for evaluating the political economy hypotheses behind reforms. Among these, we concentrate on two determinants that are highly exogenous to the tax system: banking crises and elections.

Results indicate that crises and elections matter for explaining the existence of reforms, the distribution of reforms, and the direction of reforms. As such, we provide further evidence for the "war of attrition" (Alesina and Drazen, 1991 and related) and political business cycle models. While the literature has considered the relevance of economic and political variables for reform, it has usually done so in isolation from crises and elections, even though their relevance is not independent of economic and political shocks. In particular, crises do not reduce the marginal relevance of the electoral cycle. On the contrary, electoral considerations seem to trump economic ones. This result moves the discussion a step forward because, while it is are consistent with previous work on stabilization that finds a role for crises and political variables for explaining fiscal consolidation, such as Alesina, Ardagna and Trebbi (2006), it provides the channels through which this stabilization occurs, and how the burden is distributed across the population. The paper also helps to identify and disentangle some of the mechanisms behind the workings of democratic institutions and tax levels and composition, thereby complementing the results in Profeta, Puglisi and Scabrosetti (2013) on the determinants of spending and taxation after transition. These results are in line with evidence coming from more detailed country studies from Latin America (Bonvecchi et al., 2014; Magar, Romero and Timmons, 2009; Melo, Pereira and Sousa, 2010; and Olivera, Pachón and Perry, 2010).

Looking from a macro perspective, these results have implications for the discussion about how developing countries react to crises (e.g., Berg et al., 2011). We confirm the finding of Kuralbayeva (2013) that countries in this region are more likely to increase consumption taxes during a crisis. We also confirm that some of the traditional determinants of reforms are at play

when looking at tax reforms in LAC. For example, we find evidence that tax reforms are not independent of past patterns of reforms, the fiscal situation of the country, and the possibilities countries have to finance themselves with non-tax revenue sources, such as those coming from trade and natural resources. In this way we are able to take a step beyond the intuition in El Anshasy and Katsaiti (2013) that countries with more revenues from natural resources will have weaker tax bases. Our dataset measures government attempts to increase the tax burden, and we can add to their story that governments with such resources and with poor institutions are less likely to exert effort to deepen those bases in the first place.

There is also the curious finding concerning IMF programs, where countries in a banking crisis that are under a program choose to raise the VAT while countries not under a program choose to increase the income tax. This then begs the question, why do some countries approach the IMF in the first place? It could be that presidents ask the Fund to come in because they plan to increase the VAT anyway, as this is tax is quicker and easier to enforce than others, and they want to blame the IMF for what is usually an unpopular reform. It may also be that they have no other choice. Delving deeper into the relationship between governments and the IMF would constitute another paper.

Five decades ago, Kaldor (1963) asked why developing countries do not tax more. There are policy lessons from this study to address this question. In developed countries, the desirability of tax increases is controversial—some recent research suggests that spending cuts rather than tax increases lead to more successful fiscal consolidations (e.g., Alesina and Ardagna, 2013). In developing countries and in the Latin American countries we consider, however, where the tax burden as a percent of GDP is lower, scholars as well as the development community generally agree that there are benefits to governments if they can raise the amount of tax revenue they collect (e.g., Le, Moreno-Dodson and Bayraktar, 2012). Additional "tax effort" provides funds that the government may be able to use for a gradual expansion of social benefits such as education and health care. They also lead to less, or no further, dependence on international aid agencies. Latin American countries as a group have done well in increasing their "tax effort," with revenues increasing almost 5 percentage points of GDP from 1990 to 2007, or shortly

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before the global financial crisis.[28] Our findings suggest that reforms that improve tax capacity need to be planned before electoral years. Otherwise they are very unlikely to pass, because politics trumps economics.

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[28] In comparison, African countries increased their tax effort almost 3 percentage points of GDP, while Asian countries experienced an increase of about 2.5 percentage points of GDP over the same period. See Corbacho, Fretes and Lora (2013).

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Appendix A. Reforms in Latin America

The table presents a summary of the reforms we have coded. As an example of how to read the table, one can look at the first few columns for Uruguay. The information shows that in 1990 there was an increase in corporate income taxes, and in 1993 an increase in excises and duties. In particular, the rate on gross income of the Tax on Commissions increased from 7 to 9 percent. In 1994, a tax incentive to the importation of fishing vessels was eliminated. In 1996, the rate of the Capital Tax was reduced from 2 percent to 1.5 percent at the same time that the VAT rate increased. The last reform coded for Uruguay took place in 2003. That year, the abovementioned mentioned rate on gross income of the Tax on Commissions increased once more, now to 10.5 percent. Details about each of the reforms coded are included in Focanti, Hallerberg and Scartascini (2013b).

Table A.1. Summary of Tax Reforms

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Argentina	T, vr, pir, cir, FT, E, o, TI, SS	M, VR, ft	VR, CIR, ft	ti	SS	VR	PIR, CIR, o, ss		O	PIR, CIR, ti, ss	PIR	FT, ss	ft, O	A	
Bolivia	CIR, ti	SS	VR	PIR, SS		CI, CIR, E	ti	E, ti, SS			ss	E	E, ss	E	E
Brazil	cir	VR	CIR	M, cir	VR, PIR, O	CIR, ft	pir, cir, o			O	PIR	M, A, FT, O	M, O	O	M, E, O
Chile	VR	CIR			pir	M, pir	M, E						pir, CIR, ss	VR, pir, CIR, ti	CIR
Colombia	M, VR		TI	M, VR, PIR, ti		PIR, CIR, o	M, VR, e, O, SS	E, ti	M		M, vr, FT, ti	VR, O		M, VE, PI, CIR, e, ti	A
Costa Rica			VR	vr	vr	VR	E	vr	M, e		pi		e, ti	PIR, CIR, E	cir
Dominican Rep.			T, pir, cir, O, TI	pir, cir	pir, cir	VR, pir, cir					T	pir		VR, E, SS	E, o
Ecuador	pir, cir				M, E	M, pir, E		pi, pir, E	e	pi, ci, O	VR, PI, CI	T, ft, E, SS		E	ti
El Salvador				VC, e, SS	e	VR, e, o									
Guatemala	E, O		T, e, o	pir, ci, cir		PIR, CIR, O, SS	VR	pir, FT, E		cir	cir	PIR, CIR, O, TI, SS		O	VR
Honduras	cir	VR				O	pir			VR	pir, cir				O, ti
Mexico	pir	cir	vr	cir	cir, TI, SS	VR, o	ti	M, PI	ti	PIR		M	T, M, CIR, E, O	M, pir, cir, e, o, ti	T, pir, cir, e, o
Nicaragua		ti	pir	ve, cir, o								pir, cir			
Panama		cir	pir, cir	cir, ti	cir, O, TI			cir	ti					cir, E, O, ti	ti
Paraguay	ti	T, o	M, VC, CIR, O	O	e				ti	M					
Peru	VR	vr, o	VR, pir, cir, o, TI	o, ti, SS	pir, e, o, ss		SS	O	E, SS	o		M, pir, cir	PIR, CIR, E	M, PIR	VR, CIR, FT, e
Uruguay	CIR			E	TI		VR, o		ti	O, ti		ti		CIR, E	
Venezuela		ti, SS	pir, cir	VC, O	M, VE	VR, PIR, CIR		ve, VR		T, vr, PI, FT	vr, ci, ft	T, CI, ti	VR, FT		ft
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004

Notes:

T: Tax System Overhaul, m: Minor or hard to classify reform, VC: VAT Creation, VE: VAT Expansion, VR: VAT Rate Increase, PI: Broadening of Personal Income Tax, PIR: Increase Personal Income Rate, CI: Broadening Corporate Income Tax, CIR: Increase Corporate Income Rate, A: Comprehensive Administrative Reform, FT: Financial Tax, E: Excises, O: Other Taxes, TI: Tax Incentives, SS: Social Security Contributions

Low caps italics represent a change in the opposite direction, such as a rates decrease or the elimination of a tax.

For tax incentives, capitals mean the reduction or elimination of an incentive and low caps italics the creation of one.

Source: Author's compilation using Price Waterhouse Coopers International Tax Summaries, based on Eduardo Lora's database, and Mahon (2004) coding criteria

Appendix B.

B.1. Introduction

This appendix includes the following material:

1. Determinants of Reform, Regression Tables.
2. Determinants of the Direction of Reforms, Regression Tables (Table 2 in paper)
3. Determinants of the Direction of Reforms, Regression Tables (Top panel of Table 3 in paper)
4. Determinants of the Direction of Reforms, Regression Tables (Bottom panel of Table 3 in paper)
5. Interaction Regression
6. Revenue Regressions
7. Rates Regressions

B.2 Determinants of Reform

B.2.1 Description

Here we look at the determinants of having a tax reform (a dichotomous 0-1 variable). At this level of aggregation (reforms happening regardless of the type and direction) only a few broad characterizations can be made.[29] Table B.1 summarizes the baseline results for one out of many different specifications we have run for each of the tax aggregates which looks at electoral and pre-electoral legislative cycles. Each cell in the table shows the marginal effect of the variable at the observed values of every other variable and corresponds to the reform probability from changes from 0 to 1 for each individual variable of interest (e.g., from a non-crisis to a crisis.)

The top panel in Table B.1 shows the results from a conditional logistic model that controls for time since last reform, number of previous reforms, and time splines. The bottom panel shows the results of the BTSC logit model with a full set of controls. Observations are reduced because of missing values for some of the control variables and because several of the control variables are lagged (the table describes the full set of control variables used). As expected, results are not very informative at this level of aggregation, which does not consider the direction of reforms. Still, some patterns start to emerge. First, reforms are less likely during legislative electoral years, as well as during presidential elections (see Appendix B). Second, during a crisis reforms tend to take place in taxes that are expected to provide the largest and fastest return (such as minor taxes—e.g., financial transaction taxes—and the VAT).

The control variables, results for which are shown in this appendix, behave as expected (even though in most cases the results are not significant). Having had a larger number of reforms in the past, higher tax revenues, revenues from natural resources, and trade openness—which increases the ability to raise revenues from trade—decreases the probability of having another reform. A one-party majority increases the probability of reform.

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[29] Still, because this has been the object of choice in previous papers, we see fit to start the analysis here for completeness.

Table B.1. Determinants of Tax Reforms in LAC (logit results, observed-value margins)

VARIABLES	(1) Any Tax Reform	(2) Major Tax Reform	(4) Any VAT Reform	(5) Any PIT Reform	(6) Any CIT Reform
Banking Crisis	0.071	0.029	0.155*	0.011	-0.020
	(0.086)	(0.061)	(0.085)	(0.095)	(0.069)
Electoral Year, Legislature	-0.187***	-0.170***	-0.228***	-0.194**	-0.080
	(0.068)	(0.051)	(0.081)	(0.089)	(0.063)
Pre-electoral Year, Legislature	0.029	-0.012	-0.072	0.024	-0.053
	(0.078)	(0.053)	(0.081)	(0.085)	(0.064)
Fixed Effects	Yes	Yes	Yes	Yes	Yes
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes
Political Controls	No	No	No	No	No
Economic Controls	No	No	No	No	No
Observations	262	262	247	225	255
Banking Crisis	0.020	-0.004	0.071	-0.058	-0.041
	(0.073)	(0.071)	(0.045)	(0.073)	(0.077)
Electoral Year, Legislature	-0.106	-0.179**	-0.149**	-0.092	-0.019
	(0.114)	(0.088)	(0.068)	(0.078)	(0.070)
Pre-electoral Year, Legislature	0.104	0.022	-0.025	-0.010	0.008
	(0.114)	(0.077)	(0.047)	(0.079)	(0.065)
Fixed Effects	No	No	No	No	No
Previous Reforms Controls	Yes	Yes	Yes	Yes	Yes
Political Controls	Yes	Yes	Yes	Yes	Yes
Economic Controls	Yes	Yes	Yes	Yes	Yes
Observations	209	209	209	209	209

Note: Regressions include also time-splines. Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Previous Reforms controls include: Time since last reform, Number of previous reforms

Political controls include: Partinsanship, Margin of majority, Checks and balances, and Personal vote

Economic controls include: Quality of the bureaucracy, IMF program, Inflation (lag), Log GDP per capita (lag), Trade (% of GDP) (lag), Tax revenues (lag), Tax revenue in 1990, Windfall taxes (lag), Reform elsewhere (GDP weighted), Reform elsewhere (contiguous)

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.2.2 Determinants of Reform: Full Regression Tables

The following tables present the results of the regression analysis for different specifications and complement the previous table. Each of the following tables corresponds to a different panel in Table B.1.

Table B.2. Determinants of Reform, Conditional Logit Model (top part of Table B.1)

VARIABLES	AnyReformDummy		MajorReformDummy		AnyVATReformDummy		AnyPITReformDummy		AnyCITReformDummy	
	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative
	(1)	(2)	(3)	(4)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	0.074	0.071	0.044	0.029	0.178*	0.155*	0.026	0.011	-0.009	-0.020
	(0.090)	(0.086)	(0.068)	(0.061)	(0.092)	(0.085)	(0.099)	(0.095)	(0.074)	(0.069)
Electoral Year, President	-0.108		-0.137**		-0.127		-0.150		-0.083	
	(0.077)		(0.061)		(0.102)		(0.099)		(0.072)	
Post-electoral Year, President	0.099		0.023		0.047		-0.001		-0.053	
	(0.086)		(0.061)		(0.093)		(0.089)		(0.069)	
Electoral Year, Legislature		-0.187***		-0.170***		-0.228***		-0.194**		-0.080
		(0.068)		(0.051)		(0.081)		(0.089)		(0.063)
Pre-electoral Year, Legislature		0.029		-0.012		-0.072		0.024		-0.053
		(0.078)		(0.053)		(0.081)		(0.085)		(0.064)
Time Since Last Reform	-0.075	-0.076	-0.085	-0.079	0.023	0.012	0.035	0.021	-0.067	-0.066
	(0.077)	(0.073)	(0.084)	(0.077)	(0.147)	(0.134)	(0.078)	(0.077)	(0.045)	(0.044)
Number Previous Reforms	-0.017	-0.017*	-0.048***	-0.046***	-0.109***	-0.105***	-0.067**	-0.068***	-0.067***	-0.067***
	(0.011)	(0.010)	(0.009)	(0.008)	(0.028)	(0.026)	(0.027)	(0.025)	(0.019)	(0.019)
Observations	262	262	262	262	247	247	225	225	255	255

Note: Regressions include also time-splines. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

VARIABLES	AnyReformDummy		MajorReformDummy		MinorReformDummy		AnyVATReformDummy		AnyPITReformDummy		AnyCITReformDummy	
	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative	Presidential	Legislative
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	0.011	0.020	-0.001	-0.004	0.105*	0.112**	0.071	0.071	-0.059	-0.058	-0.041	-0.041
	(0.069)	(0.073)	(0.071)	(0.071)	(0.057)	(0.056)	(0.049)	(0.045)	(0.074)	(0.073)	(0.080)	(0.077)
Electoral Year, President	-0.021		-0.115		-0.017		-0.055		-0.043		-0.011	
	(0.103)		(0.075)		(0.096)		(0.064)		(0.061)		(0.062)	
Post-electoral Year, President	0.162		0.077		0.087		0.069		0.006		-0.000	
	(0.108)		(0.075)		(0.106)		(0.065)		(0.081)		(0.055)	
Electoral Year, Legislature		-0.106		-0.179**		-0.041		-0.149**		-0.092		-0.019
		(0.114)		(0.088)		(0.108)		(0.068)		(0.078)		(0.070)
Pre-electoral Year, Legislature		0.104		0.022		0.092		-0.025		-0.010		0.008
		(0.114)		(0.077)		(0.105)		(0.047)		(0.079)		(0.065)
Partisanship	-0.083	-0.071	-0.078	-0.078	0.053	0.065	-0.032	-0.032	-0.060	-0.060	0.066	0.067
	(0.071)	(0.070)	(0.068)	(0.066)	(0.104)	(0.103)	(0.064)	(0.058)	(0.059)	(0.060)	(0.063)	(0.064)
Margin of Majority	0.535*	0.554**	-0.009	-0.018	0.838***	0.846***	-0.214	-0.236	0.028	0.032	0.059	0.061
	(0.281)	(0.281)	(0.362)	(0.354)	(0.190)	(0.184)	(0.210)	(0.191)	(0.233)	(0.226)	(0.197)	(0.198)
Checks and Balances	0.177	0.191	0.057	0.047	0.284*	0.292*	-0.144	-0.156	0.233**	0.228**	0.079	0.078
	(0.173)	(0.187)	(0.150)	(0.157)	(0.152)	(0.155)	(0.129)	(0.130)	(0.101)	(0.100)	(0.122)	(0.122)
Personalistic vote	-0.057	-0.038	-0.062	-0.068	0.327**	0.354**	-0.222	-0.215	-0.146	-0.151	0.110	0.111
	(0.187)	(0.192)	(0.127)	(0.125)	(0.157)	(0.170)	(0.189)	(0.176)	(0.104)	(0.096)	(0.146)	(0.147)
Quality of Bureaucracy	0.010	0.005	-0.056	-0.051	-0.244**	-0.251**	-0.136	-0.149	0.217	0.218	0.127	0.126
	(0.153)	(0.147)	(0.222)	(0.221)	(0.122)	(0.120)	(0.128)	(0.121)	(0.170)	(0.163)	(0.182)	(0.185)
IMF Program	0.064	0.064	-0.030	-0.023	0.022	0.023	0.006	0.014	-0.103***	-0.103***	-0.072	-0.072
	(0.064)	(0.066)	(0.076)	(0.073)	(0.079)	(0.079)	(0.048)	(0.050)	(0.036)	(0.035)	(0.047)	(0.050)
Reform, GDP weighted (lag)	0.242	0.201	-0.177	-0.230	0.065	0.075	-0.076	-0.064	-0.261	-0.274	0.100	0.095
	(0.364)	(0.365)	(0.196)	(0.207)	(0.222)	(0.228)	(0.306)	(0.303)	(0.369)	(0.353)	(0.231)	(0.231)
Reform,Contiguous weighted (lag)	-0.042	-0.040	0.092	0.103	-0.246**	-0.263**	0.225**	0.220**	0.142	0.141	-0.193	-0.189
	(0.127)	(0.134)	(0.117)	(0.120)	(0.112)	(0.114)	(0.106)	(0.112)	(0.114)	(0.118)	(0.125)	(0.125)
Inflation (lag)	0.045	0.039	0.052	0.043	0.039	0.038	0.115***	0.102***	-0.022	-0.025	-0.020	-0.021
	(0.039)	(0.038)	(0.041)	(0.043)	(0.034)	(0.032)	(0.019)	(0.020)	(0.023)	(0.023)	(0.028)	(0.027)
Log Per Capita GDP (lag)	0.166***	0.169***	0.235**	0.251***	0.194***	0.191***	0.215***	0.242***	-0.015	-0.004	0.104	0.106
	(0.057)	(0.058)	(0.095)	(0.095)	(0.060)	(0.060)	(0.080)	(0.076)	(0.085)	(0.089)	(0.093)	(0.092)
Trade (% of GDP) (lag)	-0.002*	-0.002**	-0.001	-0.001*	-0.003**	-0.003***	-0.002*	-0.002**	-0.001	-0.001	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Tax Revenue (lag)	-0.034**	-0.034**	-0.038***	-0.038***	-0.036*	-0.037*	0.001	0.002	-0.006	-0.006	-0.012	-0.013
	(0.014)	(0.014)	(0.012)	(0.012)	(0.021)	(0.020)	(0.013)	(0.012)	(0.015)	(0.015)	(0.013)	(0.013)
Tax Revenue 1990	0.005	0.004	0.002	0.001	0.011	0.012	-0.039***	-0.039***	-0.007	-0.008	0.002	0.002
	(0.012)	(0.011)	(0.011)	(0.011)	(0.016)	(0.016)	(0.013)	(0.012)	(0.014)	(0.014)	(0.011)	(0.011)
Windfall Taxes (lag)	-0.008	-0.008	-0.029***	-0.029***	0.001	0.001	-0.035***	-0.034***	-0.013	-0.014	-0.001	-0.001
	(0.011)	(0.011)	(0.009)	(0.009)	(0.012)	(0.013)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)
Time Since Last Reform	-0.084	-0.095	-0.185**	-0.187**	-0.183	-0.187	0.025	0.030	-0.005	-0.009	-0.105**	-0.105**
	(0.103)	(0.101)	(0.078)	(0.080)	(0.172)	(0.168)	(0.067)	(0.073)	(0.082)	(0.083)	(0.043)	(0.043)
Number Previous Reforms	0.019	0.017	-0.018	-0.023	0.053***	0.052**	-0.029*	-0.034***	-0.009	-0.012	-0.032*	-0.033*
	(0.015)	(0.016)	(0.016)	(0.016)	(0.020)	(0.020)	(0.016)	(0.013)	(0.026)	(0.026)	(0.019)	(0.018)
Observations	209	209	209	209	209	209	209	209	209	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Standard errors in parentheses

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

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.3. Determinants of the Direction of Reforms, Regression Tables (Table 2 in paper)

The following tables present the results of the regression analysis for different specifications and complement Table 2 in the paper. Each table covers a different dependent variable.

Table B.4. Any Tax Reform, Ordered Logit

VARIABLES	Any Tax Reform Direction											
	Presidential						Legislative					
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	-0.070	-0.038	0.108	-0.083	-0.042	0.124*	-0.067	-0.036	0.103	-0.081	-0.041	0.122*
	(0.047)	(0.024)	(0.069)	(0.051)	(0.026)	(0.074)	(0.047)	(0.024)	(0.068)	(0.051)	(0.026)	(0.074)
Electoral Year, President	0.062	0.034	-0.095	0.062	0.031	-0.092						
	(0.046)	(0.024)	(0.068)	(0.044)	(0.022)	(0.063)						
Post-electoral Year, President	-0.009	-0.005	0.014	-0.013	-0.007	0.020						
	(0.069)	(0.038)	(0.107)	(0.069)	(0.035)	(0.104)						
Electoral Year, Legislature							0.086*	0.047**	-0.133*	0.076	0.038*	-0.114
							(0.050)	(0.022)	(0.069)	(0.052)	(0.022)	(0.071)
Pre-electoral Year, Legislature							-0.006	-0.003	0.009	-0.025	-0.013	0.038
							(0.070)	(0.039)	(0.109)	(0.070)	(0.036)	(0.106)
Partisanship				-0.006	-0.003	0.009				-0.006	-0.003	0.009
				(0.060)	(0.030)	(0.090)				(0.059)	(0.030)	(0.089)
Margin of Majority				-0.198	-0.100	0.298				-0.193	-0.097	0.290
				(0.152)	(0.072)	(0.218)				(0.148)	(0.071)	(0.214)
Checks and Balances				-0.052	-0.026	0.079				-0.043	-0.022	0.064
				(0.112)	(0.054)	(0.166)				(0.121)	(0.060)	(0.181)
Personalistic vote				-0.164*	-0.083*	0.247**				-0.166*	-0.084*	0.250*
				(0.089)	(0.042)	(0.125)				(0.093)	(0.043)	(0.130)
Quality of Bureaucracy	-0.129	-0.070	0.199	-0.073	-0.037	0.109	-0.130	-0.071	0.201	-0.074	-0.037	0.111
	(0.089)	(0.053)	(0.137)	(0.093)	(0.050)	(0.141)	(0.092)	(0.055)	(0.143)	(0.094)	(0.051)	(0.144)
IMF Program	-0.065**	-0.035	0.101*	-0.088**	-0.044*	0.132**	-0.065**	-0.036	0.101*	-0.088**	-0.044*	0.132**
	(0.033)	(0.022)	(0.052)	(0.037)	(0.026)	(0.060)	(0.033)	(0.022)	(0.052)	(0.036)	(0.026)	(0.060)
Inflation (lag)	0.012	0.006	-0.018	0.011	0.005	-0.016	0.015	0.008	-0.023	0.013	0.006	-0.019
	(0.025)	(0.014)	(0.039)	(0.022)	(0.011)	(0.033)	(0.026)	(0.014)	(0.040)	(0.023)	(0.012)	(0.035)
Log Per Capita GDP (lag)	0.023	0.012	-0.035	0.047	0.023	-0.070	0.017	0.009	-0.026	0.042	0.021	-0.063
	(0.058)	(0.032)	(0.090)	(0.064)	(0.032)	(0.095)	(0.061)	(0.034)	(0.095)	(0.068)	(0.034)	(0.101)
Trade (% of GDP) (lag)	0.001***	0.001	-0.002**	0.001***	0.001*	-0.002***	0.001***	0.001	-0.002**	0.002***	0.001*	-0.002***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
Tax Revenue (lag)	0.004	0.002	-0.007	0.010	0.005	-0.015	0.004	0.002	-0.007	0.010	0.005	-0.014
	(0.009)	(0.005)	(0.014)	(0.007)	(0.005)	(0.012)	(0.008)	(0.005)	(0.013)	(0.007)	(0.005)	(0.012)
Tax Revenue 1990	-0.004	-0.002	0.006	-0.005	-0.003	0.008	-0.003	-0.002	0.005	-0.005	-0.002	0.007
	(0.008)	(0.005)	(0.013)	(0.009)	(0.005)	(0.014)	(0.008)	(0.005)	(0.012)	(0.009)	(0.005)	(0.014)
Windfall Taxes (lag)	-0.002	-0.001	0.004	-0.005	-0.002	0.007	-0.001	-0.001	0.002	-0.004	-0.002	0.006
	(0.008)	(0.004)	(0.012)	(0.008)	(0.004)	(0.013)	(0.008)	(0.005)	(0.013)	(0.009)	(0.005)	(0.013)
Time Since Last Reform	-0.020	-0.011	0.031	-0.023	-0.012	0.035	-0.019	-0.010	0.030	-0.023	-0.012	0.035
	(0.029)	(0.015)	(0.043)	(0.030)	(0.014)	(0.044)	(0.027)	(0.014)	(0.041)	(0.028)	(0.014)	(0.042)
Number Previous Reforms	-0.017*	-0.009*	0.026**	-0.022**	-0.011***	0.033***	-0.016*	-0.009*	0.025*	-0.021**	-0.011***	0.032**
	(0.009)	(0.005)	(0.012)	(0.010)	(0.004)	(0.012)	(0.009)	(0.005)	(0.013)	(0.010)	(0.004)	(0.012)
Reform, GDP weighted (lag)	0.161	0.087	-0.248	0.169	0.085	-0.253	0.171*	0.093*	-0.265*	0.180	0.091	-0.271
	(0.103)	(0.058)	(0.154)	(0.119)	(0.058)	(0.172)	(0.099)	(0.057)	(0.147)	(0.114)	(0.058)	(0.166)
Reform,Contiguous weighted (lag)	-0.099*	-0.054**	0.152**	-0.100**	-0.050**	0.151**	-0.099**	-0.054**	0.153**	-0.101**	-0.051**	0.152**
	(0.053)	(0.025)	(0.072)	(0.049)	(0.024)	(0.068)	(0.050)	(0.024)	(0.068)	(0.048)	(0.024)	(0.067)
Observations	215	215	215	209	209	209	215	215	215	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

VARIABLES	Major Tax Reform Direction											
	Presidential						Legislative					
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	-0.113**	-0.021	0.134***	-0.121**	-0.022	0.143**	-0.108**	-0.022	0.129***	-0.114**	-0.022	0.136***
	(0.048)	(0.019)	(0.045)	(0.058)	(0.020)	(0.058)	(0.044)	(0.019)	(0.041)	(0.053)	(0.019)	(0.052)
Electoral Year, President	0.072*	0.013	-0.086**	0.073*	0.013	-0.086**						
	(0.037)	(0.015)	(0.042)	(0.040)	(0.013)	(0.043)						
Post-electoral Year, President	0.111*	0.021	-0.132**	0.100*	0.018	-0.118*						
	(0.058)	(0.022)	(0.063)	(0.058)	(0.019)	(0.065)						
Electoral Year, Legislature							0.106***	0.021	-0.128***	0.107***	0.020	-0.127***
							(0.038)	(0.020)	(0.037)	(0.041)	(0.018)	(0.037)
Pre-electoral Year, Legislature							0.086*	0.017	-0.103*	0.072	0.014	-0.086
							(0.050)	(0.017)	(0.054)	(0.051)	(0.016)	(0.060)
Partisanship				0.018	0.003	-0.021				0.022	0.004	-0.027
				(0.062)	(0.013)	(0.074)				(0.063)	(0.014)	(0.077)
Margin of Majority				-0.117	-0.021	0.138				-0.086	-0.016	0.102
				(0.167)	(0.031)	(0.190)				(0.165)	(0.032)	(0.193)
Checks and Balances				0.012	0.002	-0.015				0.041	0.008	-0.049
				(0.124)	(0.023)	(0.147)				(0.137)	(0.028)	(0.164)
Personalistic vote				-0.069	-0.012	0.082				-0.055	-0.010	0.065
				(0.093)	(0.015)	(0.102)				(0.089)	(0.014)	(0.100)
Quality of Bureaucracy	-0.091	-0.017	0.108	-0.054	-0.010	0.063	-0.091	-0.018	0.109	-0.060	-0.011	0.072
	(0.133)	(0.030)	(0.158)	(0.136)	(0.027)	(0.162)	(0.133)	(0.033)	(0.160)	(0.131)	(0.029)	(0.158)
IMF Program	-0.057	-0.011	0.068*	-0.075**	-0.013	0.088**	-0.057	-0.012	0.069*	-0.075**	-0.014	0.089**
	(0.037)	(0.010)	(0.038)	(0.034)	(0.013)	(0.036)	(0.038)	(0.012)	(0.042)	(0.034)	(0.015)	(0.039)
Inflation (lag)	-0.001	-0.000	0.001	-0.007	-0.001	0.008	0.003	0.001	-0.004	-0.004	-0.001	0.005
	(0.041)	(0.008)	(0.049)	(0.039)	(0.007)	(0.046)	(0.042)	(0.008)	(0.050)	(0.040)	(0.008)	(0.047)
Log Per Capita GDP (lag)	-0.003	-0.001	0.004	0.003	0.001	-0.004	-0.017	-0.003	0.021	-0.011	-0.002	0.013
	(0.056)	(0.010)	(0.066)	(0.060)	(0.011)	(0.071)	(0.060)	(0.012)	(0.072)	(0.063)	(0.012)	(0.075)
Trade (% of GDP) (lag)	0.002***	0.000	-0.002**	0.002***	0.000	-0.002***	0.002***	0.000	-0.002***	0.002***	0.000	-0.002***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
Tax Revenue (lag)	0.010	0.002	-0.012	0.012	0.002	-0.014	0.010	0.002	-0.012	0.011	0.002	-0.014
	(0.010)	(0.003)	(0.013)	(0.009)	(0.003)	(0.012)	(0.009)	(0.004)	(0.012)	(0.009)	(0.004)	(0.012)
Tax Revenue 1990	-0.004	-0.001	0.004	-0.003	-0.000	0.003	-0.003	-0.001	0.003	-0.002	-0.000	0.002
	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)
Windfall Taxes (lag)	0.005	0.001	-0.006	0.005	0.001	-0.006	0.006	0.001	-0.007	0.006	0.001	-0.008
	(0.008)	(0.001)	(0.009)	(0.008)	(0.001)	(0.009)	(0.008)	(0.002)	(0.010)	(0.008)	(0.002)	(0.010)
Time Since Last Reform	-0.001	-0.000	0.001	-0.003	-0.001	0.004	0.000	0.000	-0.000	-0.002	-0.000	0.002
	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)
Number Previous Reforms	-0.005	-0.001	0.006	-0.008	-0.001	0.009	-0.004	-0.001	0.005	-0.006	-0.001	0.007
	(0.010)	(0.002)	(0.012)	(0.011)	(0.002)	(0.012)	(0.011)	(0.002)	(0.013)	(0.011)	(0.002)	(0.013)
Reform, GDP weighted (lag)	0.104	0.019	-0.123	0.153	0.027	-0.180	0.103	0.021	-0.124	0.160	0.030	-0.191
	(0.220)	(0.041)	(0.256)	(0.221)	(0.040)	(0.251)	(0.219)	(0.044)	(0.258)	(0.220)	(0.043)	(0.252)
Reform, Contiguous weighted (lag)	-0.115*	-0.021	0.137*	-0.123*	-0.022	0.145**	-0.120*	-0.024	0.144**	-0.128**	-0.024	0.152**
	(0.067)	(0.023)	(0.073)	(0.064)	(0.022)	(0.070)	(0.064)	(0.025)	(0.071)	(0.060)	(0.024)	(0.066)
Observations	215	215	215	209	209	209	215	215	215	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

VARIABLES	VAT Tax Reform Direction											
	Presidential						Legislative					
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	-0.027*	-0.060*	0.087**	-0.036*	-0.074**	0.109**	-0.024*	-0.052**	0.076**	-0.031*	-0.063**	0.094**
	(0.015)	(0.031)	(0.041)	(0.020)	(0.034)	(0.049)	(0.012)	(0.025)	(0.034)	(0.018)	(0.028)	(0.041)
Electoral Year, President	0.029	0.065**	-0.095**	0.032*	0.066**	-0.098**						
	(0.018)	(0.028)	(0.043)	(0.019)	(0.029)	(0.043)						
Post-electoral Year, President	0.016	0.035	-0.051	0.014	0.029	-0.042						
	(0.027)	(0.053)	(0.079)	(0.029)	(0.056)	(0.084)						
Electoral Year, Legislature							0.039**	0.085***	-0.124***	0.039**	0.081***	-0.120***
							(0.018)	(0.024)	(0.034)	(0.018)	(0.026)	(0.035)
Pre-electoral Year, Legislature							0.027	0.059	-0.086	0.023	0.048	-0.072
							(0.025)	(0.041)	(0.063)	(0.026)	(0.045)	(0.069)
Partisanship				-0.023	-0.048	0.072				-0.021	-0.042	0.063
				(0.024)	(0.041)	(0.063)				(0.023)	(0.040)	(0.062)
Margin of Majority				-0.065	-0.135**	0.199*				-0.058	-0.119**	0.177*
				(0.045)	(0.067)	(0.104)				(0.042)	(0.056)	(0.091)
Checks and Balances				-0.022	-0.046	0.069				-0.014	-0.029	0.043
				(0.034)	(0.054)	(0.087)				(0.033)	(0.056)	(0.088)
Personalistic vote				-0.022	-0.047	0.069				-0.013	-0.026	0.038
				(0.032)	(0.054)	(0.085)				(0.030)	(0.054)	(0.084)
Quality of Bureaucracy	-0.001	-0.003	0.005	0.015	0.031	-0.046	-0.002	-0.003	0.005	0.011	0.022	-0.033
	(0.023)	(0.050)	(0.073)	(0.029)	(0.056)	(0.084)	(0.024)	(0.052)	(0.076)	(0.028)	(0.056)	(0.084)
IMF Program	-0.010	-0.022	0.032	-0.010	-0.020	0.029	-0.013	-0.028	0.041	-0.012	-0.025	0.038
	(0.011)	(0.024)	(0.034)	(0.014)	(0.028)	(0.041)	(0.012)	(0.027)	(0.038)	(0.014)	(0.029)	(0.042)
Inflation (lag)	-0.008	-0.018	0.026	-0.007	-0.015	0.022	-0.006	-0.014	0.020	-0.006	-0.013	0.019
	(0.007)	(0.018)	(0.025)	(0.009)	(0.020)	(0.029)	(0.008)	(0.019)	(0.027)	(0.009)	(0.022)	(0.031)
Log Per Capita GDP (lag)	-0.011	-0.025	0.037	-0.013	-0.026	0.039	-0.018	-0.039	0.057	-0.020	-0.041	0.061
	(0.019)	(0.042)	(0.060)	(0.020)	(0.042)	(0.061)	(0.021)	(0.046)	(0.066)	(0.021)	(0.045)	(0.065)
Trade (% of GDP) (lag)	0.001***	0.001***	-0.002***	0.001***	0.001***	-0.002***	0.001***	0.001***	-0.002***	0.001***	0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tax Revenue (lag)	0.003	0.007	-0.010	0.005	0.010	-0.015	0.003	0.007	-0.010	0.005	0.009	-0.014
	(0.003)	(0.007)	(0.010)	(0.004)	(0.007)	(0.011)	(0.003)	(0.007)	(0.010)	(0.004)	(0.007)	(0.011)
Tax Revenue 1990	0.002	0.005	-0.007	0.001	0.003	-0.004	0.003	0.006	-0.009	0.002	0.004	-0.006
	(0.003)	(0.007)	(0.010)	(0.004)	(0.008)	(0.011)	(0.003)	(0.008)	(0.011)	(0.004)	(0.008)	(0.011)
Windfall Taxes (lag)	0.004**	0.010**	-0.014**	0.004*	0.008	-0.012*	0.005**	0.011**	-0.015**	0.005*	0.009*	-0.014*
	(0.002)	(0.005)	(0.006)	(0.002)	(0.005)	(0.007)	(0.002)	(0.006)	(0.007)	(0.002)	(0.006)	(0.007)
Time Since Last Reform	-0.004*	-0.008*	0.012*	-0.005**	-0.009*	0.014**	-0.003	-0.007	0.011*	-0.004*	-0.009*	0.013*
	(0.002)	(0.005)	(0.007)	(0.002)	(0.005)	(0.007)	(0.002)	(0.005)	(0.007)	(0.002)	(0.006)	(0.007)
Number Previous Reforms	0.010***	0.023*	-0.033**	0.007	0.014	-0.020	0.011***	0.024*	-0.034**	0.008*	0.016	-0.024
	(0.004)	(0.012)	(0.015)	(0.005)	(0.013)	(0.018)	(0.004)	(0.012)	(0.014)	(0.004)	(0.014)	(0.018)
Reform, GDP weighted (lag)	-0.026	-0.057	0.083	-0.009	-0.018	0.027	-0.029	-0.064	0.093	-0.013	-0.027	0.040
	(0.070)	(0.161)	(0.231)	(0.070)	(0.147)	(0.217)	(0.067)	(0.152)	(0.218)	(0.070)	(0.144)	(0.213)
Reform, Contiguous weighted (lag)	-0.072*	-0.161***	0.233***	-0.071	-0.147***	0.218**	-0.073*	-0.159***	0.232***	-0.071	-0.146***	0.218**
	(0.043)	(0.052)	(0.087)	(0.044)	(0.053)	(0.088)	(0.044)	(0.054)	(0.088)	(0.045)	(0.054)	(0.089)
Observations	215	215	215	209	209	209	215	215	215	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

VARIABLES	PIT Tax Reform Direction											
	Presidential						Legislative					
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	-0.055	0.011	0.044	-0.062	0.011	0.051	-0.060	0.012	0.048*	-0.069	0.013	0.056*
	(0.046)	(0.020)	(0.029)	(0.050)	(0.021)	(0.032)	(0.045)	(0.021)	(0.028)	(0.050)	(0.023)	(0.030)
Electoral Year, President	-0.011	0.002	0.008	-0.012	0.002	0.010						
	(0.043)	(0.009)	(0.033)	(0.040)	(0.008)	(0.032)						
Post-electoral Year, President	0.045	-0.009	-0.036	0.036	-0.007	-0.030						
	(0.043)	(0.014)	(0.035)	(0.040)	(0.010)	(0.034)						
Electoral Year, Legislature							0.036	-0.007	-0.029	0.036	-0.007	-0.029
							(0.042)	(0.010)	(0.037)	(0.042)	(0.010)	(0.037)
Pre-electoral Year, Legislature							0.023	-0.005	-0.019	0.014	-0.003	-0.012
							(0.045)	(0.010)	(0.037)	(0.047)	(0.009)	(0.039)
Partisanship				0.029	-0.005	-0.024				0.023	-0.004	-0.019
				(0.061)	(0.010)	(0.054)				(0.060)	(0.010)	(0.052)
Margin of Majority				-0.117	0.021	0.096				-0.114	0.021	0.093
				(0.184)	(0.045)	(0.149)				(0.191)	(0.047)	(0.154)
Checks and Balances				0.056	-0.010	-0.046				0.057	-0.011	-0.047
				(0.133)	(0.032)	(0.104)				(0.143)	(0.034)	(0.112)
Personalistic vote				-0.071	0.013	0.058				-0.076	0.014	0.061
				(0.085)	(0.028)	(0.062)				(0.085)	(0.029)	(0.060)
Quality of Bureaucracy	-0.008	0.002	0.006	0.007	-0.001	-0.006	-0.000	0.000	0.000	0.016	-0.003	-0.013
	(0.071)	(0.014)	(0.057)	(0.057)	(0.011)	(0.046)	(0.071)	(0.015)	(0.057)	(0.059)	(0.013)	(0.047)
IMF Program	-0.038	0.008	0.030	-0.054	0.010	0.044*	-0.035	0.007	0.028	-0.049	0.009	0.040
	(0.038)	(0.015)	(0.026)	(0.040)	(0.017)	(0.027)	(0.037)	(0.014)	(0.025)	(0.038)	(0.016)	(0.025)
Inflation (lag)	0.005	-0.001	-0.004	-0.002	0.000	0.002	0.006	-0.001	-0.005	0.000	-0.000	-0.000
	(0.023)	(0.005)	(0.018)	(0.022)	(0.004)	(0.018)	(0.023)	(0.005)	(0.018)	(0.022)	(0.004)	(0.018)
Log Per Capita GDP (lag)	-0.078	0.016	0.062*	-0.070	0.013	0.057	-0.086	0.018	0.069*	-0.079	0.015	0.064
	(0.050)	(0.023)	(0.036)	(0.051)	(0.020)	(0.039)	(0.053)	(0.025)	(0.040)	(0.055)	(0.023)	(0.043)
Trade (% of GDP) (lag)	0.001**	-0.000	-0.001**	0.001**	-0.000	-0.001***	0.001**	-0.000	-0.001***	0.001**	-0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tax Revenue (lag)	0.002	-0.000	-0.001	0.003	-0.001	-0.003	0.001	-0.000	-0.001	0.003	-0.001	-0.002
	(0.012)	(0.003)	(0.009)	(0.014)	(0.003)	(0.011)	(0.012)	(0.003)	(0.009)	(0.014)	(0.003)	(0.011)
Tax Revenue 1990	0.006	-0.001	-0.005	0.009	-0.002	-0.007	0.007	-0.001	-0.006	0.009	-0.002	-0.008
	(0.013)	(0.003)	(0.011)	(0.013)	(0.002)	(0.011)	(0.013)	(0.002)	(0.011)	(0.012)	(0.002)	(0.011)
Windfall Taxes (lag)	0.010*	-0.002	-0.008	0.011*	-0.002	-0.009	0.011*	-0.002	-0.008	0.011*	-0.002	-0.009
	(0.006)	(0.003)	(0.005)	(0.006)	(0.003)	(0.006)	(0.006)	(0.003)	(0.005)	(0.006)	(0.003)	(0.006)
Time Since Last Reform	-0.007	0.001	0.005	-0.008	0.001	0.007	-0.007	0.001	0.005	-0.008	0.001	0.006
	(0.006)	(0.002)	(0.004)	(0.007)	(0.002)	(0.005)	(0.006)	(0.002)	(0.004)	(0.007)	(0.003)	(0.005)
Number Previous Reforms	-0.007	0.001	0.006	-0.008	0.001	0.007	-0.007	0.001	0.005	-0.008	0.001	0.006
	(0.017)	(0.004)	(0.013)	(0.020)	(0.005)	(0.016)	(0.016)	(0.004)	(0.013)	(0.020)	(0.005)	(0.016)
Reform, GDP weighted (lag)	0.431**	-0.088	-0.343**	0.390**	-0.071	-0.319*	0.432**	-0.089	-0.344*	0.388*	-0.072	-0.315*
	(0.198)	(0.107)	(0.172)	(0.192)	(0.095)	(0.173)	(0.207)	(0.110)	(0.185)	(0.201)	(0.094)	(0.186)
Reform,Contiguous weighted (l	0.019	-0.004	-0.015	0.004	-0.001	-0.003	0.023	-0.005	-0.018	0.010	-0.002	-0.008
	(0.081)	(0.017)	(0.064)	(0.076)	(0.014)	(0.062)	(0.076)	(0.017)	(0.061)	(0.071)	(0.014)	(0.058)
Observations	215	215	215	209	209	209	215	215	215	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.8. CI Tax Reform, Ordered Logit

	CIT Tax Reform Direction											
VARIABLES	**Presidential**						**Legislative**					
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Banking Crisis	-0.045	0.006	0.040	-0.052	0.006	0.046	-0.040	0.005	0.036	-0.044	0.005	0.039
	(0.037)	(0.013)	(0.028)	(0.040)	(0.013)	(0.032)	(0.033)	(0.012)	(0.027)	(0.036)	(0.011)	(0.030)
Electoral Year, President	0.093**	-0.012	-0.082**	0.093**	-0.011	-0.082**						
	(0.040)	(0.023)	(0.035)	(0.043)	(0.022)	(0.033)						
Post-electoral Year, President	0.093**	-0.012	-0.081***	0.095**	-0.011	-0.083***						
	(0.037)	(0.024)	(0.027)	(0.038)	(0.022)	(0.026)						
Electoral Year, Legislature							0.104**	-0.012	-0.092**	0.109**	-0.012	-0.097***
							(0.044)	(0.027)	(0.038)	(0.046)	(0.026)	(0.036)
Pre-electoral Year, Legislature							0.041	-0.005	-0.036	0.046	-0.005	-0.041
							(0.031)	(0.010)	(0.029)	(0.033)	(0.010)	(0.030)
Partisanship				0.016	-0.002	-0.014				0.021	-0.002	-0.019
				(0.051)	(0.006)	(0.046)				(0.052)	(0.007)	(0.048)
Margin of Majority				0.030	-0.004	-0.026				0.059	-0.007	-0.053
				(0.168)	(0.020)	(0.149)				(0.171)	(0.023)	(0.153)
Checks and Balances				0.138	-0.017	-0.122				0.163	-0.018	-0.145
				(0.118)	(0.029)	(0.113)				(0.131)	(0.037)	(0.122)
Personalistic vote				-0.092	0.011	0.081				-0.071	0.008	0.063
				(0.085)	(0.025)	(0.068)				(0.084)	(0.020)	(0.070)
Quality of Bureaucracy	-0.077	0.010	0.067	-0.079	0.009	0.069	-0.075	0.009	0.067	-0.081	0.009	0.072
	(0.098)	(0.019)	(0.090)	(0.098)	(0.020)	(0.087)	(0.099)	(0.019)	(0.093)	(0.097)	(0.020)	(0.088)
IMF Program	0.001	-0.000	-0.001	-0.009	0.001	0.008	0.002	-0.000	-0.002	-0.008	0.001	0.007
	(0.040)	(0.005)	(0.035)	(0.032)	(0.005)	(0.027)	(0.040)	(0.004)	(0.036)	(0.030)	(0.004)	(0.026)
Inflation (lag)	-0.006	0.001	0.006	-0.008	0.001	0.007	-0.003	0.000	0.003	-0.006	0.001	0.005
	(0.024)	(0.004)	(0.020)	(0.020)	(0.004)	(0.017)	(0.022)	(0.003)	(0.019)	(0.018)	(0.003)	(0.016)
Log Per Capita GDP (lag)	-0.009	0.001	0.008	-0.003	0.000	0.002	-0.023	0.003	0.020	-0.018	0.002	0.016
	(0.048)	(0.006)	(0.042)	(0.051)	(0.006)	(0.045)	(0.051)	(0.008)	(0.045)	(0.053)	(0.007)	(0.048)
Trade (% of GDP) (lag)	0.001**	-0.000	-0.001**	0.001***	-0.000	-0.001**	0.001***	-0.000	-0.001**	0.001***	-0.000	-0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tax Revenue (lag)	-0.006	0.001	0.006	-0.008	0.001	0.007	-0.007	0.001	0.006	-0.009	0.001	0.008
	(0.009)	(0.002)	(0.007)	(0.008)	(0.002)	(0.007)	(0.008)	(0.002)	(0.007)	(0.008)	(0.002)	(0.006)
Tax Revenue 1990	0.005	-0.001	-0.004	0.007	-0.001	-0.006	0.006	-0.001	-0.005	0.008	-0.001	-0.007
	(0.010)	(0.002)	(0.008)	(0.010)	(0.002)	(0.008)	(0.010)	(0.002)	(0.008)	(0.009)	(0.002)	(0.007)
Windfall Taxes (lag)	0.004	-0.000	-0.003	0.001	-0.000	-0.001	0.005	-0.001	-0.004	0.002	-0.000	-0.002
	(0.006)	(0.001)	(0.004)	(0.006)	(0.001)	(0.005)	(0.006)	(0.002)	(0.005)	(0.007)	(0.001)	(0.006)
Time Since Last Reform	-0.011	0.001	0.010	-0.012	0.001	0.010	-0.010	0.001	0.009	-0.010	0.001	0.009
	(0.012)	(0.004)	(0.009)	(0.013)	(0.004)	(0.010)	(0.012)	(0.003)	(0.009)	(0.013)	(0.003)	(0.010)
Number Previous Reforms	0.004	-0.000	-0.003	0.008	-0.001	-0.007	0.006	-0.001	-0.005	0.010	-0.001	-0.008
	(0.014)	(0.001)	(0.013)	(0.013)	(0.002)	(0.012)	(0.014)	(0.001)	(0.013)	(0.013)	(0.002)	(0.012)
Reform, GDP weighted (lag)	-0.016	0.002	0.014	-0.020	0.002	0.018	0.004	-0.000	-0.004	0.012	-0.001	-0.011
	(0.179)	(0.021)	(0.158)	(0.161)	(0.018)	(0.144)	(0.177)	(0.021)	(0.157)	(0.158)	(0.019)	(0.139)
Reform, Contiguous weighted (lag)	-0.080	0.010	0.070	-0.089	0.011	0.078	-0.087	0.010	0.077	-0.096	0.011	0.086
	(0.080)	(0.025)	(0.061)	(0.072)	(0.024)	(0.055)	(0.077)	(0.026)	(0.062)	(0.068)	(0.024)	(0.055)
Observations	215	215	215	209	209	209	215	215	215	209	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.4 Determinants of the Direction of Reforms, Regression Tables (Top panel Table 3)

The following tables present the results of the regression analysis for different specifications and they complement Table 3 in the paper. Each table covers a different dependent variable.

Table B.9. Any Tax Reform, Multinomial Logit

VARIABLES	Any Reform Direction							
	Presidential				Legislative			
	increasing (1)	decreasing (2)	increasing (3)	decreasing (4)	increasing (5)	decreasing (6)	increasing (7)	decreasing (8)
Banking Crisis	0.107	-0.097	0.111	-0.122	0.105	-0.089	0.112	-0.114
	(0.077)	(0.073)	(0.076)	(0.087)	(0.078)	(0.073)	(0.078)	(0.086)
Electoral Year, President	-0.094	0.063	-0.082	0.068				
	(0.104)	(0.050)	(0.097)	(0.051)				
Post-electoral Year, President	0.059	0.052	0.060	0.032				
	(0.118)	(0.067)	(0.124)	(0.065)				
Electoral Year, Legislature					-0.153	0.070	-0.131	0.068
					(0.110)	(0.055)	(0.107)	(0.058)
Pre-electoral Year, Legislature					0.051	0.053	0.069	0.032
					(0.111)	(0.074)	(0.112)	(0.075)
Partisanship			-0.027	-0.045			-0.021	-0.040
			(0.087)	(0.063)			(0.084)	(0.064)
Margin of Majority			0.329	-0.020			0.343	-0.005
			(0.257)	(0.224)			(0.237)	(0.234)
Checks and Balances			0.106	-0.029			0.111	-0.012
			(0.175)	(0.094)			(0.185)	(0.093)
Personalistic vote			0.182	-0.309**			0.191	-0.303*
			(0.127)	(0.148)			(0.132)	(0.156)
Quality of Bureaucracy	0.307**	-0.121	0.193	0.005	0.307**	-0.117	0.195	0.003
	(0.129)	(0.123)	(0.136)	(0.119)	(0.133)	(0.129)	(0.137)	(0.122)
IMF Program	0.068	-0.090**	0.122	-0.106**	0.074	-0.092**	0.125*	-0.110***
	(0.065)	(0.042)	(0.074)	(0.041)	(0.064)	(0.044)	(0.074)	(0.042)
Inflation (lag)	-0.025	0.002	-0.016	0.006	-0.029	0.004	-0.019	0.006
	(0.025)	(0.033)	(0.023)	(0.031)	(0.027)	(0.033)	(0.025)	(0.031)
Log Per Capita GDP (lag)	-0.050	0.077	-0.067	0.095	-0.037	0.065	-0.058	0.084
	(0.087)	(0.083)	(0.089)	(0.088)	(0.096)	(0.085)	(0.096)	(0.090)
Trade (% of GDP) (lag)	-0.003***	0.001	-0.003***	0.001	-0.003***	0.001	-0.003***	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Tax Revenue (lag)	-0.013	-0.019	-0.023*	-0.013	-0.014	-0.018	-0.025*	-0.012
	(0.013)	(0.020)	(0.013)	(0.015)	(0.013)	(0.019)	(0.013)	(0.015)
Tax Revenue 1990	0.005	0.004	0.008	-0.001	0.005	0.004	0.009	-0.001
	(0.010)	(0.017)	(0.012)	(0.016)	(0.010)	(0.017)	(0.012)	(0.016)
Windfall Taxes (lag)	0.008	-0.005	0.008	-0.008	0.007	-0.004	0.007	-0.006
	(0.009)	(0.010)	(0.011)	(0.009)	(0.009)	(0.010)	(0.012)	(0.009)
Time Since Last Reform	0.027	-0.045	0.027	-0.036	0.025	-0.042	0.026	-0.034
	(0.047)	(0.049)	(0.047)	(0.049)	(0.046)	(0.049)	(0.046)	(0.049)
Number Previous Reforms	0.018	-0.021**	0.028*	-0.025***	0.017	-0.020**	0.028*	-0.024***
	(0.013)	(0.009)	(0.014)	(0.009)	(0.013)	(0.010)	(0.014)	(0.009)
Reform, GDP weighted (lag)	-0.220*	0.163	-0.279*	0.133	-0.242*	0.161	-0.302**	0.141
	(0.128)	(0.175)	(0.149)	(0.171)	(0.126)	(0.174)	(0.145)	(0.166)
Reform,Contiguous weighted (lag	0.157**	-0.070	0.175***	-0.050	0.155***	-0.076	0.173***	-0.060
	(0.062)	(0.058)	(0.061)	(0.055)	(0.059)	(0.056)	(0.061)	(0.054)
Observations	215	215	209	209	215	215	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.10. Major Tax Reform, Multinomial Logit

VARIABLES	Major Tax Reform Direction							
	Presidential				Legislative			
	increasing (1)	decreasing (2)	increasing (3)	decreasing (4)	increasing (5)	decreasing (6)	increasing (7)	decreasing (8)
Banking Crisis	0.133***	-0.131*	0.135**	-0.131	0.124***	-0.123*	0.121**	-0.123
	(0.050)	(0.069)	(0.065)	(0.085)	(0.043)	(0.066)	(0.057)	(0.081)
Electoral Year, President	-0.140**	0.057	-0.137*	0.057				
	(0.070)	(0.044)	(0.073)	(0.047)				
Post-electoral Year, President	-0.087	0.134***	-0.076	0.119**				
	(0.082)	(0.050)	(0.087)	(0.052)				
Electoral Year, Legislature					-0.208***	0.057	-0.210***	0.057
					(0.061)	(0.050)	(0.065)	(0.051)
Pre-electoral Year, Legislature					-0.087	0.091*	-0.074	0.072
					(0.058)	(0.055)	(0.060)	(0.062)
Partisanship			-0.045	-0.018			-0.059	-0.013
			(0.074)	(0.057)			(0.076)	(0.062)
Margin of Majority			0.163	-0.128			0.131	-0.123
			(0.192)	(0.313)			(0.162)	(0.338)
Checks and Balances			0.028	0.013			0.006	0.026
			(0.142)	(0.127)			(0.152)	(0.142)
Personalistic vote			0.019	-0.055			-0.029	-0.036
			(0.115)	(0.137)			(0.110)	(0.143)
Quality of Bureaucracy	0.110	-0.091	0.047	-0.059	0.107	-0.076	0.070	-0.056
	(0.129)	(0.177)	(0.128)	(0.201)	(0.135)	(0.186)	(0.126)	(0.206)
IMF Program	0.028	-0.089*	0.044	-0.101**	0.035	-0.087	0.048	-0.100**
	(0.053)	(0.052)	(0.054)	(0.046)	(0.054)	(0.053)	(0.053)	(0.045)
Inflation (lag)	-0.003	0.029	0.006	0.027	-0.010	0.030	0.001	0.027
	(0.032)	(0.037)	(0.034)	(0.033)	(0.031)	(0.036)	(0.032)	(0.033)
Log Per Capita GDP (lag)	0.043	0.085	0.048	0.099	0.085	0.066	0.081	0.080
	(0.064)	(0.100)	(0.066)	(0.108)	(0.075)	(0.102)	(0.072)	(0.110)
Trade (% of GDP) (lag)	-0.004***	0.001	-0.003***	0.001*	-0.004***	0.001*	-0.004***	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Tax Revenue (lag)	-0.026***	-0.025	-0.028***	-0.023	-0.026***	-0.023	-0.027***	-0.021
	(0.009)	(0.019)	(0.010)	(0.017)	(0.009)	(0.019)	(0.010)	(0.017)
Tax Revenue 1990	0.009	0.012	0.006	0.011	0.006	0.011	0.003	0.011
	(0.010)	(0.017)	(0.010)	(0.017)	(0.011)	(0.018)	(0.010)	(0.017)
Windfall Taxes (lag)	-0.009*	-0.007	-0.013**	-0.009	-0.012*	-0.005	-0.016***	-0.007
	(0.005)	(0.010)	(0.006)	(0.009)	(0.006)	(0.010)	(0.006)	(0.009)
Time Since Last Reform	-0.010	-0.013	-0.008	-0.014	-0.013	-0.012	-0.010	-0.014
	(0.024)	(0.017)	(0.025)	(0.016)	(0.025)	(0.017)	(0.025)	(0.016)
Number Previous Reforms	-0.004	-0.009	-0.000	-0.016	-0.007	-0.008	-0.004	-0.015
	(0.005)	(0.015)	(0.009)	(0.011)	(0.006)	(0.016)	(0.009)	(0.012)
Reform, GDP weighted (lag)	-0.082	0.168	-0.144	0.214	-0.099	0.127	-0.165	0.184
	(0.249)	(0.255)	(0.260)	(0.249)	(0.233)	(0.263)	(0.243)	(0.252)
Reform, Contiguous weighted (lag)	0.118*	-0.098	0.127*	-0.102	0.129**	-0.102	0.137**	-0.108
	(0.066)	(0.074)	(0.069)	(0.071)	(0.064)	(0.074)	(0.066)	(0.070)
Observations	215	215	209	209	215	215	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.11. VAT Reform, Multinomial Logit

VARIABLES	VAT Reform Direction							
	Presidential				Legislative			
	increasing	decreasing	increasing	decreasing	increasing	decreasing	increasing	decreasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banking Crisis	0.105**	-0.038**	0.091*	-0.000***	0.090**	-0.021	0.078**	-0.000***
	(0.048)	(0.017)	(0.047)	(0.000)	(0.037)	(0.015)	(0.039)	(0.000)
Electoral Year, President	-0.103*	0.043	-0.092	0.000***				
	(0.060)	(0.031)	(0.059)	(0.000)				
Post-electoral Year, President	-0.029	0.058	0.003	0.000***				
	(0.066)	(0.051)	(0.069)	(0.000)				
Electoral Year, Legislature					-0.143***	0.012	-0.166***	-0.000***
					(0.047)	(0.043)	(0.054)	(0.000)
Pre-electoral Year, Legislature					-0.076	0.035	-0.065	-0.000***
					(0.048)	(0.056)	(0.052)	(0.000)
Partisanship			0.005	-0.001***			-0.008	-0.000***
			(0.061)	(0.000)			(0.061)	(0.000)
Margin of Majority			0.004	-0.005***			-0.025	-0.000***
			(0.167)	(0.001)			(0.155)	(0.000)
Checks and Balances			-0.040	-0.003***			-0.079	-0.000***
			(0.108)	(0.000)			(0.115)	(0.000)
Personalistic vote			-0.064	-0.001***			-0.080	-0.000***
			(0.138)	(0.000)			(0.148)	(0.000)
Quality of Bureaucracy	-0.084	-0.065	-0.137	0.000	-0.099	-0.058	-0.140	-0.000***
	(0.102)	(0.046)	(0.127)	(0.000)	(0.103)	(0.056)	(0.120)	(0.000)
IMF Program	0.017	-0.014	-0.000	0.000***	0.027	-0.020	0.014	0.000***
	(0.057)	(0.024)	(0.061)	(0.000)	(0.058)	(0.028)	(0.061)	(0.000)
Inflation (lag)	0.055***	0.036**	0.074***	0.000***	0.047***	0.030*	0.066***	0.000***
	(0.015)	(0.016)	(0.021)	(0.000)	(0.015)	(0.017)	(0.021)	(0.000)
Log Per Capita GDP (lag)	0.113	0.116*	0.135*	-0.000**	0.145*	0.101	0.168**	0.000***
	(0.078)	(0.069)	(0.069)	(0.000)	(0.087)	(0.065)	(0.074)	(0.000)
Trade (% of GDP) (lag)	-0.003***	0.000	-0.002***	-0.000***	-0.003***	0.000	-0.003***	0.000***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)
Tax Revenue (lag)	-0.006	-0.006	-0.008	-0.000***	-0.006	-0.002	-0.007	-0.000***
	(0.011)	(0.007)	(0.009)	(0.000)	(0.011)	(0.008)	(0.009)	(0.000)
Tax Revenue 1990	-0.023**	-0.005	-0.022**	0.000	-0.024**	-0.006	-0.024**	-0.000***
	(0.011)	(0.005)	(0.010)	(0.000)	(0.011)	(0.006)	(0.010)	(0.000)
Windfall Taxes (lag)	-0.021***	-0.012**	-0.022***	-0.000***	-0.022***	-0.010**	-0.023***	-0.000***
	(0.005)	(0.005)	(0.005)	(0.000)	(0.005)	(0.005)	(0.005)	(0.000)
Time Since Last Reform	0.019**	-0.007	0.018*	0.000***	0.017**	-0.009	0.015	-0.000***
	(0.008)	(0.011)	(0.010)	(0.000)	(0.008)	(0.012)	(0.010)	(0.000)
Number Previous Reforms	-0.039**	-0.002	-0.030*	0.000***	-0.041***	-0.002	-0.036**	0.000***
	(0.017)	(0.009)	(0.018)	(0.000)	(0.015)	(0.009)	(0.015)	(0.000)
Reform, GDP weighted (lag)	0.238	-0.004	0.071	-0.000***	0.224	-0.009	0.070	0.000***
	(0.181)	(0.145)	(0.195)	(0.000)	(0.168)	(0.128)	(0.186)	(0.000)
Reform, Contiguous weighted (lag	0.191**	-0.185*	0.147*	-0.002***	0.182**	-0.160	0.143	-0.000***
	(0.082)	(0.098)	(0.079)	(0.000)	(0.089)	(0.102)	(0.088)	(0.000)
Observations	215	215	209	209	215	215	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.12. PIT Reform, Multinomial Logit

VARIABLES	PIT Reform Direction							
	Presidential				Legislative			
	increasing	decreasing	increasing	decreasing	increasing	decreasing	increasing	decreasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banking Crisis	0.022	-0.081	0.018	-0.085	0.027	-0.088	0.016	-0.093
	(0.031)	(0.071)	(0.033)	(0.066)	(0.029)	(0.073)	(0.031)	(0.068)
Electoral Year, President	-0.010	-0.039	-0.017	-0.045				
	(0.040)	(0.046)	(0.041)	(0.051)				
Post-electoral Year, President	-0.038	0.046	-0.046	0.028				
	(0.039)	(0.054)	(0.039)	(0.060)				
Electoral Year, Legislature					-0.082*	-0.007	-0.099*	-0.007
					(0.045)	(0.049)	(0.057)	(0.057)
Pre-electoral Year, Legislature					-0.034	0.024	-0.052	0.012
					(0.030)	(0.065)	(0.040)	(0.079)
Partisanship			-0.086	-0.022			-0.083	-0.023
			(0.058)	(0.054)			(0.056)	(0.059)
Margin of Majority			0.067	0.012			0.052	-0.002
			(0.176)	(0.219)			(0.178)	(0.225)
Checks and Balances			0.173**	0.149			0.176**	0.142
			(0.077)	(0.127)			(0.083)	(0.133)
Personalistic vote			-0.074	-0.056			-0.102	-0.056
			(0.073)	(0.102)			(0.075)	(0.102)
Quality of Bureaucracy	0.110*	0.066	0.110*	0.088	0.106*	0.077	0.120*	0.103
	(0.062)	(0.115)	(0.063)	(0.105)	(0.064)	(0.116)	(0.071)	(0.107)
IMF Program	-0.017	-0.068*	-0.043	-0.082**	-0.014	-0.064	-0.045	-0.077**
	(0.031)	(0.041)	(0.039)	(0.039)	(0.026)	(0.040)	(0.033)	(0.036)
Inflation (lag)	-0.008	0.001	-0.008	-0.002	-0.011	-0.000	-0.010	-0.003
	(0.020)	(0.018)	(0.022)	(0.017)	(0.020)	(0.018)	(0.020)	(0.017)
Log Per Capita GDP (lag)	0.052	-0.050	0.035	-0.059	0.069	-0.056	0.056	-0.066
	(0.051)	(0.064)	(0.046)	(0.066)	(0.050)	(0.065)	(0.055)	(0.066)
Trade (% of GDP) (lag)	-0.003**	0.000	-0.004**	0.001	-0.003***	0.000	-0.004***	0.001
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Tax Revenue (lag)	-0.007	-0.001	-0.011	-0.000	-0.006	-0.000	-0.010	-0.000
	(0.011)	(0.014)	(0.012)	(0.014)	(0.011)	(0.014)	(0.013)	(0.014)
Tax Revenue 1990	-0.007	0.000	-0.010	0.001	-0.008	0.000	-0.012	0.002
	(0.013)	(0.014)	(0.010)	(0.012)	(0.011)	(0.014)	(0.010)	(0.012)
Windfall Taxes (lag)	-0.007	0.005	-0.015***	0.004	-0.007	0.005	-0.017***	0.004
	(0.005)	(0.008)	(0.004)	(0.008)	(0.005)	(0.008)	(0.004)	(0.007)
Time Since Last Reform	0.009	-0.011	0.017	-0.010	0.009	-0.012	0.017	-0.010
	(0.007)	(0.010)	(0.013)	(0.009)	(0.008)	(0.009)	(0.014)	(0.009)
Number Previous Reforms	0.006	-0.023	0.010	-0.023	0.004	-0.024	0.006	-0.024
	(0.019)	(0.024)	(0.027)	(0.025)	(0.018)	(0.023)	(0.026)	(0.026)
Reform, GDP weighted (lag)	-0.088	0.774***	-0.081	0.756***	-0.101	0.752***	-0.094	0.724***
	(0.256)	(0.245)	(0.243)	(0.245)	(0.256)	(0.266)	(0.248)	(0.268)
Reform,Contiguous weighted (lag	-0.070*	-0.058	-0.075*	-0.089	-0.077**	-0.053	-0.087**	-0.081
	(0.038)	(0.121)	(0.045)	(0.115)	(0.032)	(0.114)	(0.039)	(0.105)
Observations	215	215	209	209	215	215	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.13. CIT Reform, Multinomial Logit

VARIABLES	Presidential				Legislative			
	increasing (1)	decreasing (2)	increasing (3)	decreasing (4)	increasing (5)	decreasing (6)	increasing (7)	decreasing (8)
Banking Crisis	0.021	-0.099	0.023	-0.096	0.011	-0.090	0.013	-0.084
	(0.044)	(0.062)	(0.051)	(0.075)	(0.043)	(0.059)	(0.048)	(0.070)
Electoral Year, President	-0.110*	0.099***	-0.114	0.101**				
	(0.065)	(0.036)	(0.070)	(0.041)				
Post-electoral Year, President	-0.081	0.087**	-0.080	0.095***				
	(0.056)	(0.035)	(0.055)	(0.031)				
Electoral Year, Legislature					-0.139**	0.092**	-0.149***	0.095**
					(0.059)	(0.043)	(0.057)	(0.046)
Pre-electoral Year, Legislature					-0.046	0.034	-0.056	0.043
					(0.042)	(0.038)	(0.047)	(0.039)
Partisanship			0.040	0.032			0.031	0.032
			(0.068)	(0.062)			(0.071)	(0.069)
Margin of Majority			-0.114	0.024			-0.097	0.028
			(0.207)	(0.187)			(0.174)	(0.199)
Checks and Balances			-0.117	0.149			-0.103	0.157
			(0.201)	(0.103)			(0.179)	(0.116)
Personalistic vote			-0.008	-0.060			-0.050	-0.042
			(0.105)	(0.159)			(0.109)	(0.173)
Quality of Bureaucracy	0.164*	0.006	0.209**	-0.023	0.171**	0.015	0.231***	-0.020
	(0.086)	(0.149)	(0.100)	(0.137)	(0.081)	(0.156)	(0.089)	(0.140)
IMF Program	-0.062	-0.048	-0.086*	-0.056	-0.058	-0.047	-0.088**	-0.056
	(0.040)	(0.043)	(0.046)	(0.039)	(0.040)	(0.045)	(0.043)	(0.040)
Inflation (lag)	-0.008	-0.007	-0.009	-0.011	-0.011	-0.004	-0.012	-0.010
	(0.018)	(0.032)	(0.018)	(0.024)	(0.018)	(0.031)	(0.017)	(0.025)
Log Per Capita GDP (lag)	0.023	0.037	0.023	0.066	0.046	0.019	0.045	0.043
	(0.054)	(0.082)	(0.061)	(0.091)	(0.062)	(0.082)	(0.062)	(0.086)
Trade (% of GDP) (lag)	-0.002*	0.001*	-0.003**	0.001*	-0.002**	0.001**	-0.003**	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Tax Revenue (lag)	0.001	-0.017	0.005	-0.021	0.002	-0.015	0.006	-0.018
	(0.008)	(0.015)	(0.009)	(0.015)	(0.007)	(0.014)	(0.008)	(0.014)
Tax Revenue 1990	-0.003	0.008	-0.004	0.012	-0.004	0.007	-0.006	0.011
	(0.007)	(0.015)	(0.008)	(0.014)	(0.007)	(0.016)	(0.007)	(0.015)
Windfall Taxes (lag)	0.003	-0.001	0.004	-0.005	0.002	0.001	0.002	-0.003
	(0.005)	(0.008)	(0.007)	(0.008)	(0.005)	(0.008)	(0.008)	(0.007)
Time Since Last Reform	0.005	-0.023	0.003	-0.024	0.004	-0.021	0.001	-0.023
	(0.011)	(0.015)	(0.009)	(0.016)	(0.011)	(0.015)	(0.009)	(0.016)
Number Previous Reforms	-0.021	-0.012	-0.027**	-0.012	-0.023	-0.011	-0.030**	-0.011
	(0.014)	(0.019)	(0.014)	(0.015)	(0.015)	(0.020)	(0.014)	(0.016)
Reform, GDP weighted (lag)	0.164	0.094	0.203	0.105	0.138	0.098	0.184	0.119
	(0.193)	(0.139)	(0.203)	(0.141)	(0.189)	(0.142)	(0.192)	(0.138)
Reform,Contiguous weighted (lag	0.037	-0.083	0.042	-0.086	0.053	-0.085	0.059	-0.092
	(0.066)	(0.063)	(0.060)	(0.062)	(0.069)	(0.065)	(0.068)	(0.064)
Observations	215	215	209	209	215	215	209	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.5 Determinants of the Direction of Reforms, Regression Tables (Bottom panel, Table 3)

The following tables present the results of the regression analysis for different specifications and they complement Table 3 in the paper. Each table covers a different dependent variable.

Table B.14. Any Tax Increase Reform, Conditional Logit and Logit

VARIABLES	Any Tax Increase Reform			
	Presidential		Legislative	
	(1)	(2)	(3)	(4)
Banking Crisis	0.091	0.098	0.090	0.103
	(0.083)	(0.074)	(0.083)	(0.075)
Electoral Year, President	-0.093	-0.057		
	(0.081)	(0.100)		
Post-electoral Year, President	0.067	0.088		
	(0.079)	(0.114)		
Electoral Year, Legislature			-0.217***	-0.157
			(0.074)	(0.117)
Pre-electoral Year, Legislature			-0.054	0.023
			(0.077)	(0.119)
Partisanship		0.014		0.020
		(0.097)		(0.098)
Margin of Majority		0.616***		0.617***
		(0.217)		(0.212)
Checks and Balances		0.343*		0.326
		(0.196)		(0.200)
Personalistic vote		0.070		0.080
		(0.192)		(0.190)
Quality of Bureaucracy		0.026		0.030
		(0.099)		(0.097)
IMF Program		0.140**		0.147**
		(0.066)		(0.064)
Inflation (lag)		0.040		0.032
		(0.046)		(0.043)
Log Per Capita GDP (lag)		0.122**		0.131**
		(0.050)		(0.055)
Trade (% of GDP) (lag)		-0.002**		-0.002**
		(0.001)		(0.001)
Tax Revenue (lag)		-0.034*		-0.034*
		(0.018)		(0.019)
Tax Revenue 1990		0.005		0.004
		(0.014)		(0.015)
Windfall Taxes (lag)		-0.013		-0.013
		(0.008)		(0.009)
Time Since Last Reform	0.022	-0.064	0.022	-0.072
	(0.026)	(0.089)	(0.026)	(0.090)
Number Previous Reforms	0.008	0.046	0.006	0.043
	(0.014)	(0.030)	(0.014)	(0.029)
Reform, GDP weighted (lag)		-0.543***		-0.577***
		(0.195)		(0.199)
Reform,Contiguous weighted (lag,		0.121		0.117
		(0.087)		(0.083)
Observations	262	209	262	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table B.15. Major Tax Increase Reform, Conditional Logit and Logit

VARIABLES	Major Tax Increase Reform			
	Presidential		Legislative	
	(1)	(2)	(3)	(4)
Banking Crisis	0.144*	0.115**	0.122	0.103**
	(0.087)	(0.055)	(0.078)	(0.049)
Electoral Year, President	-0.157*	-0.180**		
	(0.090)	(0.079)		
Post-electoral Year, President	-0.063	-0.040		
	(0.086)	(0.084)		
Electoral Year, Legislature			-0.261***	-0.276***
			(0.072)	(0.066)
Pre-electoral Year, Legislature			-0.123*	-0.076
			(0.071)	(0.060)
Partisanship		-0.076		-0.088
		(0.070)		(0.067)
Margin of Majority		-0.036		-0.057
		(0.219)		(0.191)
Checks and Balances		0.005		-0.024
		(0.180)		(0.173)
Personalistic vote		-0.042		-0.083
		(0.120)		(0.095)
Quality of Bureaucracy		0.004		0.021
		(0.127)		(0.126)
IMF Program		0.009		0.016
		(0.050)		(0.046)
Inflation (lag)		0.026		0.017
		(0.038)		(0.031)
Log Per Capita GDP (lag)		0.105		0.136**
		(0.065)		(0.066)
Trade (% of GDP) (lag)		-0.004***		-0.004***
		(0.001)		(0.001)
Tax Revenue (lag)		-0.009		-0.003
		(0.012)		(0.012)
Tax Revenue 1990		-0.014		-0.021**
		(0.011)		(0.009)
Windfall Taxes (lag)		-0.020***		-0.023***
		(0.007)		(0.007)
Time Since Last Reform	0.017	0.039	0.015	0.031
	(0.016)	(0.051)	(0.014)	(0.045)
Number Previous Reforms	-0.069***	-0.026	-0.068***	-0.037**
	(0.021)	(0.017)	(0.018)	(0.017)
Reform, GDP weighted (lag)		-0.500		-0.524
		(0.371)		(0.349)
Reform,Contiguous weighted (lag,		0.303**		0.323**
		(0.154)		(0.150)
Observations	232	209	232	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.16. VA Tax Increase Reform, Conditional Logit and Logit

VARIABLES	VAT Tax Increase Reform			
	Presidential		Legislative	
	(1)	(2)	(3)	(4)
Banking Crisis	0.185*	0.110**	0.161*	0.102***
	(0.095)	(0.047)	(0.086)	(0.039)
Electoral Year, President	-0.138	-0.119**		
	(0.109)	(0.060)		
Post-electoral Year, President	0.002	-0.006		
	(0.099)	(0.059)		
Electoral Year, Legislature			-0.251***	-0.178***
			(0.083)	(0.052)
Pre-electoral Year, Legislature			-0.136	-0.048
			(0.086)	(0.042)
Partisanship		0.053		0.046
		(0.048)		(0.048)
Margin of Majority		-0.092		-0.137
		(0.129)		(0.127)
Checks and Balances		-0.031		-0.061
		(0.110)		(0.124)
Personalistic vote		0.010		-0.009
		(0.088)		(0.076)
Quality of Bureaucracy		-0.099		-0.115
		(0.103)		(0.098)
IMF Program		0.025		0.029
		(0.053)		(0.053)
Inflation (lag)		0.069***		0.060***
		(0.020)		(0.017)
Log Per Capita GDP (lag)		0.158*		0.184**
		(0.084)		(0.087)
Trade (% of GDP) (lag)		-0.002***		-0.002***
		(0.001)		(0.001)
Tax Revenue (lag)		-0.001		0.004
		(0.011)		(0.012)
Tax Revenue 1990		-0.033**		-0.037***
		(0.013)		(0.013)
Windfall Taxes (lag)		-0.024***		-0.025***
		(0.006)		(0.006)
Time Since Last Reform	0.035**	0.191**	0.029**	0.192**
	(0.014)	(0.094)	(0.014)	(0.081)
Number Previous Reforms	-0.193***	-0.050**	-0.182***	-0.059***
	(0.036)	(0.024)	(0.034)	(0.023)
Reform, GDP weighted (lag)		0.185		0.194
		(0.272)		(0.253)
Reform,Contiguous weighted (lag,		0.251**		0.251**
		(0.119)		(0.125)
Observations	232	209	232	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.17. PI Tax Increase Reform, Conditional Logit and Logit

VARIABLES	PIT Tax Increase Reform			
	Presidential		Legislative	
	(1)	(2)	(3)	(4)
Banking Crisis	0.038	-0.008	0.040	-0.007
	(0.120)	(0.037)	(0.121)	(0.036)
Electoral Year, President	-0.036	-0.010		
	(0.116)	(0.041)		
Post-electoral Year, President	-0.107	-0.030		
	(0.133)	(0.033)		
Electoral Year, Legislature			-0.177	-0.068
			(0.126)	(0.055)
Pre-electoral Year, Legislature			-0.110	-0.005
			(0.125)	(0.036)
Partisanship		-0.146*		-0.133
		(0.083)		(0.088)
Margin of Majority		0.175		0.182
		(0.150)		(0.143)
Checks and Balances		0.244**		0.243**
		(0.111)		(0.119)
Personalistic vote		-0.195**		-0.202**
		(0.090)		(0.093)
Quality of Bureaucracy		0.250***		0.244***
		(0.070)		(0.060)
IMF Program		-0.058		-0.061
		(0.058)		(0.051)
Inflation (lag)		0.004		0.003
		(0.019)		(0.018)
Log Per Capita GDP (lag)		-0.023		-0.015
		(0.053)		(0.070)
Trade (% of GDP) (lag)		-0.006***		-0.006***
		(0.002)		(0.002)
Tax Revenue (lag)		-0.018**		-0.019**
		(0.008)		(0.007)
Tax Revenue 1990		-0.011		-0.010
		(0.010)		(0.009)
Windfall Taxes (lag)		-0.018***		-0.018***
		(0.005)		(0.005)
Time Since Last Reform	0.067***	-0.079	0.066***	-0.086
	(0.015)	(0.063)	(0.016)	(0.052)
Number Previous Reforms	-0.069	0.034*	-0.075	0.034**
	(0.067)	(0.020)	(0.066)	(0.017)
Reform, GDP weighted (lag)		-0.510		-0.515
		(0.465)		(0.400)
Reform,Contiguous weighted (lag,		0.047		0.026
		(0.103)		(0.090)
Observations	150	209	150	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.18. CI Tax Increase Reform, Conditional Logit and Logit

VARIABLES	CIT Tax Increase Reform			
	Presidential		Legislative	
	(1)	(2)	(3)	(4)
Banking Crisis	-0.007	-0.001	-0.018	-0.009
	(0.114)	(0.050)	(0.105)	(0.047)
Electoral Year, President	-0.219*	-0.127**		
	(0.131)	(0.058)		
Post-electoral Year, President	-0.208	-0.081		
	(0.135)	(0.058)		
Electoral Year, Legislature			-0.310***	-0.161***
			(0.112)	(0.056)
Pre-electoral Year, Legislature			-0.160	-0.062
			(0.102)	(0.053)
Partisanship		0.039		0.023
		(0.058)		(0.055)
Margin of Majority		-0.080		-0.073
		(0.185)		(0.140)
Checks and Balances		-0.123		-0.120
		(0.253)		(0.198)
Personalistic vote		0.007		-0.035
		(0.117)		(0.118)
Quality of Bureaucracy		0.200*		0.226**
		(0.117)		(0.108)
IMF Program		-0.072**		-0.074**
		(0.034)		(0.035)
Inflation (lag)		-0.009		-0.014
		(0.022)		(0.018)
Log Per Capita GDP (lag)		0.039		0.058
		(0.073)		(0.075)
Trade (% of GDP) (lag)		-0.003**		-0.003**
		(0.001)		(0.001)
Tax Revenue (lag)		0.008		0.012
		(0.010)		(0.009)
Tax Revenue 1990		-0.004		-0.008
		(0.009)		(0.008)
Windfall Taxes (lag)		0.005		0.003
		(0.011)		(0.011)
Time Since Last Reform	0.039***	0.036	0.037***	0.026
	(0.014)	(0.090)	(0.014)	(0.079)
Number Previous Reforms	-0.155**	-0.022	-0.160***	-0.034
	(0.061)	(0.042)	(0.056)	(0.034)
Reform, GDP weighted (lag)		0.068		0.045
		(0.229)		(0.220)
Reform,Contiguous weighted (lag,		-0.009		0.036
		(0.099)		(0.098)
Observations	195	209	195	209

Note: Robust-clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.6. Interaction Regression

The following table presents the interaction results from running the baseline specification including the interaction between banking crises and the electoral variables.

Table B.19. Interaction Crises * Electoral Year, Regression Coefficients

Variables	VAT Reforms			PIT Reforms			CIT Reforms		
	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing	decreasing	doing nothing	increasing
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Banking Crisis	0.926**	0.926**	0.926**	1.040*	1.040*	1.040*	0.641	0.641	0.641
	(0.415)	(0.415)	(0.415)	(0.566)	(0.566)	(0.566)	(0.394)	(0.394)	(0.394)
Electoral Year, Legislature	-1.115***	-1.115***	-1.115***	-0.259	-0.259	-0.259	-1.025**	-1.025**	-1.025**
	(0.321)	(0.321)	(0.321)	(0.586)	(0.586)	(0.586)	(0.448)	(0.448)	(0.448)
Banking Crisis * Electoral Year	-0.124	-0.124	-0.124	-0.739	-0.739	-0.739	-0.569	-0.569	-0.569
	(1.204)	(1.204)	(1.204)	(1.066)	(1.066)	(1.066)	(0.747)	(0.747)	(0.747)
Pre-electoral Year, Legislature	-0.684	-0.684	-0.684	-0.172	-0.172	-0.172	-0.480	-0.480	-0.480
	(0.648)	(0.648)	(0.648)	(0.566)	(0.566)	(0.566)	(0.353)	(0.353)	(0.353)
Partisanship	0.608	0.608	0.608	-0.242	-0.242	-0.242	-0.216	-0.216	-0.216
	(0.568)	(0.568)	(0.568)	(0.775)	(0.775)	(0.775)	(0.556)	(0.556)	(0.556)
Margin of Majority	1.685*	1.685*	1.685*	1.277	1.277	1.277	-0.680	-0.680	-0.680
	(0.960)	(0.960)	(0.960)	(2.246)	(2.246)	(2.246)	(1.821)	(1.821)	(1.821)
Checks and Balances	0.400	0.400	0.400	-0.758	-0.758	-0.758	-1.777	-1.777	-1.777
	(0.832)	(0.832)	(0.832)	(1.652)	(1.652)	(1.652)	(1.470)	(1.470)	(1.470)
Personalistic vote	0.368	0.368	0.368	0.938	0.938	0.938	0.768	0.768	0.768
	(0.801)	(0.801)	(0.801)	(0.914)	(0.914)	(0.914)	(0.842)	(0.842)	(0.842)
Quality of Bureaucracy	-0.310	-0.310	-0.310	-0.202	-0.202	-0.202	0.873	0.873	0.873
	(0.810)	(0.810)	(0.810)	(0.679)	(0.679)	(0.679)	(1.008)	(1.008)	(1.008)
IMF Program	0.360	0.360	0.360	0.591	0.591	0.591	0.086	0.086	0.086
	(0.401)	(0.401)	(0.401)	(0.385)	(0.385)	(0.385)	(0.314)	(0.314)	(0.314)
Inflation (lag)	0.181	0.181	0.181	-0.003	-0.003	-0.003	0.055	0.055	0.055
	(0.302)	(0.302)	(0.302)	(0.262)	(0.262)	(0.262)	(0.193)	(0.193)	(0.193)
Log Per Capita GDP (lag)	0.585	0.585	0.585	0.963	0.963	0.963	0.202	0.202	0.202
	(0.619)	(0.619)	(0.619)	(0.615)	(0.615)	(0.615)	(0.568)	(0.568)	(0.568)
Trade (% of GDP) (lag)	-0.018***	-0.018***	-0.018***	-0.013***	-0.013***	-0.013***	-0.013**	-0.013**	-0.013**
	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Tax Revenue (lag)	-0.133	-0.133	-0.133	-0.034	-0.034	-0.034	0.096	0.096	0.096
	(0.100)	(0.100)	(0.100)	(0.166)	(0.166)	(0.166)	(0.069)	(0.069)	(0.069)
Tax Revenue 1990 (lag)	-0.061	-0.061	-0.061	-0.112	-0.112	-0.112	-0.082	-0.082	-0.082
	(0.111)	(0.111)	(0.111)	(0.158)	(0.158)	(0.158)	(0.085)	(0.085)	(0.085)
Windfall Taxes (lag)	-0.133*	-0.133*	-0.133*	-0.135*	-0.135*	-0.135*	-0.022	-0.022	-0.022
	(0.075)	(0.075)	(0.075)	(0.078)	(0.078)	(0.078)	(0.072)	(0.072)	(0.072)
Time Since Last Reform	0.122*	0.122*	0.122*	0.093	0.093	0.093	0.103	0.103	0.103
	(0.066)	(0.066)	(0.066)	(0.081)	(0.081)	(0.081)	(0.128)	(0.128)	(0.128)
Number Previous Reforms	-0.229	-0.229	-0.229	0.089	0.089	0.089	-0.106	-0.106	-0.106
	(0.177)	(0.177)	(0.177)	(0.229)	(0.229)	(0.229)	(0.144)	(0.144)	(0.144)
Reform, GDP weighted (lag)	0.384	0.384	0.384	-4.440*	-4.440*	-4.440*	-0.087	-0.087	-0.087
	(2.037)	(2.037)	(2.037)	(2.627)	(2.627)	(2.627)	(1.654)	(1.654)	(1.654)
Reform, Contiguous weighted (lag)	2.083***	2.083***	2.083***	-0.170	-0.170	-0.170	0.954	0.954	0.954
	(0.770)	(0.770)	(0.770)	(0.785)	(0.785)	(0.785)	(0.668)	(0.668)	(0.668)
Constant	-0.864	-0.864	-0.864	3.857	3.857	3.857	-1.650	-1.650	-1.650
	(4.615)	(4.615)	(4.615)	(4.848)	(4.848)	(4.848)	(4.759)	(4.759)	(4.759)
Observations	209	209	209	209	209	209	209	209	209

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

Table B.20. Interaction Crises * IMF, Regression Coefficients

Variables	VAT Reforms (1)	PIT Reforms (2)	CIT Reforms (3)
Banking Crisis	0.224	9.379*	-0.070
	(0.760)	(5.050)	(0.710)
IMF Program	0.097	2.006***	0.680
	(0.370)	(0.675)	(0.632)
Banking Crisis*IMF Program	1.169	0.994**	0.153
	(0.991)	(0.462)	(0.377)
Electoral Year, Legislature	-1.146***	-1.948**	-0.360
	(0.278)	(0.786)	(0.823)
Pre-electoral Year, Legislature	-0.701	-0.454	-1.151***
	(0.662)	(0.504)	(0.371)
Partisanship	0.342	-0.183	-0.487
	(0.275)	(0.609)	(0.350)
Margin of Majority	1.527	-0.190	-0.124
	(0.959)	(0.368)	(0.294)
Checks and Balances	0.498	1.499	-0.603
	(0.812)	(2.314)	(1.820)
Personalistic vote	0.444	-0.845	-1.743
	(0.813)	(1.623)	(1.478)
Quality of Bureaucracy	-0.324	0.773	0.729
	(0.802)	(0.893)	(0.858)
Inflation (lag)	0.191	-0.143	0.875
	(0.314)	(0.705)	(1.023)
Log Per Capita GDP (lag)	0.554	-0.031	0.054
	(0.623)	(0.252)	(0.191)
Trade (% of GDP) (lag)	-0.018***	1.021	0.199
	(0.004)	(0.626)	(0.573)
Tax Revenue (lag)	-0.147	-0.014***	-0.013**
	(0.097)	(0.005)	(0.006)
Tax Revenue 1990 (lag)	-0.040	-0.017	0.096
	(0.103)	(0.167)	(0.072)
Windfall Taxes (lag)	-0.125*	-0.141	-0.086
	(0.075)	(0.156)	(0.084)
Time Since Last Reform	0.119*	-0.157**	-0.028
	(0.065)	(0.077)	(0.072)
Number Previous Reforms	-0.235	0.089	0.106
	(0.174)	(0.076)	(0.127)
Reform, GDP weighted (lag)	0.508	0.106	-0.105
	(2.033)	(0.220)	(0.144)
Reform,Contiguous weighted (lag)	2.125***	-4.927**	-0.106
	(0.782)	(2.483)	(1.653)
Constant	-0.864	3.857	1.016
	(4.615)	(4.848)	(0.685)
Observations	209	209	209

Robust standard errors in parentheses

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

Source: Authors' calculations based on data from Focanti, Hallerberg and Scartascini (2013a).

B.7. Tax Revenue Regressions

The following table presents the results from running the baseline specification on revenue data.

Table B.21. Revenue Regressions, Fixed Effects

Variables	(1) VAT Revenues	(2) PIT Revenues	(3) CIT Revenues
Banking Crisis	-0.224*	-0.024	-0.154**
	(0.119)	(0.052)	(0.076)
Electoral Year, Legislature	-0.017	-0.037	-0.045
	(0.103)	(0.045)	(0.066)
Pre-electoral Year, Legislature	0.045	-0.018	-0.089
	(0.105)	(0.046)	(0.068)
IMF Program	-0.012	0.057	-0.024
	(0.103)	(0.045)	(0.067)
Inflation (lag)	-0.122**	-0.116***	-0.061*
	(0.056)	(0.024)	(0.036)
Log Per Capita GDP (lag)	0.375	0.943***	2.058***
	(0.480)	(0.210)	(0.309)
Trade (% of GDP) (lag)	0.014***	0.001	0.010***
	(0.004)	(0.002)	(0.002)
Tax Revenue (lag)	0.325***	0.018	0.135***
	(0.029)	(0.012)	(0.018)
Windfall Taxes (lag)	-0.167***	0.003	0.049**
	(0.030)	(0.013)	(0.019)
Constant	-2.002	-7.201***	-18.171***
	(4.175)	(1.826)	(2.687)
Observations	273	273	273
R-squared	0.603	0.340	0.597
Number of countries	17	17	17

Regressions include fix effects. Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B.22. Revenue Regressions, Controls

Variables	(1) VAT Revenues	(2) PIT Revenues	(3) CIT Revenues
Banking Crisis	-0.073	0.128	-0.256**
	(0.181)	(0.088)	(0.113)
Electoral Year, Legislature	-0.156	-0.052	-0.018
	(0.162)	(0.083)	(0.119)
Pre-electoral Year, Legislature	-0.025	-0.035	-0.123
	(0.173)	(0.091)	(0.120)
Partisanship	-0.125	-0.167***	-0.008
	(0.091)	(0.055)	(0.076)
Margin of Majority	-0.697	-0.239	-0.686**
	(0.480)	(0.274)	(0.348)
Checks and Balances	-0.140	-0.003	-0.530**
	(0.396)	(0.184)	(0.218)
Personalistic vote	0.129	0.823***	0.890***
	(0.324)	(0.224)	(0.251)
Quality of Bureaucracy	-0.658*	-0.018	0.526**
	(0.334)	(0.191)	(0.210)
IMF Program	-0.525***	0.306***	-0.086
	(0.154)	(0.074)	(0.104)
Inflation (lag)	-0.110	-0.080*	-0.139***
	(0.091)	(0.042)	(0.050)
Log Per Capita GDP (lag)	-0.310	0.571***	0.105
	(0.204)	(0.089)	(0.146)
Trade (% of GDP) (lag)	-0.017***	0.006***	-0.002
	(0.002)	(0.001)	(0.002)
Tax Revenue (lag)	0.402***	-0.000	0.108***
	(0.037)	(0.017)	(0.022)
Tax Revenue 1990	0.073*	0.127***	-0.106***
	(0.039)	(0.018)	(0.026)
Windfall Taxes (lag)	-0.012	0.006	-0.061***
	(0.027)	(0.011)	(0.018)
Constant	4.589**	-5.318***	2.161
	(1.818)	(0.794)	(1.310)
Observations	260	260	260
R-squared	0.802	0.643	0.367

Robust standard errors in parentheses

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

B.8. Tax Rates Regressions

The following table presents the results from running the baseline specification on rates data.

Table B.23. Rates Regressions, Fixed Effects

Variables	(1) VAT Revenues	(3) PIT Revenues	(5) CIT Revenues
Banking Crisis	0.005*	-0.013	-0.006
	(0.003)	(0.011)	(0.010)
Electoral Year, Legislature	-0.002	-0.019*	-0.016*
	(0.003)	(0.010)	(0.009)
Pre-electoral Year, Legislature	0.002	-0.014	-0.007
	(0.003)	(0.010)	(0.009)
IMF Program	0.002	-0.009	0.014
	(0.003)	(0.011)	(0.010)
Inflation (lag)	0.001	0.003	0.009*
	(0.001)	(0.006)	(0.005)
Log Per Capita GDP (lag)	0.046***	-0.282***	-0.063
	(0.014)	(0.054)	(0.048)
Trade (% of GDP) (lag)	0.000**	0.001**	0.000
	(0.000)	(0.000)	(0.000)
Tax Revenue (lag)	0.002***	0.004	0.006*
	(0.001)	(0.003)	(0.003)
Windfall Taxes (lag)	-0.001	0.004	0.004
	(0.001)	(0.003)	(0.003)
Constant	-0.295**	2.619***	0.695*
	(0.125)	(0.473)	(0.419)
Observations	219	223	223
R-squared	0.233	0.210	0.090
Number of countries	17	17	17

Regressions include fix effects. Robust standard errors in parentheses

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

Table B.24. Rates Regressions, Controls

Variables	(1) VAT Rates	(2) PIT Rates	(3) CIT Rates
Banking Crisis	0.015***	-0.042**	0.008
	(0.004)	(0.019)	(0.012)
Electoral Year, Legislature	-0.006	-0.005	-0.011
	(0.004)	(0.018)	(0.011)
Pre-electoral Year, Legislature	-0.002	-0.002	-0.004
	(0.004)	(0.018)	(0.011)
Partisanship	-0.001	-0.032***	0.032***
	(0.002)	(0.010)	(0.007)
Margin of Majority	0.004	-0.058	0.020
	(0.011)	(0.065)	(0.030)
Checks and Balances	0.012	-0.059	-0.083**
	(0.009)	(0.053)	(0.034)
Personalistic vote	0.027***	0.184***	0.032
	(0.009)	(0.039)	(0.022)
Quality of Bureaucracy	-0.015**	0.000	0.006
	(0.007)	(0.046)	(0.023)
IMF Program	0.003	0.034*	0.046***
	(0.004)	(0.018)	(0.010)
Inflation (lag)	0.006**	0.014*	0.019***
	(0.002)	(0.008)	(0.006)
Log Per Capita GDP (lag)	0.030***	0.092***	0.079***
	(0.005)	(0.025)	(0.016)
Trade (% of GDP) (lag)	-0.001***	0.001**	0.001***
	(0.000)	(0.000)	(0.000)
Tax Revenue (lag)	0.006***	-0.009**	-0.003
	(0.001)	(0.004)	(0.003)
Tax Revenue in 1990 (lag)	0.003**	-0.008**	-0.003
	(0.001)	(0.004)	(0.003)
Windfall Taxes (lag)	-0.000	-0.013***	-0.000
	(0.001)	(0.004)	(0.002)
Constant	-0.198***	-0.246	-0.519***
	(0.040)	(0.228)	(0.153)
Observations	213	217	217
R-squared	0.867	0.376	0.398

Robust standard errors in parentheses

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