Roads or Schools? Political Budget Cycles with different types of voters.

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ABSTRACT

Using a new Colombian data set (1830-2000), we analyze how changes in the electoral legislation with regard to the characteristics of voters (in terms of education and income levels) has affected fiscal policy in electoral times. In line with economic theory, we show that after the law was reformed in 1936 the composition of the expenditure shifted towards social spending (like education, health, and welfare benefits) but there was decreased spending on infrastructure and investment projects (like roads). Consistent with the literature, we also find: 1.The timing and the size of the political budget cycles changed after 1936 and 2.After 1936 there was a shift in the funding mechanisms from indirect tax revenues to more debt.
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1. Introduction

An important question in political economy is how, if at all, policy instruments affect voting behaviour. Although there is a large literature that has studied evidence of politically-driven manipulations of economic policy in electoral periods, most studies have focused attention on developed economies or on the type of government or form of democracy in place. However, the strongest evidence of opportunistic cycles in economic policy has been found in what is called "weak democracies", mainly developing economies in Latin America and Africa.

Evidence has shown that political budget cycles are persistent in developing countries and in particular in nascent democracies that are vulnerable, have weaker institutions, impose fewer restrictions on government actions and usually do not have independent central banks (Brender and Drazen, 2005). However, in recent decades these democracies have become more inclusive, which has augmented popular pressures on political leaders (Remmer, 2003).

The size and the composition (taxes vs. spending) of the electoral policy cycle also depend on the political and institutional features of the country. In particular, Latin America has been characterized as having unsophisticated voters and simple economies, creating greater incentives and opportunities for politicians to manipulate fiscal variables in order to increase the probability that they will stay in power.

Within Latin America, Colombia has been a country of electoral traditions, strongly rooted in the 19th century and reinforced by intense election campaigns and by a commitment to suffrage that grew to involve substantial sectors of Colombia society during the 20th century (Posada Carbo, 1997). Without denying the problems of the electoral system, historians such as David Bushnell (1993) and Malcom Deas (1993) have emphasized the early expansion of Colombian suffrage, the relatively high levels of voter participation in certain periods, the intensity of the competition, and the long-term impact of frequent electioneering.

These electoral traditions and political contests make Colombia an interesting case for study. In particular, the constitutional reform established in 1936 by the liberal President Alfonso Lopez Pumarejo can be viewed as a natural experiment in politics.[2]

Since independence and before this reform, the law stated that only literate men with properties or a certain amount of income per year could vote.[3]These laws had reduced the number of potential voting block to a limited group of rich and educated men with access to government information and as a result, electioneering was concentrated on just a small group of homogeneous voters. Following the constitutional reform in 1936, the group of potential voters changed. The legislative act established that, starting from the next elections (1938), all men older than 21 years of age could vote irrespective of their income or education. This reform transformed the group of voters from a small group of high income, literate, and informed men to a large and heterogeneous group with a majority being low-income and illiterate uninformed men.

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[2]This constitutional reform also stipulated among other things, agrarian reform, private property reform and a list of rights for workers (Botero, 2006).

[3]The value of property and the level of income required were updated in each new Constitution during the 19th century.

This paper studies this constitutional reform, which changed the characteristics of the voters, by reference to the theory of Political Budget Cycles. In particular, it is based our paper on the theoretical approach proposed by Rogoff and Sibert (1988), Rogoff (1990), and Drazen and Eslava (2010). The former papers introduced the signalling role of a pre-election fiscal expansion under asymmetric information and unobserved competence.[4] In these models, incumbents want to appear competent in the eyes of voters during electioneering because more competent politicians can generate higher welfare and they are then preferred by voters. They have the incentive to do this by manipulating fiscal instruments during electoral periods. One important characteristic of these signalling models is the voters' incomplete ability to observe the overall level of spending or revenues. Were they able to do so, they could perfectly infer politicians' competence.

Drazen and Eslava (2010) proposed an alternative signalling model: even if voters are well-informed or fiscal conservatives, during electoral periods fiscal manipulation may be observed via the composition of the budget (expenditure or revenues) being targeted at some particular voters at the expenses of others. If it is the composition of spending or revenues that is manipulated for electoral purposes, rational voters may infer something different from, or additional to, competence. In this view, voters who are targeted before elections want to know the incumbent's competence and also whether they will be still favoured after the election. This is a different signalling problem faced by the voters: whether receiving high targeted expenditures before elections signals a greater weight of their group in the incumbent's objective function than other voters' groups or whether it signals the interest of the incumbent in increasing the number of votes by targeting their group with more expenditure or raising less revenues. Drazen and Eslava (2010) show that even with fully rational voters, there exists an equilibrium in which voters rationally respond to electoral years' expenditure or revenues and politicians make budgetary decisions according to this behaviour.

Politicians target spending or revenues towards electorally attractive groups in electoral periods and choose their platform depending on the type of voters. Based on this, we test how the characteristics of the voters (in terms of income, education and information access) determine politicians' platforms.

Our hypothesis states that when the potential voters were a small but well specified economic group (high income, literate and well-informed men), politicians decided to target the expenditure that benefited them more (infrastructure) and this strategy shifted when the characteristics of potential voters changed. After 1936, when the majority of voters were

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[4]Competence is defined as the ability to deliver more public goods for the same level of taxes.

illiterate, low-income and uninformed men, incumbents decided to target a different type of expenditure (social) that mainly affected this new majority. In this way, they increased their probability of staying in power. However, eventually some minorities can still have political power to make this new decision non trivial to the politicians and thus the policy manipulation less strong and clear in time.

We expect that the incumbent will always prefer to choose an electoral platform that targets the expenditure and the revenues that benefit the voters most. The targetable expenditure, or revenue, changes according to the characteristics of the majority of voters. In the Colombian case, prior to 1936 when this group was homogeneous and better informed, voters belonged to the high-income group. They were mainly landowners and traders who were usually interested in increasing their profits and economic activity. Although the government could directly benefit firms in several ways, primary sources show that voters usually requested better railroads, highways, roads and bridges that could help to improve trade inside and outside the country. This particular group of voters did not request more social expenditure, such as schools or public hospitals, from the government, since they could afford this type of expenditure by themselves.

After 1936, when voters were on average less informed and more heterogeneous and the majority belonged to an illerate low- or medium- income group, the incentives for the political parties were different. Since a higher portion of voters valued more basic or subsistence necessities, politicians preferred to focus on social expenditure (public schools and hospitals) instead of investing in development projects. This could also partly explain the lag in new roads and railway system that Colombia experienced during the 20th century.

This hypothesis agrees with the results found by Lopez-Uribe and Espinosa (2012) in Colombia during the 19th century. They followed presidents' political careers, and showed that being Minister of Infrastructure during this period increased the probability of becoming President by 30% while being Minister of Education decreased it by 22%.

We keep the usual assumptions of the Political Business Cycles theories: (i) politicians are identical and opportunistic (their only interest is to remain in power) and (ii) voting rule is rationally retrospective: voters are naive and support the incumbents based on observed outcomes; if they are favourable, the incumbent is re-elected, otherwise the challenger wins.[5] These models assume that voters have imperfect information about politicians' competence and that they know it only in retrospect, while politicians know their competence from the outset. In this sense, voters base their decision on the information that is available,

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[5]Studies have criticized the characterizations of the opportunistic politician framework (see Hibb (1977), Lohmann (1998), Rogoff and Sibert (1988))

linked to what they observe. Hence, before elections incumbents attempt to signal their competence and have incentives to manipulate the public expenditure and revenues in an effort to show the results of their policies. This will increase their chances of re-election. However, the imperfection of the information, the characteristics of the voters and the tools that politicians use to stay in power (monitoring institutions) change between periods.

We should also note that, fortunately for us, the timing of presidential elections in the whole period under study was determined by the constitution, even during war periods. Since independence, Constitutions established the exact timing of presidential elections (two, four or six years).[6] In this sense, we can take election years as exogenous since these were pre-determined by the law. Going even further, presidential elections always took place in the first semester of the year, and most of them during March and May.

We focus upon the influence of electoral cycles on fiscal policies instead of dealing with how governments attempt to manipulate the economy. It seems easier to manipulate budgets than macroeconomics outcomes such as GDP, inflation or unemployment. Economic performance is the outcome of decisions taken by consumers, workers, producers and others countries as well as national and local governments. In particular, during the 19th century the economy depended mainly on imported goods for consumption and there was not a clear monetary policy and central bank did not exist. Governments are in control of their budgets, whereas they can only hope to have some indirect impact on the economy. Hence, increasing spending during electoral periods must appear a much simpler and potentially rewarding strategy than trying to produce a business cycle through fiscal and monetary policies (Blais and Nadeau, 1992). As Rogoff (1990) has pointed out, it is "more promising to focus empirical research for electoral cycles on taxes, transfers and government consumption".

We limit the analysis to presidential elections based on the idea that they have a more direct impact upon power than elections for senators and councillors. We might expect stronger electoral cycles under presidential regimes given that individual political account- ability gives stronger incentives than collective accountability (Persson and Tabellini, 2003). This has also been proved empirically in the U.S states by Lowry, Alt and Ferree (1998) who show that voters respond more to policy in gubernatorial elections than in legislative ones.

To test our hypothesis we run different exercises with two groups of dependent variables (fiscal policy). The variables in real terms help to understand the changes in magnitude

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[6] Article 102 of the 1832 constitution, article 87 of the 1843 constitution, article 27 of the 1853 constitution, article 61 of the 1858 constitution established presidential elections every four years. Article 64 of the 1863 constitution established presidential elections every two years and article 114 of the 1886 constitution established presidential elections every six years.

of the fiscal policies while the variables in percentage as a fraction of total expenditure or revenues help to understand the changes in distribution of its components.

One caveat that we should note is an overestimation of the results as a consequence of the time period of the law change. The 1930's was also a decade of important changes in terms of the role of the state as a provider of public goods. Although the notion of the welfare state was not officially established in Colombia until 1991, the idea of a major state intervention in social issues was intensified during these years. So, a higher social expenditure could not only be a result of the new type of voters but of a global change of perspective. However, we run some robustness tests showing that the main change in the political budget cycles was around 1936 compared with the years before and after. This result reinforces our hypothesis of the relationship between the change in the electoral law and a different expenditure and revenue composition in electoral periods.

This paper differs from the existing literature in two different respects. First, although we study just one country, we study the political budget cycles during a longer period, starting just after independence and ending at the beginning of the 21th century. Unlike most existing studies, our work covers 170 years (1830-2000). Second, we focus on the changes in the policy instruments and politicians' platforms when the characteristics of the voters change. Instead of giving priority to the type of government or democracy and studying the political budget cycle with reference to those categories, we concentrate on the particularities of voters. In this sense, we try to answer how, depending on the characteristics of the different groups of voters, the politicians use different policy instruments to attempt to get re-elected.

The rest of the paper is organized as follows. Section 2 gives a short historical background on Colombian politics. Section 3 briefly reviews the existing literature on political budget cycles. Section 4 describes the data. Section 5 describes the empirical setup and section 6 presents the results. Section 7 discusses some robustness tests. Finally, section 8 offers some conclusions.

2. Historical Background

Since Colombia became a republic and during different state forms that it has had between the 19th century and today (the unitary state of "Gran Colombia" (1819-1830) and "Nueva Granada" (1830-1853), the federal Regime known as "Estados Unidos de Colombia" (1853-1886), and the unitary state of "Republica de Colombia" (1886-today)); elections have been part of the daily life of its citizens. Some estimations calculate more than 200 elections during this period.

Since independence, politics in Colombia has been dominated by two strong, opposing ideologies that became official parties in 1850, with the names of the Conservatives and Liberals.[7] Although for some short periods these parties had internal divisions and formed different coalitions, these were not strong enough to persist and were easily reabsorbed into the traditional parties.[8] Some politicians also tried to establish new political parties away from the traditional ideologies and more in line with the changes that the world had, but none prospered and they were easily overcome by the traditional parties in elections.[9] The founding and development of new political parties was not guaranteed until the new Constitution in 1991, and finally in 2002 a candidate who did not belong to the traditional parties won the presidential elections.

Between 1830 and 2000, Colombia had 43 presidential elections and 6 coups, but 5 out of the 6 lasted less than 2 years in power and were the result of struggles by the opposition party. Only the military dictator Gustavo Rojas Pinilla was able to stay in power for a longer period (1953-1958), but he was defeated in the next presidential election by the Liberal candidate.

According to the national constitutions, presidential elections were to take place every four years for most of the period, on the date established by the Constitution. The only exceptions were during the "radical era" (1861-1884), when the liberal constitution established the timing at every 2 years; and during the first years of the "Regeneration era" (1886-1898), when the Conservative constitution changed the timing to every 6 years.

Presidents were elected through indirect vote until 1910, via a system in which voters chose an electoral council which in turn elected the President over the following two weeks. From 1910 until now, Colombian voters have used the direct vote.

The voters were an essential part of the election campaign. The constitution always established who could vote and what the process was, although in some important cases

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[7]Before 1850, the traditional parties were not officially founded and named as they are today. However, there existed two opposing political groups that are normally associated with the traditional parties in their ideologies: Bolivaristas with the Conservatives and Santanderistas with the Liberals.

[8]Among the most significatives divisions we found: Golgotas and Draconianos within the Liberal party (Jordan Florez, 2000) and historicos and nacionalistas within the Conservative party.

[9]These parties include: Unión Patriótica (UP), Partido Nacional Cristiano, Alianza Democrática M-19 (AD M-19), Nueva Fuerza Democrática, Movimiento de Salvación Nacional, Movimiento Unitario Metapolítico, Partido Socialista de los Trabajadores (PST), Partido Comunista de Colombia - Marxista Leninista (PCdeC-ML), Grupo Comunista Revolucionario (GCR), Alianza Nacional Popular (ANAPO), Unión Nacional Izquierdista Revolucionaria, Partido Socialista Revolucionario and Unión Republicana.

these decrees were renewed or changed.[10] Until 1936, the constitution specified that only literate males older than 21 years old who were tax payers, property owners or industry employees could vote.[11]

Each Constitution established the minimum amount of money (in terms of property or rents) required to become a voter. For example, the constitution in 1832 recognized that all men older than 21 years old with property valued at a minimum of $1.000 pesos or annual income of $500 pesos, could become voters. This minimum amount changed with the Constitution in 1843 and once again in 1886, when the lower minimum established $1.500 pesos for property and $500 pesos for annual rents.

Urrutia's (2010) work on urban wages during the 19th century allows us to make some comparisons with these minimums. The annual nominal wage of a doorkeeper in 1832 was $200 pesos and a minister earned $2.400 pesos, whilst in 1886 the doorkeeper earned $250 pesos annually and the minister $3.000 pesos. The upgrade threshold was not an issue for the government. Since this minimum was established based on nominal wages, the rigidity that urban wages showed during the entire 19th century meant that there were few big real-terms changes in the threshold of the income needed to vote. Urrutia (2010) showed that public wages changed only once or twice during fifty or sixty years in the 19th century.

Although historians (Posada Carbo, 1997) have argued that these voting requirements were not rigorously enforced, we can observe an important increase in the percentage of voters just after the change in the law in 1936. It has been roughly calculated that during the 19th century only 10% of adult male had the right to vote (Bushnell, 1993).

In 1936, President Lopez Pumarejo introduced universal suffrage for all men over 21 years old, and in 1957 Rojas Pinilla's government introduced suffrage for women over 21 years old[12].

The importance of President Lopez Pumarejo's government in 1934 and 1938 goes beyond this electoral policy. His government, known as "The Revolution in Motion", pro-

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[10]For example, the 1853 constitution established direct voting without income and education restriction, but only one election took place under these conditions before the traditional constraints were re-established.

[11]The Constitution of 1853 established universal suffrage, saying that all men older than 25 years old could vote directly to elect the President. In this sense, the requirement of education and income was eliminated. However, only one election took place under these conditions (1856), since the Constitution in 1858 once again stipulated this restriction and the indirect vote.

[12]Women obtained this right through the Legislative Act no.3 in 1954 and exercised their right for the first time at the presidential elections in 1957.

mulgated constitutional, agrarian, educational, labour and tax reforms. However, all these reforms, including the electoral one, had begun to be discussed under the previous liberal government of Enrique Olaya Herrera.

In particular, the two most important newspapers in the 1930s (*"El Tiempo"* and *"El Espectador"*) had begun to claim the need to extend the electoral suffrage in 1931, long before Lopez Pumarejo's government started. The frequent discussions on this subject in national newspapers and in political speeches make us think that the electoral reform in 1936 was the consequence of a long process of debating that ended in this particular year. In other words, 1936 was not chosen as the year of the electoral reform for a specific reason: on the contrary, the reform could have taken place some years before or after.

To summarize, Colombia has been a country of electoral traditions and elections occurred with constitutional regularity. Although political institutions were weak in some periods, traditional political parties are well established; leading to a high degree of institutionalisation of competitive politics.

3. Literature Review

In the last three decades there have been many works in the literature on political business cycles and political budget cycles. The pioneering work by Nordhaus (1975) considered the idea that governments may act opportunistically by adapting fiscal policy to the electoral cycle. He linked the opportunistic manipulation of economic policy to election times - making decisions biased against future generations - and showed the long-run and short-run equilibrium in the economy when politicians face choices between present and future welfare [13].

There are two types of model in the political business cycle research. One of these models assumes that voters are myopic, non-rational and easily fooled by policymakers, in which case it is simple to predict the existence of a systematic opportunistic cycles in fiscal policy and macroeconomic variables. The other model rejects the irrationality of voters, limiting the ability of government to manipulate the economy in order to be re-elected. Nevertheless, still appears to be opportunistic behaviour by policy makers as an equilibrium to a signalling game under asymmetric information, where voters do not know the government's competence

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[13] In this literature there are two types of model. One is the traditional opportunistic model derived by Nordhaus (1975) and the other one, called the "rational political business cycle", incorporates rational expectation and suggests strategic behaviour and asymmetric information. The most relevant works in this line are papers by Rogoff and Sibert (1988) and Rogoff (1990).

while government does.

In the structure of these models the incumbent government values being re-elected but governments differ in their levels of "competence": governments with high competence value being re-elected more highly than governments with low competence. One important feature of these models is the moral hazard problem: the incumbents' ability to manipulate policy instruments in order to bias the voters' perception in their favour. Another key feature is the existence of information asymmetry. While incumbents know their level of competence, voters can not observe it: they must try to perceive it by observing economic outcomes, in this case the production of public goods, in retrospect. Then, incumbents must signal their competence to voters to increase their chances of re-election through a higher provision of public goods, hoping that voters would attribute the increase to their competence.

In our paper, we assume the existence of asymmetric information on the part of the voters but assume that there are two levels of it (one less informed that the other one): uninformed voters (after 1936) and informed voters (before 1936). None of them observe politicians's competence perfectly, but voters before 1936 had a better signal of it.

Rogoff(1990) refined to these competency models to distinguish between different types of government expenditures: "current" or "visible" expenditures,the benefits of which can be easily observed by voters before elections; and "capital or "less visible" expenditures, the benefits of which are less easy to observe prior to elections and which in many cases are realized in subsequent periods. In this sense, an incumbent government has the incentive to focus in "visible" expenditure in order to send as efficient a signal as possible about its competence. Signals must be seen to be effective, and therefore it is more important for the government to focus on areas with the most visible expenditures instead of thinking about the timing of the benefits. In our paper, both social and infrastructure expenditure could be included in the "visible" category while the other components (finance, institutional, defence and debt) would be part of the "less visible" expenditure.

The evidence about political business cycles is not conclusive. Therefore, empirical studies began to focus on cycles in policy instruments, in particular, fiscal expansions before elections and contractionary policies once the election is over, known as "Political Budget Cycles". A political budget cycle is defined as a period of fluctuation in a government's fiscal policies, which is induced by the cyclicality of election (Shi and Svensson, 2003).The main idea in this literature is that voters make their decision based on visible economic policies. Policymakers have the incentives to stimulate the economy with the help of fiscal or monetary policies in order to generate employment gains or wealth transfers that increase their's popularity, but these policies have to be visible to the voters. Once the elections are over, contractionary policies are pursued to reduce a fiscal deficit or inflation.

The literature on political budget cycles has concentrated on the manipulation of government expenditures by the incumbents in order to get re-elected. It does not give an important role to revenues and taxes.

Empirical' works on Political Budget Cycles are extensive and have found different evidence about the incidence of fiscal deficits, total expenditures and total revenues before elections. The results differ between the group or country under study. For developed and less developed countries, Persson and Tabellini (2003) did not find any change of government expenditure before elections. Shi and Svensson (2006) provide an empirical analysis based on a large panel of developed and developing countries and found that, on average, the fiscal deficit increases by 22% in election years. However, the size of political budget cycles is much larger in developing countries. They argue that the main reason for this difference is that in developed countries there exist strong institutional constraints on politicians and a large section of informed voters, which makes fiscal policy manipulation less effective. Similar results were found by Brender and Drazen (2005) in a broad cross-section of democracies over the period 1960-2001. However, they highlight that the existence of a political expenditure cycle in the fiscal balance is extremely sensitive to the set of countries included and that once they drop "new democratic" countries the effect disappears. At the same time, they find a significant revenue cycle (revenues fall in an election year) when they only include "old democracies". In the same wave, for developing countries between 1970 and 1992, Schunknecht (1996, 2000) found increases in public expenditures and in fiscal deficits in pre-electoral periods and contractionary policies thereafter, emphasizing that these fiscal policy cycles are stronger in less trade-oriented economies[14].

Additionally, Block (2002) found evidence of pre-election manipulation of fiscal policies (fiscal deficit, public expenditure, tax revenue and government consumption as a share of GDP) in a sample of 44 Sub-Saharan African countries between 1980-1995[15]. An explication of this result is given by Brender and Drazen (2005) who argue that this could happen to "new democracies" in the first years after their transition to democracy. This might suggest that political deficit cycles only emerge when voters and the media have not yet developed the ability to monitor fiscal policy.

The literature on Latin American political budget cycles has yielded inconclusive findings. Ames(1987) found that government expenditure increased in the year before elections

[14]He also found that natural catastrophes affect current expenditure, probably through expenditure on emergency relief and improvements in the terms of trade decrease current expenditure.

[15]He also found strong evidence of political business cycles in monetary policy. In particular, election years see faster monetary expansions and lower nominal interest rates.

and decreased in the year after elections for a pool of seventeen Latin America countries between 1947 and 1982. Remmer (1993) reports that the quarterly percentage change in the fiscal balance is heterogeneous across eight South American democracies during the 1980s. Mejia Acosta and Coppedge (2001), and Amorim Neto and Borsani (2004), found that budget deficits worsen during elections but government expenditure does not increase. This result has been strengthened recently by the work of Barberia and Avelino (2011) who argue that the increase in the deficit and the fiscal difficulties during elections are mainly driven by the reluctance of governments to increase taxes.

Studies focused on particular countries and on particular political levels (national, regional or municipal) have found, in general, that the share of votes obtained by the incumbent's party is negatively related to the level of government spending and/or the fiscal deficit observed just before elections, but they do not agree on the changes in the expenditure composition before elections.

In this sense, at municipal level in Israel Brender (2005) found between 1989-1998 that voters reward high expenditure in development projects and education expenditure (measured as the education system's performance), but they penalized increases in deficits[16]. Similar results were found in Canada by Kneebone and McKenzie (2001) where there was a clear electoral cycle in revenues and spending: in particular, an increase in education, transportation, recreation and culture spending and a decrease in spending in health, social services and industrial development during electoral years. At national level, Gonzalez (2002) did not find evidence of pre-electoral increases in aggregate spending in Mexico, but there are indications that just before elections, spending on social services and health increase while the increase in investment in infrastructure starts early in the pre-election period. In addition, in Mexico Gamez and Ibarra-Yunez (2009) and in Russia Akhmedov and Zhuravskaya (2004)[17] examined the existence of an expansionary political cycle in regional public expenditure during election years and a contractionary cycle in post-electoral years, but they did not find evidence of a cyclical behaviour in infrastructure spending in electoral years.

Nevertheless, Khemani (2004) has found in local governments in India that public expenditure on investment areas rises before elections; Faal (2007) found pre-election manipulation of fiscal instruments, mainly development spending and overall primary expenditure,

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[16]In particular, Brender (2005) found that the fiscal perfomance was only relevant in the 1998 campaign when the political environment changed.

[17]Akhmedov and Zhuravskaya (2004) also found evidence that the magnitude of the cycles decreases with education, urbanization, level of democracy, transparency and freedom of media and also that cycles have become smaller over time.

in Papua New Guinea during 1988-2004; Vega (2004) reports increases in infrastructure projects before elections in Portugal; Medina (2003) concludes that fiscal deficit and capital expenditure increased in election years at provincial level in Argentina during 1985-2001; and Larrain and Assael (1997) found qualitative evidence of increases in fiscal deficits in Chile before elections in the period 1939-1993. For Colombia, the works of Eslava (2006) and Drazen and Eslava (2005) at municipal level, for the period 1987-2000 have shown that the share of votes received by the incumbent party in elections increases with capital expenditures and decreases with fiscal deficits.

In contrast to previous studies we use disaggregated data on the government budget of a single country. This allows us to run a series of regressions using 15 different budget items as dependent variables. Compared to the previous literature our data set is also larger, in the sense that we have homogenized fiscal policy variables for 170 years (from Independence up to today). This data enables us to examine sustainable changes in political budget cycles. The major difference with respect to the previous literature is that we concentrate on the relationship between different types of voters and political budget cycles instead of focusing on the relationship between the latter and political regimes.

4. The Data

The database holds information in standard format between 1831 and 2000. The national annual series of fiscal instruments and outcomes comes from different sources: *Informes del secretario de Hacienda al Congreso* (1841-1844, 1846-1859), *Memoria del Ministro de Hacienda* (1860-1895, 1904), *Liquidaciones de los Presupuestos de Rentas y Gastos* (1831-1848, 1853-1860, 1870-1878, 1884-1892, 1895-1896, 1899-1902), *Informes Especiales del Secretario de Hacienda* (1863-1867, 1874-1875, 1877-1882) and *Boletines de Estadistica* (1915-2000). For the years that the information was missing, we used official newspapers as *Gaceta de la Nueva Granada* (1840-1848), *Gaceta Oficial* (1849-1861), *Registro Oficial* (1862-1864) and *Diario Oficial* (1865-1915). We also reviewed the information provided by Soto (1837) and Galindo (1874) for the years prior to 1840.

The database has information on total revenues and expenditure liquidated and their respective disaggregated components. For the years where the expenditure was biannual (1886-1909), we checked the *Diario Oficial* daily and sum up any addition that was included to the original budget.

We aggregate the different categories of revenues and expenditure in order to homogenize them across time. For the revenues, we compress the information into five categories: indirect

taxes (customs and consumption taxes), direct taxes (income and land taxes), fees and fines from public services (institutional fees), transfers and contributions from national properties (monopolies and national properties that were sold) and treasury balance resources (revenues left from the previous year). The expenditure was aggregated in six categories: Finance (including spending related to collection of taxes), Institutional (including justice, diplomatic and legislative spending), Social (including education, health and cultural spending), Infrastructure (including investment and development projects), Defence (military spending) and National Debt (interest). We also include fiscal deficit as a dependent variable .

Once we had all the real variables, we decided to separate the data into two groups in order to test the hypothesis of political budget cycles: real variables and percentage as a fraction of total expenditure and total revenues. For each of these groups we ran exercises taking into account different time periods: 1. The entire period, to study the relationship between the change in the law in 1936 and the elections with the fiscal policy variables and 2. Separately, before and after the law was changed (1936) in order to get the sign and significance of the relationship between elections and fiscal policy for each period.

We check the stationarity of all the variables using the augmented Dickey Fuller Test of unit root. We run this test for each variable in three different time periods: 1830-2000, 1830-1936 and 1937-2000. No variable was I(2). Those that resulted being I(1) were converted to stationary variables using first differences and the unit root test was run again to assure that all the variables were I(0)[18].

We converted the variables that were in the *reales* currency into *pesos*. According to Camacho Roldan (1871), the conversion was approximately 8 reales to 1 peso. Although the law of June 2, 1846 was the first one regarding currency units and nominated the *real de plata* as the official currency, this conversion was used from 1847. The data appears in this currency until 1853 when the government returned to the currency unit *granadino* o *peso de 10 reales* (Vergara and Vergara, 1915).

Besides, at the end of the hyperinflation (1903) prices had multiplied by 40 compared to 1899 levels, and to stabilize them a new rate of $100 for $1 peso oro was established in

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[18]For the period 1830-2000 the nonstationary variables are: total expenditure, finance expenditure, social expenditure, infrastructure expenditure, defence expenditure, debt expenditure, social percentage, infrastructure percentage, total revenues, direct taxes, indirect taxes, direct taxes percentage, indirect taxes percentage, national properties percentage. For the period 1830-1936 they are: infrastructure expenditure, infrastructure percentage, total revenues, direct taxes, indirect taxes, direct percentages, indirect percentages, fees and fines percentages, national properties percentage. For the period 1936-2000 the nonstationary variables are the same as for the entire period, plus the finance percentage and the treasury balances resources revenues.

1905 (Ocampo, 1998). Thus, we converted the data for these years into pesos oro.

The Urrutia-Ruiz Price Index for the 19th century was interpolated using a Newton interpolation with the Ocampo Trade Index (1998) for the years that were missing. This was then homogenized to the same year base (1878) for the 20th century with the GRECO (2002) price index and inflation rate.

The nominal GDP for the 19th century series was taken from Kalmanovitz and Lopez (2009) and that for the 20th century from GRECO (2002). The population series was constructed using census data and GRECO estimations. Once we had the complete series of GDP, we estimated the cyclical component using different filters: Hodrick and Prescott, Baxter and King, Christiano and Fitzgerald and Butterworth, and we generated a new variable that measures the difference between the cyclical component and the trend. This new variable captures time variation in fiscal policy due to shocks to aggregate output and income.

Information about elections, party hegemonies, wars, constitutions and coups were taken from *Gaceta de la Nueva Granada* (1840-1848), *Gaceta Oficial* (1849-1861), *Registro Oficial* (1862-1864) and *Diario Oficial* (1865-2000) and from Urrutia and Arrubla (1970).

5.   Empirical Strategy

5.1.   First estimation

As we focus on the manipulation of policy tools instead of the changes in macroeconomic variables, we must test the existence of cycles in spending, revenues and deficit rather than looking directly at the behaviour of real variables.

The analysis of the changes in expenditure and revenues in electoral years according to the type of voter begins with a simple specification. This allows us to verify how politicians react in electoral periods to changes in fiscal variables when only a small portion of the population could vote (only educated and high-income men older than 21 years old), compared to periods when a higher proportion of the population can vote and their characteristics are more heterogeneous (all men older than 18 years old) [19]. We are interested in the sign and magnitude of the relationship between electoral and fiscal policy variables. We estimate the

$$\Delta fiscal\_policy_t = \beta_0 + \beta_1 t + \beta_2 outputgap_t + \beta_3 \Delta fiscal\_policy_{t-1} + \beta_4 election_{t+i} + \beta_5' \gamma_t + \varepsilon_t$$

where we first difference the dependent variable -measured initially in levels or as a percentage-. In this sense, we put more structure on the data for the identification of the election effect.

following equation for the two periods separated (1830-1936 and 1937-2000):

$$fiscal\_policy_t = \beta_{0i} + \beta_{1i}t + \beta_{2i}outputgap_t + \beta_{3i}fiscal\_policy_{t-1}$$
$$+\beta_{4i}election_{t+i} + \beta'_{5i}\gamma_t + \varepsilon_{ti}$$

where $fiscal\_policy_t$ is each component of the expenditures and revenues in real terms or the percentage as a fraction of the total expenditure, t is a trend that measures the effect of time on the dependent variable, $outputgap_t$ is a measure of cyclical deviations from GDP trend in year t, since fiscal instruments tend to be highly cyclical. The variable $election_{t+i}$ takes the value 1 if in the year t a presidential election took place and 0 otherwise and where $i = \{-2, -1, 0, 1\}$. In the case when $i = -2$ the variable takes the value 1 in the first and second year before elections (not only in the second year), in order to test for the existence of a consistent and longer effect of elections[20].

γ_t is a matrix that includes others controls: the variable $hegemony_t$ that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable war_t takes the value 1 if in year t there was a civil war and 0 otherwise[21]; the variable $constitution_t$ takes the value 1 in the years where a new constitution was established and 0 otherwise[22], the variable $coup_t$ takes the value 1 in the years where there was a coup and 0 otherwise, the dummy d_1910 takes the value 1 in 1910 and 0 otherwise and measures the change from the indirect to the direct voting system and the variable d_1957 takes the value 1 in 1957 and 0 otherwise and measures the year that women's suffrage was introduced. We are interested in the coefficient β_4, which measures the relation between elections (including periods before and after) and fiscal policy variables.

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[20] This variable was also constructed for the year of the election t and for two years before elections $t - 2$ (this includes $t - 1$ and $t - 2$).

[21] During the 19th century, Colombia had 9 civil wars and just four of them lasted just one year, two lasted two years, two lasted three years and one lasted four years. Hence, we have 18 observations with value 1. The length of the wars was taken from Vergara y Gaitan (1866), Espana (1985) and Pardo (2004).

[22] In total there were 7 constitutions: 1832, 1843, 1853, 1858, 1863, 1886 and 1991. In years where there was an interim pact (as in 1861) or partial changes to the constitution (as during Reyes' government) we established the value 0, since these changes did not generate important changes in the political, economic or electoral system and their effects and scope were lower than during periods of constitutional change.

5.2. Second Estimation

Our hypothesis states that depending on the type of voters politicians choose a different platform to increase their probability of being re-elected. In our approach, we proxy the type of potential voters according to the period of time (before or after 1936). In this sense, the effect of elections may depend on the year. In all the years up to and including 1936, voters can be associated with literate and high-income men, and after 1936 they are associated with a more heterogeneous group, with a majority of illiterate and low- and medium-income voters.

The new specification is:

$$
\begin{aligned}
fiscal\_policy_t \;=\; & \alpha_{0i} + \alpha_{1i}t + \alpha_{2i}outputgap_t + \alpha_{3i}(fiscal\_policy_{t-1}) \\
& + \alpha_{4i}\left(d\_1936 * election_{t+i}\right) + \alpha_{5i}election_{t+i} + \alpha_{6i}d\_1936 \\
& + \alpha'_{7i}\gamma_t + \varepsilon_{ti}
\end{aligned}
$$

where $fiscal\_policy_t$ is the percentage as a fraction of the total expenditure or revenues or the logarithm of the fiscal policy variables in real terms. The variable d_1936 is a dummy that takes the value 1 for the years between 1937 and 2000 and the value 0 for the years between 1830 and 1936. The rest of the variables are the same.

We are interested in the coefficient α_4, which measures whether the relationship between elections and fiscal policy variables is different before or after 1936.

6. Empirical Evidence

Tables I to V report OLS estimations and p-values for different dependent variables. Table I shows results when the dependent variable is total expenditure, table II when they are infrastructure expenditure and social expenditure, table III for the other components of expenditure (finance, institutional, defence and debt) and deficit, table IV when the dependent variable is total revenues, and table V for each of the revenues' components.

All of the tables have the same structure. For each one, column (1) indicates the period that is included in the estimation (1830-1936, 1937-2000, 1830-2000). Columns (2) to (9) indicate different values of the variable $election_{t+i}$ where $i \in \{-2, -1, 0, 1\}$. Columns (2) and

(3) reports the results when $i = -2$ [23], columns (4) and (5) when $i = -1$, columns (6) and (7) when $i = 0$ and columns (8) and (9) when $i = 1$. For each combination of the dependent variable and the election variable we ran two types of regressions: without[24] controls and with controls.

For each dependent variable we report separate estimates of β_4 in equation (1) for the periods 1830-1936 and 1937-2000 in real terms and as percentage (when is not total expenditure or revenues variable). We also present separate estimates of the interaction coefficient α_4 in equation (2) for the entire period 1830-2000. These estimates are reported in real terms (log) and as percentages. Variables in absolute terms help to understand changes in magnitude, while variables in percentage terms let us study changes in distribution of its components and make comparisons between them.

Equation (2) allows us to estimate the relation between elections and fiscal policy variables before and after the electoral reform. Here, the interaction coefficient, α_4, shows the difference between electoral and non-electoral years regarding fiscal policy variables for the two periods under study (i.e. before and after 1936). The coefficient α_5 shows the difference in fiscal policy variables between electoral and non-electoral years before 1936. Likewise, the coefficient α_6 shows the difference before and after 1936 for non-electoral years. We only report results for α_4

Hence, each cell in each table is the β_4 coefficient or α_4 interaction coefficient for the respective combination of fiscal policy variable and election variable (columns). Significant results are highlighted and p-values are in parentheses. We report all the outcomes independently of the significance.

6.1. Total Expenditure

Table I reports the relationship between electoral years and total expenditure for the three periods of study and with different measures of the dependent variable. Panel a. shows the estimates of β_4 for the two periods of study (1830-1936, 1937-2000) and panel b shows the estimates of α_4 for the entire period (1830-2000).

The estimate results indicates a clear and strong expenditure cycle before 1936 in pre-

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[23]Strictly, column (2) and (3) are a dummy variable which take the value 1 one and two years before elections. We decided to include both years to study persistence in the changes made by the budget.

[24]In the regressions without controls we only included the trend and cyclical component.

electoral years. This table indicates that total expenditure increases by around 2,000,000 pesos in pre-election years, but decreases by 1,300,000 pesos in election years. Compared to the sample average, pre-election years can explain a 21% (for one and two years before elections) and a 32% (for just one year before elections) increase in total expenditure, and post-election years can explain an 18% decrease in total expenditure. This finding is consistent with the evidence found in developing countries for the recent years (Gonzalez, 2002; Brender and Drazen, 2005; Akhmedov and Zhuravskaya, 2004).

For the second period (1937-2000), results shift considerably. Total expenditure only increases in election years but it does not change significantly before elections. In real terms, during election years total expenditure rises by 17,000,000 pesos on average compared to non-elections years. In terms of the sample average, during these years total expenditure grows by 9.4%.

If we compare the two political budget cycles (before and after 1936) in terms of the sample average, the first effect is twice that of the second one (21% vs 9.4%), showing a strong cycle before 1936. This could be a consequence, amongst other things, of a greater flexibility available to the government when controlling the budget, and of fewer government monitoring agencies before 1936.

Results in panel b. reinforce the findings: a decrease in total expenditure in pre-electoral years and an increase in electoral years after 1936 (smaller and significant only at 10%). This estimation also highlights an important change in terms of the timing and size of the cycle. Before 1936, political cycles start in the pre-election period, but this trend changes to the election year after 1936. Besides, the cycle's size is bigger before 1936 compared to the ones observed after 1936.

We can also follow the theory applied by Brender and Drazen (2005) about new and established democracies and try to study the Colombian case as a process, which started when the country became a republic and then evolved towards an established democracy. In this case, each new election is a further step in consolidating democracy in the country. Thus, according to their results and our findings in panel b., we can expect stronger political budget cycles before 1936 than after.

6.2. Infrastructure and Social Expenditure

Table II reports OLS estimates and p-values for equations 1 and 2. The table presents two panels. Panel A. shows different results when the dependent variable is infrastructure expenditure and panel B. when the dependent variable is social expenditure. Within each

panel we present estimates with different measures of the dependent variable. Sub-panels a and b report α_4 coefficient in equation (1) for the two periods of study when the dependent variable is measured in real terms and as a percentage of the total expenditure, and sub-panels c. and d. report α_4 interaction coefficient in equation (2) for the entire period when the dependent variable is measured in real terms (log) and as a percentage of the total expenditure.

As table I showed, there is a clear cycle in total expenditure. The results in table II allow us to distinguish which of the different components this additional expenditure was used for.

As this table indicates, before 1936 the expenditure excess was used to increase the infrastructure expenditure (panel A.).This component rises in real terms in pre-election years and decreases during election years (sub-panel a.). The result is also consistent with the percentages (sub-panel b.), where is shown that only this expenditure increases its participation before elections.

These findings are first approximations that corroborate our hypothesis about how the fiscal policy instruments in election times depend on the characteristics of voters. Politicians prefer to focus on infrastructure expenditure instead of others expenditures to attract more potential voters. The infrastructure spending was related to investment projects to build roads or railways that help to reduce distances and improve the transportation system and communication between regions. These projects mostly benefited traders and landowners who were interested in increasing their profits and expanding their markets.

According to Valencia (1988) and Perez (1942), during pre-industrial times in Colombia, this expenditure was viewed as the main mechanism to achieve development given the isolation of the regions and their effect on the economy. In this sense *"the promises of more infrastructure expenditure were used as political platforms"* (Valencia, 1988). Besides, the expenditure on investment projects had an immense effect on commercial activities. For example, in 1878 a local newspaper ("El Telegrafo") published the proposal of a group of traders, entrepreneurs, importers-exporters and landowners. In this publication, they criticized the government's use of public resources and proposed building new roads and bridges to connect their region and stimulate trade (Valencia, 1993).

The results before 1936 also show that infrastructure expenditure decreases during election years. We can explain this change by the date of elections. Presidential elections in Colombia have always taken place in the first semester of the year. Then, once an election has occurred, politicians who are then in power try to compensate for the excess of expenditure of the previous years by delaying or eliminating existing or new projects.

For the period 1937-2000, infrastructure spending results non-significant in any of the different election's estimates. This results indicates that this expenditure was not a priority for the government in electoral periods and was not used as a mechanism to attract new voters.

When we include the entire sample and estimate the interaction coefficient α_4 in equation (2) our hypothesis is reinforced: both measures of infrastructure expenditure decrease in pre-election years for the years after 1936 compared with the years before 1936.

Panel B reports the results when the dependent variable is social expenditure. Before 1936 there are not significant changes in social expenditure for any of the estimations.

This finding is also consistent with the hypothesis about the focus of expenditure according to the types of voter. The main beneficiaries of this expenditure were the illiterate and low-income population, who were **not** potential voters. Hence, politicians did not have any incentives to increase this expenditure in electoral periods nor to include it in their platforms.

This trend changed after 1936, although the cycle is not as strong as the one of regarding infrastructure spending. For the period 1937-2000, social expenditure is the only type of expenditure that increases significantly during elections. The results show an increase of 8,414,090 pesos in real terms and of 14% in terms of the sample average. This is consistent with the hypothesis that politicians prefer to focus on a form of expenditure that benefits the majority of voters, which in this case is social programs (education and health), not investment projects.

Although the definition of social expenditure during the 19th century may seem unclear, disaggregated reports of this expenditure make clear how it was distributed. Social expenditure was divided into two main categories: education and charity. The first category, education, had more than 70% of the total social expenditure, which was distributed mainly amongst primary and secondary schools across the country (paying teachers and rents and building new schools). The second was used to pay the maintenance of public hospitals and charity houses. The existence of a clear social expenditure and its importance could also be observed in the common idea among politicians about the necessity of education as one of the best ways to generate economic growth and better standards of livings. However, despite the usual highlighting of education by politicians, there is no evidence of an increase in this expenditure during electoral years before 1936.

Once again, when we use the entire sample, the results still hold: social expenditure, mainly education and health spending, increases in election times for the years after the new law was established compared with the period when voters were a limited group. This result

is significant whether it is measured as a percentage or as logarithm.

The significance of the results in both panels of the table II reinforces our hypothesis about the change in expenditure composition by the characteristics of potential voters.

With respect to the timing of the cycle, the explanation of the change between the two periods is related to the type of expenditure on which politicians choose to focus. In accordance with the results of Gonzalez (2002) and Block (2002), the increase in investment in infrastructure started relatively early in the pre-election period: meanwhile social expenditure tends only to increase in election years (the months before elections).

6.3. Other Expenditures and Deficit.

Table III reports results obtained from equation 1 and 2 for other types of expenditure (finance, institutional, defence and debt) and deficit.

In general, there is not a clear cycle in most of these components or the deficit. This result supports our previous findings, demonstrating that the increase observed during electoral periods in total expenditure was spent mainly on "visible" expenditure: infrastructure before 1936 and on social goals after 1936.

Panel A. indicates the absence of a cycle in the finance expenditure in any period or electoral year.

Panel B. reports the results for institutional expenditure, which is associated with bureaucratic spending. Estimates from equation 1 (sub-panel a. and b.) did not show a clear cycle in the two different periods. However, estimates from equation 2 indicates that one year before elections this expenditure decreases after 1936, compared with the years before 1936. This trend shifts during election years, as institutional expenditure increases after 1936. These results can be interpreted in terms of a change in the timing of payments for political favours. Before 1936, these payments took place before elections (as a prepayment) in order to attract new voters and increase the probability of staying in power. After 1936, they occurred in elections years (often once the election was underway) as a mechanism to pay favours (financing of political campaign) once the candidate got to power.

Panel C. shows the results when the dependent variable is defence expenditure. There is no clear cycle in this component. The only interesting result is the decrease before elections after 1936 compared with the period 1830-1936.

Panel D. presents the results when the dependent variable is debt. This indicates that

before elections this component increases, but during election years after 1936 it decreases compared with the years before the electoral reform. In this component there is also a change in the timing between the two periods. In terms of the importance of the component within the budget (measured by the percentage variable), before 1936 interests payments are less important in the budget during pre-electoral periods but once elections are over, this component reaches almost the weight that it had before. The opposite occurs for the period after 1936: before elections this component becomes more important but during elections years this importance is lost. The size of change between the two periods is also different: while the change before 1936 is around 3%, after 1936 it is only 0.6%. We do not observe significant changes when we estimate equation (1) for the two periods separately but estimates of equation (2) are significant.

Finally, panel E reports the results for deficit. This variable increase in pre-electoral periods before 1936 and decreases in post-electoral periods after 1936.The growth in the variable before 1936 could explain the difference between the increase in total expenditure versus the increase in total revenues before elections. Since not all the increase in expenditure could be compensated for by more revenues (the increase in expenditure was around 25% and that in revenues around 14%), the excess was obtained from other resources despite all the constraints. For example, rich local landowners or local banks that lend small quantities of money to the government. The rise in the public deficit observed during these years is consistent with some of the literature (Shi and Svensson, 2006; Block, 2002).

6.4. Revenues

Table IV shows estimations for each election year variable when the dependent variables are the total revenues in real terms and in logs for different periods (1830-1936, 1937-2000, 1830-2000). The estimation shows the existence of a revenue cycle one year before elections for the period 1830-1936, mainly, as we will see later, due to an increase in the collection of indirect taxes (the most important revenue at that time).

Before 1936, there is an increase in total revenues only one year before elections[25]. In real terms, total revenues increase on average by 727.912 pesos one year before elections. Evaluated at the sample average, the results imply that elections can explain a 14% increase in total revenues during pre-election times.

After 1936, the results indicate that total revenues did not change significantly during

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[25]This increase is also significant two years before elections at a10.2% significance level.

electoral periods and the inexistence of a revenue cycle. This result could be a consequence of major access to credit markets, making it easier for the government to obtain extra resources through debt instead of taxes during electoral periods. This new revenue source is less visible for the voters than higher taxes, and in some instances it is institutionally cheaper and easier to obtain than the traditional revenues.

Estimates when total revenues is the dependent variable from equation (2) are presented in panel b. These outcomes confirm the previous results. There is an important change in the revenue cycle before and after 1936 in the timing of the cycle. Total revenues decrease in pre-electoral periods after 1936 compared with previous years but they increase during electoral periods, although this increase is smaller and only significant at 10% with controls.

Table V reports estimates obtained from equation 1 and 2 for different revenues components.

Panel A indicates that the percentage of direct taxes decreased in election years after 1936, and decreased in log terms in pre-election years for the same period. This may be due to the late creation of its main component, i.e income tax (established by law 56 of 1918 but only applied from 1922) which makes the comparison of this variable between the two periods difficult.

Panels B and C show that, before 1936 the extra revenues came mainly from indirect taxes and fees and fines, which increase on average 583,665 pesos and 106,255 pesos respectively. Again, in terms of the sample average, this means that, in these years, indirect taxes and fees and fines augmented 20% and 22% respectively due to the electoral process.

Public revenues have two important characteristics during this period: 1. Highly dependent of customs and undiversified: until the process of industrialization began in Colombia during the 1920's, more than 70% of total revenues were obtained from customs taxes (Gonzales and Calderon, 2002). 2. Limited access to credit: during the 19th century, Colombia experienced serious problems accessing internal and external credit markets. This restriction translates into greater fiscal instability and fewer options during times of crisis. The constraints started to be overcome during the 1920's when the Kemmerer Commission (Junguito, 2009; López, 1992) organized the national administration and the central bank, carried out a technical revision of the administration and supervision of tax collection, and helped to create a national institution for this purpose.

Thus, if the government wanted more revenues, it had to search for mechanisms other than credit to obtain them[26]. These other resources came from revenues that already existed

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[26] The central bank was founded in 1923 and since then, and in particular during the 1930s, Colombia

as customs or fees.

Reviewing all the laws in public newspapers such as *La Gaceta Oficial, El Registro Oficial, El Diario Oficial y La Gaceta de la Nueva Granada,* we found few increases in the customs tariffs, reflecting their stability. Most increases occurred one year after a presidential election[27]. In general, we could find only small tariff changes regarding specific types of imported goods. This fact was reinforced by Ocampo (2007), who points out that few laws completely changed the tariffs.

This means that revenues did not increase before elections due to higher tariffs but because of higher collection rates. The means used to collect more revenues was to increase those that were flexible in the collection and were getting less than their potential: in some years, the customs revenues collected only 25% of what they were supposed to collect (*El Tiempo*, May 22th 1855). In this sense, this was a target revenue for the government.

Besides, the principal problem in the collection was smuggling, and the people most affected by this crime were traders, who were also potential voters. According to Laurent (2008), this problem underlines the state's inefficiency at improving controls and taking action, but at the same time it was an example of its flexibility: with low effort and money the collection rate could be increased. This seems a reasonable way to obtain more revenues during electoral periods.

Panel B and C also show the results when the dependent variable is measured as a percentage of total revenues. The results do not show big changes in the composition of revenues in electoral periods before 1936. This may be explained by the increase in the total revenues found before. As total revenues, indirect taxes and fees and fines grew in similar proportions, it was not necessary to redistribute the existing revenues.

Related to the estimates of equation 2, we find that the sign of the coefficient of the log of indirect taxes is consistent with what we found in equation 1 for the two periods, but is not significant. The non-taxable revenue from fees and fines tend to decrease both one and two years before elections for the years after 1936 compared with the previous ones.

For the period 1830-1936, we can observe in panel D a decrease in the participation of "national properties", which is a non-tax revenue, in pre-election and post-election times, but an increase in electoral years. These revenues comprise the state monopolies (mainly salt and tobacco) during the 19th century and the exploitation of mines and oil concessions during

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started an intense effort, within the international markets, to restore investor confidence.

[27]The years of the main tariff reforms are 1844, 1861, 1873, 1886, 1913 and 1931.

the 20th century. They also includes the rents received from the sale of national properties, and transfers. The level of this revenue increases before and after elections for the years after 1936, but decreases in electoral years in the same period. This trend is compared with the other period (1937-2000) when we estimate equation 2. We find an important change in the variable's performance after 1936. This variable increases in pre-electoral and post-electoral years but decreases in electoral years after 1936.

We find almost the opposite performance for the variable Treasury Balance Resources (panel E.), although most of the results are not significant.

7.   Robustness Analysis

Natural concerns with the empirical strategy include potential overestimates arising from spurious relationships or other shifts in the priorities or role of the central government. This section presents some robustness checks that address these concerns.

First, it could be the case that the investment projects were so many and permanent before 1936 that Colombia built a good infrastructure system and then it was not necessary to invest in important and ambitious projects any more; hence the government could change priorities afterwards. At the same time, we might argue that before 1936 the government and politicians did not care about education and health or that the government role in this aspect was not well-defined and they had other priorities.

With respect to the first concern, the answer would be pretty obvious for anyone who travels within the country. Today, Colombia does not have any national rail system and the gap in this regard is huge when we compare statistics with other similar countries in the region. Even when it was clear that the country was falling behind in terms of infrastructure, few initiatives were taken by the central government, and even fewer succeeded.

The deficiencies of the country in this respect could be clearer when we compare it with other countries in the region. Table VI shows the number of kilometres per capita of roads and the total routes-km of rail lines for most countries in Latin America in the last decade. As the table points out, Colombia has one of the lowest levels of roads per person (only above Brazil) and of routes per km of rail lines. This suggests that the infrastructure expenditure must not have been a concern of the government in the past, and that it is not correct to think that this was a minimal problem after 1936 to the extent that politicians had no need to focus on this type of spending.

With respect to concerns about the importance of social expenditure before 1936, we

can focus mainly on the role of the government in the education system. As Ramirez and Salazar (2007) and Jaramillo (1980) have pointed out: although Colombia had one of the lowest education levels in the 19th century (even lower than the Latin American level) and its expansion during this period was low; education in its three levels, primary, intermediate and superior had been one of the principal interests since the first republican government of Bolivar. Table VII shows the proportion of students enrolled in primary school/population from the beginning of the Republic up to 1905 and indicates that this proportion increased more than twofold during this period. Table VIII shows the difference between public and private schools and indicates the relative importance of the former compared to the latter. Besides, the table clarifies that most of the schools were public instead of private.

The role of the government in education was also observable in their policies to expand higher education in the country, and in the fact that the most important public universities were founded during the 19th century. It was clear to the government how important education was for achieving development. Most of the politicians of that time, independently of their ideology, highlighted in their political speeches the importance of education for the society and the role of the government to boost it. At the time, the huge importance of education for development was clear, and in this sense the discussion focused on the role that the Church should have in it.

Another important concern is the year when the law changed. The 1920s and 1930s were important decades for social movements that claimed a new role for the State and new rights (in terms of labour conditions and equality). Although Colombia was not much of an open country ideologically speaking, many of these ideas arrived in the country and their impact was perceived in the frequency on the newspapers highlights. It is difficult to settle on a particular year to test this effect, since these were two decades of different movements and ideologies. However, we can try to separate the effect of the global movement from the effect of the electoral law, by changing the dummy year variable (varying the year from 1936). If the effect is the same in terms of magnitude when we move the dummy variable a few years earlier or later, we can argue that the main effect was not due to 1936 by itself but instead due to a more general effect that occurred throughout the decade, such as the labour and social movements.

Table IX shows the results for the main variables of the hypothesis (infrastructure and social expenditure) when we change the dummy year (four years before and after the change in the law) in order to see if, when we take an additional election or we drop the previous one, the coefficients change in magnitude. If it is true that 1936 was a random year or the result of a bigger change in an ideological trend, we would expect similar results if we include one more or one fewer election, as the estimates will capture a general effect in no particular

year. However, if we observe small differences in the magnitude and smaller coefficients in both new estimates, the validity of regarding 1936 as the year of change will be higher. It is important to note that we can only expect small differences in the coefficient because these are associated with an average of many years and we are only increasing or reducing a small portion of the variable (4 years).

As table IX indicates, the new estimates for the dummy year in 1932 and 1940 are consistent with the estimates in table I and II in terms of the sign of coefficients and significance. However, all the coefficients are strictly smaller than in the original regressions, showing that the strongest effect is concentrated around 1936. This suggests that the change in the target expenditures is not a result of a general change in an ideological trend, but that it is linked specifically to 1936.

To reinforce the results, we also ran the main regressions eliminating the periods with elections every two years (1861-1884). The importance and significance of the main results do not change when we exclude these years. Total expenditure increases in pre-electoral years before 1936 and in electoral years after 1936; social expenditure increases in election years after 1936; and infrastructure expenditure increases in pre-electoral years before 1936.

8.   Conclusions

The objective of this work is to analyse how the change in electoral legislation in 1936, regarding the characteristics of voters, affects fiscal policy in electoral periods. Using a new Colombian data set (1830-2000) we estimate OLS equations and interpret the size and magnitude of the interaction coefficient. We find the existence of Political Budget Cycles in Colombian history. These cycles are stronger in expenditure than in revenues.

In line with our hypothesis, we also show that before the electoral legislature was reformed in 1936, total expenditure increased in pre-electoral periods and this increase was due mainly to higher infrastructure spending. This pattern changed after 1936, since when total expenditure has increased only in the election year. This pattern was driven by higher social expenditure.

Another important finding is linked to the timing and size of the political budget cycles in the two periods (before and after 1936). In the first period, the expenditure cycle existed only in pre-electoral years (one year and two years before elections) while in the second period, this cycle only existed during election years. The magnitude of the coefficients also indicate that the cycle was stronger in the first period than in the second one. This could be explained, in part, by the greater flexibility that the government had to control and

manipulate the budget and to the existence of fewer government monitoring agencies.

We find the existence of a weaker revenue cycle. Total revenues increased before 1936 in pre-electoral periods, due to an increase in indirect taxes, but this trend disappears after 1936. Hence, the higher expenditure in electoral year in the second period must have been financed with debt. It is not clear if this is due to the change in voters' characteristics or to a greater access to credit markets.

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	Table I							
	Total Expenditure							
	One and Two years before elections		**One year before elections**		**Election year**		**One year after election**	
	(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	a) Dependent Variable: Total Expenditure in real terms - β4 coefficient - Equation 1.							
1830-1936	**1.360e+06***	**1.637e+06****	**2.392e+06****	**2.453e+06****	**-1372000***	**-1.367e+06****	619,072	614,679
	(0.079)	**(0.049)**	**(0.036)**	**(0.040)**	**(0.036)**	**(0.039)**	(0.392)	(0.394)
1937-2000	-1.007e+07	-1.005e+07	-9.842e+06	-9.800e+06	**1.64e+07***	**1.70e+07***	-7.389e+06	-7.659e+06
	(0.177)	(0.196)	(0.163)	(0.181)	**(0.083)**	**(0.079)**	(0.339)	(0.333)
	b) Dependent Variable: Total Expenditure in log - α4 coefficient - Equation 2.							
1830-2000	**-0.215****	**-0.215****	**-0.282*****	**-0.275****	**0.183***	**0.195***	-0.0872	-0.0891
	(0.0288)	**(0.0271)**	**(0.008)**	**(0.012)**	**(0.0957)**	**(0.0776)**	(0.437)	(0.427)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p- values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. In a) is reported β4 coefficient and the dependent variable is Total expenditure in real terms. In b) is reported α4 coefficient and the dependent variable is Total Expenditure in log. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i {-2,-1,0,1}.Columns (2) and (3) reports the results when i=-2, columns (4) and (5) when i=-1, columns (6) and (7) when i=0 and columns (8) and (9) when i=1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.

Table II

A) Infrastructure Expenditure

	One and Two years before elections		One year before elections		Election year		One year after election	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
a) Dependent Variable: Infrastructure Expenditure in real terms - β4 coefficient - Equation 1.								
1830-1936	786,339***	1.081e+06***	849,408***	925,953***	-652,603**	-591,678**	44,191	119,712
	(0.000)	(0.000)	(0.003)	(0.004)	(0.025)	(0.027)	(0.851)	(0.630)
1937-2000	2.044e+06	1.664e+06	2.643e+06	2.381e+06	-2.192e+06	-2.275e+06	-1.151e+06	-47,016
	(0.192)	(0.275)	(0.124)	(0.160)	(0.270)	(0.254)	(0.612)	(0.982)
b) Dependent Variable: Infrastructure Expenditure in percentage - β4 coefficient - Equation 1.								
1830-1936	0.0476***	0.0536**	0.0399*	0.0384*	-0.0255	-0.0256	0.00326	0.00501
	(0.007)	(0.018)	(0.054)	(0.092)	(0.236)	(0.210)	(0.844)	(0.780)
1937-2000	0.0207	0.0207	-0.00274	-0.00180	-0.0171	-0.0166	-0.00467	-0.00209
	(0.103)	(0.110)	(0.809)	(0.865)	(0.137)	(0.183)	(0.745)	(0.887)
c) Dependent Variable: Infrastructure Expenditure in log - α4 coefficient - Equation 2.								
1830-2000	-0.584***	-0.568***	-0.697***	-0.680***	0.313	0.369	-0.00282	0.0600
	(0.000)	(0.000)	(0.000)	(0.000)	(0.101)	(0.159)	(0.988)	(0.754)
d) Dependent Variable: Infrastructure Expenditure in percentage- α4 coefficient - Equation 2.								
	-0.0555***	-0.0578***	-0.0523**	-0.0516**	0.0175	0.0195	0.0203	0.0245
	(0.00502)	(0.00914)	(0.0184)	(0.0271)	(0.466)	(0.399)	(0.291)	(0.216)

B) Social Expenditure

	One and Two years before elections		One year before elections		Election year		One year after election	
a) Dependent Variable: Social Expenditure in real terms - β4 coefficient - Equation 1.								
1830-1936	68,477	57,865	93,877	79,355	-86877	-90439.56	53,058	24,812
	(0.241)	(0.300)	(0.148)	(0.262)	(0.100)	(0.136)	(0.133)	(0.530)
1937-2000	-4.991e+06*	-5.786e+06*	-203,050	-807,854	9.527e+06**	8.473e+06**	-859,472	526,477
	(0.080)	(0.051)	(0.933)	(0.738)	(0.0180)	(0.0265)	(0.794)	(0.861)
b) Dependent Variable: Social Expenditure in percentage - β4 coefficient - Equation 1.								
1830-1936	0.00318	0.000520	-0.00473	-0.00698	-0.00432	-0.00455	0.00287	0.00231
	(0.521)	(0.925)	(0.322)	(0.155)	(0.369)	(0.389)	(0.589)	(0.674)
1937-2000	0.000238	-0.00235	0.00583	0.00419	0.0256	0.0231	-0.00682	-0.00284
	(0.980)	(0.817)	(0.489)	(0.636)	(0.182)	(0.241)	(0.532)	(0.790)
c) Dependent Variable: Social Expenditure in log - α4 coefficient - Equation 2.								
1830-2000	-0.382***	-0.298**	-0.262	-0.255	0.436***	0.414***	-0.217	-0.176
	(0.005)	(0.037)	(0.130)	(0.154)	(0.002)	(0.003)	(0.114)	(0.167)
d) Dependent Variable: Social Expenditure in percentage- α4 coefficient - Equation 2.								
	-0.00748	-0.00403	0.0123	0.0152	0.03182*	0.02998*	-0.0171	-0.0145
	(0.674)	(0.827)	(0.547)	(0.465)	(0.052)	(0.068)	(0.363)	(0.439)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p- values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents two panels. Panel A) shows results when dependent variable is Infrastructure expenditure and panel B) when is Social Expenditure. In each panel: a) reports β4 coefficient when the dependent variable is in real terms. b) reports β4 coefficient when the dependent variable is in percentage. In c) reports α4 when the dependent variable is in log. in d) reports α4 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i {-2,-1,0,1}.Columns (2) and (3) reports the results when i=-2, columns (4) and (5) when i=-1, columns (6) and (7) when i=0 and columns (8) and (9) when i=1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.

Table III								
	One and Two years before elections		One year before elections		Election year		One year after election	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A) Dependent Variable: Finance Expenditure								
a) Dependent Variable in real terms - β4 coefficient - Equation 1.								
1830-1936	42,700	83,771	6,928	12,386	-54,310	-47,484	-91,434	-90,769
	(0.730)	(0.482)	(0.738)	(0.910)	(0.527)	(0.790)	(0.527)	(0.557)
1937-2000	-2.614e+06	-508,160	-1.039e+07	-9.143e+06	93,841	951,089	1929327	-1.621e+06
	(0.568)	(0.896)	(0.152)	(0.202)	(0.974)	(0.736)	(0.765)	(0.754)
b) Dependent Variable as percentage - β4 coefficient - Equation 1.								
1830-1936	-0.00983	-0.00822	-0.0254	-0.0239	0.00302	0.000647	-0.0165	-0.0143
	(0.509)	(0.599)	(0.142)	(0.177)	(0.857)	(0.972)	(0.297)	(0.359)
1937-2000	-0.0238	-0.0210	-0.0258	-0.0242	-0.0157	-0.0139	0.0137	0.00632
	(0.156)	(0.223)	(0.239)	(0.283)	(0.137)	(0.188)	(0.478)	(0.742)
c) Dependent Variable in log - α4 coefficient - Equation 2.								
1830-2000	-0.0635	-0.0711	-0.0815	-0.0745	0.0615	0.0918	-0.0150	-0.0263
	(0.662)	(0.622)	(0.582)	(0.614)	(0.677)	(0.547)	(0.935)	(0.887)
d) Dependent Variable as percentage- α4 coefficient - Equation 2.								
	0.0204	0.0177	0.0233	0.0220	-0.00918	-0.00617	0.0186	0.0148
	(0.304)	(0.389)	(0.258)	(0.289)	(0.653)	(0.772)	(0.422)	(0.507)
B) Dependent Variable: Institutional Expenditure								
a) Dependent Variable in real terms - β4 coefficient - Equation 1.								
1830-1936	62,442	92,133	327,645	337,281	**-347,450****	**-288,100***	-65,174	-54,561
	(0.780)	(0.714)	(0.408)	(0.412)	**(0.042)**	**(0.068)**	(0.606)	(0.670)
1937-2000	-3.127e+06	-3.130e+06	-1.963e+06	-1.991e+06	1.054e+07	1.076e+07	-3.082e+06	-3.084e+06
	(0.505)	(0.532)	(0.593)	(0.602)	(0.235)	(0.242)	(0.400)	(0.431)
b) Dependent Variable as percentage - β4 coefficient - Equation 1.								
1830-1936	-0.0105	-0.00818	-0.000660	-0.000166	-0.0224	-0.0160	-0.00165	0.00106
	(0.442)	(0.542)	(0.962)	(0.990)	(0.134)	(0.261)	(0.900)	(0.933)
1937-2000	-2.84e-05	-0.000925	0.00235	0.00164	0.0168	0.0162	-0.00327	-0.00504
	(0.998)	(0.929)	(0.778)	(0.850)	(0.294)	(0.331)	(0.693)	(0.564)
c) Dependent Variable in log - α4 coefficient - Equation 2.								
1830-2000	-0.117	-0.123	**-0.257****	**-0.257****	**0.444*****	**0.456*****	-0.184	-0.191
	(0.345)	(0.303)	**(0.032)**	**(0.031)**	**(0.0041)**	**(0.0039)**	(0.124)	(0.114)
d) Dependent Variable as percentage- α4 coefficient - Equation 2.								
	0.00435	0.000884	-0.00493	-0.00780	**0.0490****	**0.0417***	-0.0131	-0.0136
	(0.800)	(0.958)	(0.765)	(0.636)	**(0.0383)**	**(0.0864)**	(0.459)	(0.447)
C) Dependent Variable: Defence Expenditure								
a) Dependent Variable in real terms - β4 coefficient - Equation 1.								
1830-1936	68,477	57,865	93,877	79,355	-86877	-90439.56	53,058	24,812
	(0.241)	(0.300)	(0.148)	(0.262)	(0.100)	(0.136)	(0.133)	(0.530)
1937-2000	-464,221	-540,081	-1.011e+06	-1.107e+06	-1.595e+06	-1.590e+06	1.864e+06	2.485e+06*
	(0.704)	(0.671)	(0.546)	(0.520)	(0.134)	(0.164)	(0.140)	(0.0610)
b) Dependent Variable as percentage - β4 coefficient - Equation 1.								
1830-1936	-0.0270	-0.0126	0.0249	0.0355	-0.0109	-0.0113	0.0186	0.0295
	(0.291)	(0.614)	(0.410)	(0.223)	(0.678)	(0.672)	(0.524)	(0.265)
1937-2000	-0.000352	0.00221	-0.00967	-0.00799	**-0.0191****	**-0.0187****	**0.0186****	**0.0214****
	(0.972)	(0.826)	(0.351)	(0.461)	**(0.012)**	**(0.014)**	**(0.049)**	**(0.017)**
c) Dependent Variable in log - α4 coefficient - Equation 2.								
1830-2000	-0.113	-0.126	**-0.391****	**-0.393****	0.0676	0.0943	-0.000775	-0.0384
	(0.481)	(0.410)	**(0.0335)**	**(0.0258)**	(0.656)	(0.533)	(0.997)	(0.830)
d) Dependent Variable as percentage- α4 coefficient - Equation 2.								
	0.0294	0.0245	-0.0269	-0.0317	-0.0123	-0.00891	-0.00458	-0.0133
	(0.262)	(0.341)	(0.358)	(0.244)	(0.636)	(0.732)	(0.882)	(0.631)

D) Dependent Variable: Debt Expenditure								
a) Dependent Variable in real terms - β4 coefficient - Equation 1.								
1830-1936	147,296	123,245	105,878	83,549	185,081	127,748	-14,657	-72,184
	(0.337)	(0.363)	(0.454)	(0.550)	(0.340)	(0.462)	(0.926)	(0.640)
1937-2000	1.031e+06	1.042e+06	71,254	56,988	-881,411	-881,593	-2.799e+06	-2.958e+06
	(0.597)	(0.609)	(0.970)	(0.977)	(0.639)	(0.651)	(0.147)	(0.139)
b) Dependent Variable in percentage - β4 coefficient - Equation 1.								
1830-1936	0.00345	-0.00410	-0.0253	**-0.0301***	0.0405	0.0362	-0.0187	-0.0274
	(0.862)	(0.832)	(0.152)	**(0.099)**	(0.105)	(0.111)	(0.354)	(0.189)
1937-2000	0.00179	0.00134	0.00557	0.00537	-0.00867	-0.00966	-0.00989	-0.0113
	(0.873)	(0.910)	(0.637)	(0.656)	(0.495)	(0.465)	(0.317)	(0.292)
c) Dependent Variable in log - α4 coefficient - Equation 2.								
1830-2000	-0.133	-0.118	0.0261	0.0492	-0.190	-0.167	0.0253	0.0431
	(0.456)	(0.500)	(0.880)	(0.783)	(0.334)	(0.382)	(0.879)	(0.794)
d) Dependent Variable in percentage- α4 coefficient - Equation 2.								
	-0.00180	0.00162	**0.0377***	**0.0408***	**-0.0521***	**-0.0495***	0.00894	0.0143
	(0.940)	(0.944)	**(0.0828)**	**(0.0689)**	**(0.0611)**	**(0.0624)**	(0.682)	(0.528)
E) Dependent Variable: Deficit								
a) Dependent Variable in real terms - β4 coefficient - Equation 1.								
1830-1936	902455	1298273	**1684460****	**1802758****	-929364	-851650	550605	712609
	(0.231)	(0.105)	**(0.044)**	**(0.034)**	(0.247)	(0.321)	(0.508)	(0.410)
1937-2000	1.15e+07	1.24e+07	5515193	6329632	2.15e+07	2.20e+07	**-3.79e+07****	**-4.24e+07****
	(0.475)	(0.456)	(0.769)	(0.744)	(0.251)	(0.254)	**(0.041)**	**(0.029)**
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p- values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Finance Expenditure, panel B) when is Institutional Expenditure, panel C) when is Defense Expenditure, panel D) when is Debt Expenditure, panel E) when is Deficit. In each panel: a) reports β4 coefficient when the dependent variable is in real terms. b) reports β4 coefficient when the dependent variable is in percentage. In c) reports α4 when the dependent variable is in log and in d) reports α4 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i {-2,-1,0,1}.Columns (2) and (3) reports the results when i=-2, columns (4) and (5) when i=-1, columns (6) and (7) when i=0 and columns (8) and (9) when i=1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.

	Table IV							
	Total Revenues							
	One and Two years before elections		One year before elections		Election year		One year after election	
	(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	a) Dependent Variable: Total Revenues in real terms - β4 coefficient - Equation 1.							
1830-1936	406928	449910	**697983***	**727912****	-238855	-242599	-123216	-127846
	(0.139)	(0.102)	**(0.051)**	**(0.040)**	(0.473)	(0.453)	(0.693)	(0.702)
1937-2000	- 1985e+07	-2061e+07	-1016e+07	-1119e+07	3112e+06	4779e+06	2249e+07	2373e+07
	(0.286)	(0.304)	(0.457)	(0.447)	(0.840)	(0.763)	(0.536)	(0.560)
	b) Dependent Variable: Total Revenues in log - α4 coefficient - Equation 2.							
1830-2000	**-0.174****	**-0.164****	**-0.171****	**-0.169****	0.105	**0.128***	0.0161	0.0301
	(0.0175)	**(0.0228)**	**(0.0468)**	**(0.0474)**	(0.175)	**(0.0881)**	(0.857)	(0.742)
Controls Included	No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p- values of equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. In a) is reported β4 coefficient and the dependent variable is Total Revenues in real terms. In b) is reported α4 coefficient and the dependent variable is Total Revenues in log. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i {-2,-1,0,1}.Columns (2) and (3) reports the results when i=-2, columns (4) and (5) when i=-1, columns (6) and (7) when i=0 and columns (8) and (9) when i=1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.

	One and Two years before elections		One year before elections		Election year		One year after election	
	(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**

Table V

A) Dependent Variable: Direct Taxes

a) Dependent Variable in real terms - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	29165	16697	-832.9	-10065	-23805	-29077	-10207	-25365
	(0.391)	(0.634)	(0.967)	(0.664)	(0.417)	(0.377)	(0.756)	(0.454)
1937-2000	-3247e+06	-1594e+06	-4453e+06	-3427e+06	905584	2087e+06	2275e+06	-1694e+06
	(0.289)	(0.532)	(0.126)	(0.202)	(0.721)	(0.362)	(0.651)	(0.610)

b) Dependent Variable in percentage - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	-0.00301	- 0.00507	-0.003	- 0.0051	0.005	0.006	-0.004	-0.007
	(0.634)	(0.440)	(0.467)	(0.321)	(0.454)	(0.432)	(0.422)	(0.268)
1937-2000	0.0202	0.0231	0.00387	0.00548	**-0.0254****	**-0.0244***	0.00257	-0.00837
	(0.183)	(0.130)	(0.812)	(0.738)	**(0.0408)**	**(0.0513)**	(0.907)	(0.699)

c) Dependent Variable in log - α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	**-0.327***	**-0.380****	**-0.286***	-0.292	0.272	0.285	0.0337	0.0608
	(0.0878)	**(0.0393)**	**(0.0930)**	(0.133)	(0.442)	(0.417)	(0.863)	(0.759)

d) Dependent Variable in percentage- α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	0.0266	0.0240	0.00482	0.00397	**-0.0291****	**-0.0300****	0.00796	0.00490
	(0.111)	(0.154)	(0.780)	(0.822)	**(0.0496)**	**(0.0454)**	(0.727)	(0.831)

B)Dependent Variable: Indirect Taxes

a) Dependent Variable in real terms - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	**380343****	**400812****	**573000*****	**583665*****	-230931	-236192	31238	19279
	(0.017)	**(0.010)**	**(0.000)**	**(0.000)**	(0.250)	(0.241)	(0.857)	(0.920)
1937-2000	2258e+06	1005e+06	7267e+06	6310e+06	-3118e+06	-2685e+06	-3531e+06	-1993e+06
	(0.505)	(0.771)	(0.112)	(0.149)	(0.467)	(0.518)	(0.328)	(0.573)

b) Dependent Variable in percentage - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	0.0144	0.00703	0.0109	0.00474	-0.0174	-0.0152	0.020	0.022
	(0.500)	(0.745)	(0.663)	(0.857)	(0.504)	(0.558)	(0.369)	(0.320)
1937-2000	0.0285	0.0273	**0.0363****	**0.0358***	-0.0142	-0.0152	-0.0170	-0.0131
	(0.114)	(0.156)	**(0.0401)**	**(0.0528)**	(0.458)	(0.449)	(0.447)	(0.590)

c) Dependent Variable in log - α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	-0.102	-0.0942	-0.108	-0.105	0.0486	0.0667	-0.0718	-0.0557
	(0.156)	(0.182)	(0.189)	(0.195)	(0.609)	(0.489)	(0.385)	(0.515)

d) Dependent Variable in percentage- α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	0.0146	0.0179	0.0206	0.0243	0.000967	-0.00253	-0.0417	-0.0375
	(0.605)	(0.522)	(0.507)	(0.436)	(0.975)	(0.937)	(0.175)	(0.245)

C) Dependent Variable: Fees and Fines

a) Dependent Variable in real terms - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	19425	2572	**105388***	**106255***	31973	29836	39630	34864
	(0.681)	(0.963)	**(0.057)**	**(0.060)**	(0.606)	(0.640)	(0.525)	(0.581)
1937-2000	**-1791e+06****	**-1621e+06* (0.090)**	-160890	-207111	593046	737082	1262e+06	990449
	(0.047)		(0.820)	(0.770)	(0.599)	(0.512)	(0.307)	(0.464)

b) Dependent Variable in percentage - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	0.000	0.000	0.0147	**0.0160***	0.001	0.000	0.000	0.002
	(0.908)	(0.994)	(0.134)	**(0.098)**	(0.812)	(0.991)	(0.944)	(0.800)
1937-2000	**-0.0261****	**-0.0254****	0.000424	0.00114	0.0101	0.0108	0.0135	0.0137
	(0.010)	**(0.013)**	(0.973)	(0.929)	(0.221)	(0.214)	(0.190)	(0.209)

c) Dependent Variable in log - α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	**-0.459****	**-0.400****	-0.203	-0.191	0.154	0.207	0.0534	0.110
	(0.0101)	**(0.0270)**	(0.312)	(0.313)	(0.396)	(0.255)	(0.793)	(0.571)

d) Dependent Variable in percentage- α4 coefficient - Equation 2.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-2000	**-0.0264***	**-0.0256***	-0.00758	-0.00809	0.00613	0.00721	0.0115	0.0109
	(0.0558)	**(0.0684)**	(0.641)	(0.612)	(0.595)	(0.553)	(0.415)	(0.433)

D) Dependent Variable: National Properties

a) Dependent Variable in real terms - β4 coefficient - Equation 1.

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1830-1936	24735	2501	-19363	-14991	213768	151894	-77263	-95992
	(0.784)	(0.971)	(0.851)	(0.884)	(0.144)	(0.239)	(0.459)	(0.398)

D) Dependent Variable: National Properties							
a) Dependent Variable in real terms - β4 coefficient - Equation 1.							
1830-1936							
24735	2501	-19363	-14991	213768	151894	-77263	-95992
(0.784)	(0.971)	(0.851)	(0.884)	(0.144)	(0.239)	(0.459)	(0.398)
1937-2000							
-1796e+06*	**-1863e+06***	-455630	-455453	708826	644188	1770e+06	1914e+06
(0.064)	**(0.071)**	(0.660)	(0.678)	(0.642)	(0.683)	(0.284)	(0.268)
b) Dependent Variable in percentage - β4 coefficient - Equation 1.							
1830-1936							
- 0.0311**	**-0.0231****	**-0.0341****	**- 0.0277***	**0.045****	**0.046*****	**-0.0296****	**-0.029***
(0.018)	**(0.021)**	**(0.032)**	**(0.055)**	**(0.011)**	**(0.002)**	**(0.028)**	**(0.081)**
1937-2000							
0.00096	0.00093	0.00644	0.00662	0.00165	0.000967	-0.00135	-0.00047
(0.787)	(0.807)	(0.117)	(0.110)	(0.702)	(0.832)	(0.745)	(0.912)
c) Dependent Variable in log - α4 coefficient - Equation 2.							
1830-2000							
-0.134	-0.125	0.100	0.0987	-0.363	-0.326	0.411	0.423
(0.515)	(0.528)	(0.636)	(0.640)	(0.188)	(0.244)	(0.140)	(0.155)
d) Dependent Variable in percentage- α4 coefficient - Equation 2.							
0.0336**	**0.0296****	**0.0463*****	**0.0425*****	**-0.0474****	**-0.0472*****	**0.0320****	**0.0258***
(0.0131)	**(0.0134)**	**(0.00410)**	**(0.00434)**	**(0.0116)**	**(0.00317)**	**(0.017)**	**(0.089)**
E) Dependent Variable: Treasury Balance Resources							
a) Dependent Variable in real terms - β4 coefficient - Equation 1.							
1830-1936							
48624	66534	95392	104242	**-137391****	**-124265****	-86112	-75495
(0.501)	(0.460)	(0.421)	(0.413)	**(0.042)**	**(0.037)**	(0.174)	(0.153)
1937-2000							
-2281e+06**	**2339e+06****	**-1559e+06***	**-1658e+06***	-712433	-568370	**3860e+06*****	**4014e+06****
(0.043)	**(0.046)**	**(0.086)**	**(0.077)**	(0.557)	(0.645)	**(0.009)**	**(0.011)**
b) Dependent Variable in percentage - β4 coefficient - Equation 1.							
1830-1936							
0.008	0.009	0.0147	0.0157	-0.0217	-0.022	-0.016	**-0.015***
(0.524)	(0.547)	(0.493)	(0.490)	(0.110)	(0.103)	(0.121)	**(0.099)**
1937-2000							
-0.00426	-0.00432	**-0.0118***	**-0.0120***	-0.00306	-0.00226	0.0111	0.0119
(0.520)	(0.534)	**(0.051)**	**(0.056)**	(0.649)	(0.739)	(0.155)	(0.160)
c) Dependent Variable in log - α4 coefficient - Equation 2.							
1830-2000							
-0.332	-0.294	-0.663	-0.631	0.497	0.507	0.626	0.727
(0.497)	(0.562)	(0.275)	(0.308)	(0.347)	(0.334)	(0.223)	(0.163)
d) Dependent Variable in percentage- α4 coefficient - Equation 2.							
-0.0116	-0.0115	-0.0247	-0.0252	0.0214	0.0224	**0.0277****	**0.0289****
(0.439)	(0.457)	(0.262)	(0.270)	(0.139)	(0.120)	**(0.029)**	**(0.024)**
Controls Included							
No	Yes	No	Yes	No	Yes	No	Yes

Notes: The table reports OLS estimates and p- values for equation 1 and 2. Each cell is a different regression. Column (1) indicates the period that is included in the estimation. The table presents five panels. Panel A) shows results when dependent variable is Direct Taxes, panel B) when is Indirect Taxes, panel C) when is Fees and Fines, panel D) when is National Properties, panel E) when is Treasury Balance Resources. In each panel: a) reports β4 coefficient when the dependent variable is in real terms. b) reports β4 coefficient when the dependent variable is in percentage. In c) reports α5 when the dependent variable is in log and in d) reports α5 when the dependent variable is in percentage. Columns (2) to (9) indicates the timing of the variable "election_{t+i}" where i {-2,-1,0,1}.Columns (2) and (3) reports the results when i=-2, columns (4) and (5) when i=-1, columns (6) and (7) when i=0 and columns (8) and (9) when i=1. For each combination of the dependent variable and the election variable we run two type of regressions: without and with controls. The estimation without controls only includes the "trend" and the "cyclical component". The estimation with controls also include the variable "hegemony" that takes the value 1 if the conservative party was in power in year t and 0 if it was the liberal or a dictator; the variable "war" takes the value 1 if in year t there was a civil war and 0 otherwise; the variable "constitution" takes the value 1 in the years where a new constitution was established and 0 otherwise, the variable "coup" takes the value 1 in the years where there was a coup and 0 otherwise, the dummy "d_1910" takes the value 1 in 1910 and 0 otherwise and measures the change from indirect to direct voting system and the variable "d_1957" takes the value 1 in 1957 and 0 otherwise and measure the year that was established the women's suffrage. P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.

Table VI				
Country	**Year**	**Roads, Total Networks (Km per capita)**	**Year**	**Rail Lines (Total Route-Km)**
Colombia	**2009**	**0.284**	**2009**	**1,672**
Argentina	2003	0.609	2010	25,023
Bolivia	2009	0.822	2009	2,866
Chile	2009	0.474	2010	5,352
Brazil	2004	0.096	2010	29,817
Costa Rica	2009	0.850		
Ecuador	2007	0.315		
Jamaica	2009	0.821		
Mexico	2009	0.327	2010	26,704
Nicaragua	2009	0.385		
Paraguay	2008	0.506		
Peru	2009	0.440	2010	2,020
Puerto Rico	2008	0.709		
Uruguay	2004	2.354	2008	2,993
Venezuela			2008	336
Source: World Bank				

Table VII	
Students enroll in primary school / Population	
1827	150
...	
1835	119
...	
1837	152
1838	160
...	
1843	139
1844	138
1845	134
...	
1847	137
1848	137
...	
1850	131
1851	125
...	
1874	269
...	
1882	221
...	
1887	215
...	
1890	206
1891	220
...	
1893	217
1894	211
...	
1896	226
...	
1898	256
...	
1903	259
...	
1905	480

Source: Ramirez and Salazar (2007)

Table VIII		
Number of Students enroll in primary school		
	Public Schools	**Private Schools**
1837	21,168	4,903
1838	22,343	6,015
1843	18,359	7,933
1844	19,361	7,763
1845	19,418	7,401
1848	21,511	7,631
1850	21,678	7,143
...		
1916	329,573	18,412
...		
1950	758,156	50,338
Source: Ramirez and Salazar (2007)		

Table IX						
	1932					
	One and two years before elections		**One year before elections**		**Election years**	
	Without Controls	**With Controls**	**Without Controls**	**With Controls**	**Without Controls**	**With Controls**
Total expenditure (in log)	**-0.194***	**-0.195****	**-0.258****	**-0.252****	0.169	0.178
	(0.0523)	**(0.0466)**	**(0.0171)**	**(0.0232)**	(0.138)	(0.126)
Social Expenditure (in log)	**-0.422****	**-0.404****	**-0.307****	**-0.283***	**0.367****	**0.381****
	(0.001)	**(0.003)**	**(0.047)**	**(0.069)**	**(0.0121)**	**(0.0127)**
Social Expenditure (%)	-0.0128	-0.00958	0.00775	0.0107	**0.0314***	**0.0280***
	(0.448)	(0.584)	(0.691)	(0.587)	**(0.0553)**	**(0.0889)**
Infrastructure Expenditure (in log)	**-0.542****	**-0.519****	**-0.680****	**-0.659****	0.211	0.270
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	(0.310)	(0.208)
Infrastructure Expenditure (%)	**-0.0524****	**-0.0510****	**-0.0505****	**-0.0493****	-0.00431	-0.00255
	(0.00874)	**(0.0194)**	**(0.0261)**	**(0.0387)**	(0.857)	(0.913)
	1940					
	One and two years before elections		**One year before elections**		**Election years**	
	Without Controls	**With Controls**	**Without Controls**	**With Controls**	**Without Controls**	**With Controls**
Total expenditure (in log)	**-0.227****	**-0.226****	**-0.291****	**-0.284****	0.181	**0.195***
	(0.020)	**(0.0195)**	**(0.00704)**	**(0.00941)**	(0.101)	**(0.0796)**
Social Expenditure (in log)	**-0.387****	**-0.363****	**-0.284***	-0.260	**0.415****	**0.427****
	(0.005)	**(0.009)**	**(0.0744)**	(0.104)	**(0.0033)**	**(0.0029)**
Social Expenditure (%)	-0.00921	-0.00582	0.0110	0.0139	**0.0352****	**0.0323***
	(0.614)	(0.756)	(0.592)	(0.507)	**(0.0329)**	**(0.0512)**
Infrastructure Expenditure (in log)	**-0.570****	**-0.554****	**-0.689****	**-0.673****	**0.319***	**0.365***
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.0922)**	**(0.0598)**
Infrastructure Expenditure (%)	**-0.0514****	**-0.0527****	**-0.0500****	**-0.0491****	0.0188	0.0199
	(0.00879)	**(0.0143)**	**(0.0231)**	**(0.0325)**	(0.435)	(0.394)
P-values are reported for the respective tests. *** Denotes signficance at 1% level. ** Denotes signficance at 5% level. * Denotes signficance at 10% level.						