

Political manipulation in the enforcement of labour regulations in Brazil

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Abstract

Increasingly, the literature on labour regulation is turning to the *de facto* implementation of employment laws to understand their labour market effects, rather than simply analysing their *de jure* provisions. This article takes a political economy look into the space between institutions and implementation by investigating empirically whether labour regulations are selectively enforced according to political motivations, and identifying the political strategies used along the electoral cycle.

Matching a unique dataset of all fines imposed by labour inspectors at a municipality level in two of Brazil's largest and most industrialised states for the past 13 years with data on electoral results at municipal, state and federal levels, the analysis finds evidence of electoral cycles in sanctioning, with fewer fines given out in election years. The political motives and channel for manipulation are then uncovered by looking at the influence of partisan alignment and electoral competition on the targeting of towns. Towns where the governor faces fierce electoral competition ("swing voter" towns) receive fewer fines on average, whilst in gubernatorial election years core supporter towns are instead rewarded for their support, particularly where the mayor is a political ally of the governor. The president's local electoral interests also affect the distribution of fines, but only when he is aligned with the state governor and the latter is in his first term.

In the light of the institutional analysis, these results are indicative of a marginal political interference at the state level into the enforcement of labour regulations aimed at promoting governors' electoral success.

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Introduction

It is widely recognised in the political economics literature that regulations should be drawn up by elected officials but enforced by an independent bureaucracy in order to safeguard impartiality in their implementation, sheltering enforcement from short term political considerations. In practice however bureaucrats are rarely immune from the influence of powerful politicians. This article investigates whether the enforcement of labour regulations in Brazil is captured by politicians, by analysing the allocation of fines for labour infractions at a municipality level for evidence of the targetting of towns based on distributive politics motivations. There is an ongoing debate in Brazil about the implementation of labour regulations, particularly over the degree of discretion which labour inspectors should enjoy and the adequacy of the resources at their disposal. While the Brazilian Constitution and Labour Code (RIT, *Regulamento da Inspeção do Trabalho*) grant generous benefits and strict employment protection to workers, these are only very weakly upheld in practice. It is broadly argued that this is partly due to the overwhelming impunity enjoyed by infractious firms following inspections. While this is generally ascribed to a lack of resources available to the Inspectorate, politicians have been reluctant to remedy it. Yet to many researchers, these tight regulations are the cause of many of Brazilian labour market woes, such as its very high turnover rate and low labour productivity. This combination of tight regulation and low enforcement should draw attention to the incentives of both politicians and social actors. This article partly aims to contribute to the policy debate by empirically analysing the political economy of regulatory enforcement in this context and investigating whether sanctioning is immune from political motivations.

There are various reasons to believe that politicians at various institutional levels may benefit from exerting influence over the sanctioning of firms, particularly in the states of Sao Paulo and Minas Gerais, two of Brazil's most industrialised and populous states where labour relations are of crucial electoral importance and where employers and labour unions are key political actors¹. Brazil has some of the most stringent labour regulations in Latin America. While these aim to protect workers' welfare, in doing so they also substantially increase the cost of labour, imposing a significant wedge between pay and take-home wage, resulting in high unemployment and informality rates. Almeida and Carneiro (2009) show in the context of Brazil that the enforcement of labour regulation is a binding constraint on firm size and reduces firms' productivity, employment and output. The effective lifting of these regulatory burdens by suspending or reducing enforcement therefore represents a substantial subsidy for employers. Note that the reduction of sanctions would often

¹Labour unions are very rich and have strong political connections in Brazil as a result of the important place they were given in the 1988 Constitution, which was enshrined after the overthrow of the dictator in which they played a major role.

be in the interest of workers as well if it safeguards jobs by removing the threat of plant closures². In fact, a closer study of the regulatory system in practice reveals that while employers often evade fines, workers generally end up losing their jobs because employers' method to evade fines mostly involves launching an appeal process and shutting the plant down before a legal judgement is reached. The ability to influence the behaviour of bureaucrats could therefore be very instrumental for politicians who want to bolster their electoral support.

A key challenge is then to identify the precise channels for political pressure on the bureaucracy responsible for enforcement of labour regulations. The Labour Inspection Secretariat (SIT, *Secretaria de Inspeção do Trabalho*) carries a lot of political weight and is highly decentralised. Its Director is a highly prized bureaucratic office, as it controls one of the largest and most educated bureaucracies in the Labour Ministry with representation all over Brazil. As a result of a long struggle by the bureaucracy, this office has gained substantial independence from politicians. The Directors of the SIT have been career inspectors since the late 90s - rather than political appointees - and Article 3 of the 4,552/02 Decree establishing the rules of the Labour Inspectorate (RIT, *Regulamento da Inspeção do Trabalho*) places the inspectors under the technical authority of the national authorities in order to grant them more autonomy from regional political power. In practice however, it appears that the selection of firms for inspection is seldom left to inspectors due to the sheer volume of firms and denunciations they have to deal with³. More importantly, the Regional Office Superintendent, who oversees regulatory enforcement within each state, is appointed directly by the Labour Minister upon recommendation by and as a favour to the state governor. This office has, among others, authority over the final decision upon whether or not to enforce fines and over their amount.

Manipulation in the enforcement of labour regulations has been documented in various contexts. Ronconi (2010) exploits the existence of an electoral cycle in the staffing of labour inspectorates in Argentina to proxy for enforcement in his study of the effects of enforcement on compliance. In the context of Brazil, Tandler (2002) observes in the case of two large clusters of firms well-known for not respecting labour regulations what she describes as:

“a kind of unspoken deal between politicians and their constituents - myriad small-firm owners, many in the informal sector. If you vote for me, according to this exchange, I won't collect taxes from you; I won't make you comply

²Labour law in Brazil does not grant syndicates the right to negotiate on behalf of individual firms' workers. For example, unions cannot negotiate a pay cut in a downturn in exchange for the guarantee that no workers will be laid off because the Constitution forbids pay cuts. Similarly, if firms incur a substantial fine they cannot negotiate pay cuts against no job losses.

³See Cardoso and Lage (2005).

with other tax, environmental, or labor regulations; and I will keep the police and inspectors from harassing you.”

While data on the number of inspections is not available, hence the empirical analysis cannot claim to identifying the sort of direct political interference in the work of inspectors reported in the above quote, patterns in the imposition of fines point to political manipulation motivated by distributive politics at the gubernatorial level. The number of fines issued to firms in breach of labour regulations is on average significantly lower during election years, in particular during municipal election years, even when controlling for municipality fixed effects, including a time trend for possible trends in inspection activity and controlling for time varying municipality characteristics⁴. There are alternative explanations for this effect, such as the extra work that the event of an election may demand from inspectors in order to prepare reports on their local activity. If political manipulation is what is driving these fluctuations, we should expect intervention to be motivated by politicians’ interests, in which case the targeting of sanctions across towns and across periods would be influenced by such political factors as the level of local electoral competition and the partisan alignment of politicians. In fact, it emerges that those towns where the governor had least electoral support in the previous election, that is where he faces most political competition, have on average fewer fines. Towns where the president faced a tight electoral race also receive fewer fines, but only in states where the governor is a political ally and he is in his first term, while mayors’ electoral support has no influence on the distribution of fines. In the light of the institutional analysis, this pattern is interpreted as evidence that a key channel for political interference is at the governor’s level, probably through the Regional Superintendent whom he effectively nominates. Finally, I investigate whether a specific electoral strategy is implemented by looking at how the targeting of towns changes along the electoral cycle. Interacting the political variables with election year dummies I find that in state election years, those towns where the governor has strong electoral support are rewarded with a significant reduction in sanctioning, in particular where the mayor is aligned with the governor’s party, while in municipal election years towns where the governor faces most electoral competition receive on average fewer fines. These results are also similar to those identified by (Ferraz, 2007)’s analysis of environmental license approvals in the state of Sao Paulo, in particular the reversal of strategy during election years. However, while he finds evidence of a political quid pro quo between governors and mayors that are politically aligned, there is no evidence of enforcement being used to help bolster support for mayors during municipal elections. Yet mayors do seem to have a role in the interference into the

⁴Note that due to data limitations, only town population is controlled for. The number of job contract terminations at a state level is also introduced in some estimations to control for fluctuations in the labour market.

labour inspectorate, as the governors' electoral strategy is more significant in towns with aligned mayors. One explanation may be that mayors from the same political party as the governor act as a local intermediary with social actors in the municipality - employers and unions - but are rewarded by governors through other means, such as intergovernmental transfers⁵. In fact, if governors cannot reward mayors in the future because they face a term limit, the number of fines distributed is significantly larger in towns where mayors are aligned.

These results illustrate various predictions about the political manipulation of government resources made by the literature on distributive politics. On the one hand, in non-gubernatorial election years the pattern of enforcement is in line with a “swing voter” strategy as modelled by (Lindbeck and Weibull, 1987) and (Dixit and Londregan, 1996), where politicians target towns where they faced a tight electoral race in order to sway the electorate in their favour. On the other hand, during state election years governors follow a “core supporter” strategy, as described by (Cox and McCubbins, 1986), of rewarding electoral strongholds.

The paper is structured in the following way: Part 1 analyses the background institutional (Chapter 1) and political (Chapt. 2) contexts; Part 2 describes the data (Chapt. 3) and explains the empirical methodology (Chapt. 4); finally, Part 3 presents and interprets the results (Chapt. 5) and concludes.

Part I

Institutional and political context

1 Labour regulation and enforcement

1.1 Institutional structure of the Labour Inspection Secretariate

The Labour Inspection Secretariat (SIT) is one of the four offices directly below the Minister's office in the Labour and Employment Ministry (MTE). It is composed of a central office in the federal capital Brasília and 27 decentralized units that are also directly subordinate to the Minister. The 27 Regional Labour and Employment Superintendencies of (SRTE, *Superintendencia Regionais do Trabalho e Emprego*) are located in each of the 26 states plus the Federal District. These support and monitor the work of the labour inspectors who work from 114 Subregional Labour Offices (GR, *Gerencia Regional*) and 480 smaller agencies (*Agencia Regional*), each having jurisdiction over constituencies of

⁵(Grossman, 1994) draws a model in which the central politicians helps local political allies in exchange for their support during election times.

one or more municipalities. The positions of power within the inspectorate's institutions are politically strategic, not least because employment and labour rights in particular are key electoral issues in Brazil. The Head of the Labour Inspection Secretariat (SIT, *Secretaria de Inspeção do Trabalho*) is in control of a large bureaucracy that reaches into all parts of the country, and is in part responsible for the enforcement of taxes that represent a significant share of the federal budget. There has been a move towards greater organisational autonomy, more resources, and higher professionalisation in the upper echelons of the Secretariate since the mid 1990s. For example, the past four heads of the SIT have been career inspectors - rather than political appointees as was previously the case. But whilst in theory the institutional organisation of the inspectorate and bureaucrats' work has moved towards greater autonomy from politicians' influence, in practice anecdotal evidence as well as official reports paint the picture of an overstretched bureaucracy that lacks the resources to fully enjoy the extent of its official autonomy.

There are currently 2,997⁶ labour inspectors (AFT, *Auditor-Fiscal do Trabalho*) in Brazil, a figure that is widely recognised to be far too low, as each inspector is on average responsible for 32 thousand potential workers and 2,470 firms⁷. The allocation of resources to regional offices is also decided centrally by the Ministry of Labour following a simple rule that takes into account the population of the area, its estimated informal employment rate depending on the size and sector of firms operating there, and the industrial activity⁸. Two inspectors are allocated per geographical area within each SRTE's circumscription and are randomly rotated every twelve months so as to minimise the chances that they will be captured by local elites. These are supplemented by mobile task forces that cut across geographical areas to implement special enforcement programs where they are most needed. The Decree 4,552/02 of the new Labour Inspection Regulation deepened the autonomy of labour inspectors by subordinating them directly to the federal authority⁹. Yet although this decree grants them the power to inspect and issue a Notice of Infraction to any firm within the geographic area of their agency, the volume of denunciations received and the limited resources available to the agencies means that inspections are rarely direct visits to randomly selected firms¹⁰. Consequently, inspectors are generally

⁶Information from June 2010 available on the ILO website at http://www.ilo.org/labadmin/info/lang-en/WCMS_114935/index.htm

⁷This estimate is based on estimates of the active population - 95 million - and number of economic entities - 7.4 million - from the 2009 *RAIS* dataset available on the IBGE website.

⁸However, just as Almeida and Carneiro (2009), the details of this formula are unknown to this author.

⁹See Cardoso and Lage (2005), p13

¹⁰According to a Labour Ministry document (2004:7, reported in Cardoso and Lage (2005)):

"The greatest source of information that, in compliance with the priorities laid out in planning, will guide inspection activities are the denunciations filed by labour unions, the Public Labor Ministry, other governmental and nongovernmental bodies, and workers themselves, who turn to Inspection Auditors from the Regional Labor Office daily."

told which firms to inspect. Such a situation of excess demand may leave space for a two-speed system involving a selection of the cases investigated based on political criteria. Moreover whilst the career of Labour Inspector is highly professionalized, the heads of the SRTEs who have a key role in determining the issuance of sanctions to firms remain politically appointed by the state governor. The next subsection describes the heavy regulatory burden faced by firms, and the procedures for issuing sanctions.

1.2 Labour regulations and sanctions

Brazilian law burdens employers with substantial regulations and mandatory contributions. Employers are responsible for registering workers' employment on a work permit which entitles workers to wage and non-wage benefits paid for by the employer. These include retirement benefits, unemployment insurance, and contribution to a severance pay fund, the FGTS (Employment Duration Guarantee Fund), which requires the payment of 8% of the monthly salary into a bank account that is accessible to the employee in case of unfair dismissal. These mandatory non-wage benefits amount to 85% of workers' net wage¹¹, pricing low productivity workers out of the formal labour market and contributing to the widespread avoidance of labour law. The informality rate in Brazil rose from 40% in 1980 to 60% in 1990. Beside the Brazilian Labour Code (CLT, *Consolidação das Leis do Trabalho*), which includes 922 such contractual regulations, employers also bear the capital cost of abiding by the more than 2000 items of a Health and Safety Code. Yet despite such generous provisions for workers' welfare, abuse is reportedly widespread and apart from certain areas of infraction, such as child or slave labour which special task forces have been effective at tackling, most firms get away with it unpunished.

Inspectors have discretion in their response to infractions, provided these do not pose a significant threat to workers' health. In the event that they decide to issue a fine, inspectors must first give a Notice of Infraction within 24 hours of the inspection, after which the firm then has ten days to present its defense. It is then the superintendent of the SRTE who ultimately has the authority to decide on the imposition or not of a fine, and on its amount, within guidelines set by the law for the amount by which each type of infraction is punishable.

Once a fine is issued the firm can appeal to the central inspectorate office in the Federal District. This is common, particularly in the case of large firms, and because of the scarce resources dedicated to treating such cases, the judicial procedure takes years to come to a decision. As a result, a great majority of sanctioned employers end up evading their fines by closing down the firm. Nonetheless, fines still carry substantial costs for both employers and employees. In the period of study, firms were compelled to make a

¹¹World Bank, (2004) Brazil: equitable, competitive, sustainable : contributions for debate

deposit of the full value of the fine whilst waiting for the case to be dealt with¹². As for workers, while the visit of an inspector and subsequent redressment of their working conditions represents a welfare gain, it is not clear that the imposition of a fine upon inspection also does, as its likely short term consequence is a combination of job loss or firm closure. In the analysis presented in the next section, the dependent variable used in all regressions is not the number of inspections but the number of fines imposed. This leads me to interpret reductions in the number of fines as a short term favour for voters, where as it is not obvious that interference in the actual inspection of firms would be as amenable to the same interpretation.

Finally, employers' compulsory contributions represent a substantial source of revenue for the government. The federal tax structure is dominated by turnover and payroll taxes, the former accounting for nearly 30% of taxes (excluding FGTS), while payroll taxes, including social security contributions, account for over 25% of federal revenue¹³. Although FGTS collections due to inspections generally represent under 5% of total FGTS revenue, this amounted to 60% of the Labour Ministry's budget in 2003 (BRL 1bn for a total budget of BRL 1.6bn)¹⁴. For this reason, labour inspectors' remuneration includes a commission for the amount of FGTS collected and large firms with a high payroll have increasingly become the focus of inspections.

During the period of study, the institutional structure of the SIT has moved significantly towards providing more autonomy to labour inspectors and sheltering them from local and federal political interests. In practice however, it is argued that malpractice by employers is still widespread and mostly left unpunished, particularly in the case of large firms. Moreover, the institutional analysis reveals that the scope for political interference remains present at the state level, through the nominated Regional Superintendent. Whilst potential mechanisms and incentives for political manipulation of the issuance of sanctions are identifiable, the absence of documentation of such practices is notable. One explanation for this might be the absence of a public database of inspections or fines. Indeed, the dataset used in this analysis has to my knowledge never before been released, and due to the limited resources available to the inspectorates, the data is also scarcely used to follow up on inspections by inspectors.

¹²This requirement was ruled unconstitutional by the Supreme Federal Court in February 2010.

¹³See World Bank, (2004) Brazil: equitable, competitive, sustainable : contributions for debate

¹⁴See Cardoso and Lage (2005) for calculation.

2 Electoral politics in Brazil

The president, state governors and town mayors are elected every four years, with the elections staggered at a two year interval. During the period of study, the state and federal executive were elected in 1998, 2002 and 2006, and three municipal elections were held in 2000, 2004 and 2008. The electoral rules (including the election date) are the same throughout the country. President, governors and mayors are all elected through a dual-ballot plurality rule (runoff system), except in towns of fewer than 200,000 inhabitants, where simple plurality rule applies for mayoral elections. Registering to vote and voting are compulsory for all citizens aged 18-70 under Brazilian law.

The period of study covers four presidential mandates, two successive mandates of Fernando Henrique Cardoso of the centrist-right Brazilian Social Democracy Party (*Partido da Social Democracia Brasileira*, PSDB) from 1995 to 2002, followed by Luiz Inácio Lula da Silva of the Workers' Party (*Partido dos Trabalhadores*, PT) from 2003 to 2010. Although both parties enjoy large support in Sao Paulo, the state of Sao Paulo has been governed by the PSDB since 1994. This provides variation in the alignment of state and federal level politicians, with both executives ruled by the same PSDB party from 1995 to 2002, and a governor from the opposition PSDB during the PT presidency of Lula from 2003 to 2010. Similarly the state of Minas Gerais was ruled by the PSDB for the entire period, bar one term from 1999 to 2002 when the Brazilian Democratic Movement Party (*Partido do Movimento Democrático Brasileiro*, PMDB) was in power.

The Brazilian constitution was amended in 1997 to allow two consecutive terms for executive posts, giving governors and the president the opportunity to run for re-election in 1998 and mayors to stand for re-election in 2000. Therefore, during the 2001-2004 mandate mayors were in either of two positions - serving their first term with a potential re-election in the next term, or serving their second term and facing a binding term limit. This change of institutions is exploited to identify whether the ability to repay a political favour through the ability to run for another term affects the manipulation of fines at a local level. Municipal governments in Brazil are responsible for the provision of many public goods such as health, education, garbage services and transportation and as such receive large intergovernment transfers from the federal government. Consequently, they wield significant political power, particularly in larger towns. The analysis will therefore look into the interference into the imposition of sanctions by governors to favour mayors that are politically aligned, or the president if he is a political ally.

There is substantial evidence of the use of distributive transfers for electoral purposes in Brazil. Bugarin and Ferreira (2005) show that governors favour municipalities ruled by a mayor of their own party in the distribution of voluntary intergovernmental transfers, while Finan (2004) shows that federal deputies target public investments from budgetary

amendments for public works to reward municipalities for local support. More relevant to this article, Ferraz (2007) finds that the issuance of environmental licences is targeted to municipalities based on patronage concerns in the state of Sao Paulo. Environmental licenses are subject to political influence because they can be targeted at specific municipalities and have an important impact on job creation, so they can be used to gain political support. Similarly, the sanctioning of firms following labour inspections involves substantial fines and can lead to the closure of firms and destruction of its employees' jobs¹⁵.

Part II

Data and empirical methodology

3 Data and descriptive statistics

The empirical analysis makes use of municipality-level data from all 1498 towns in Sao Paulo and Minas Gerais, two of the largest and most industrialised states in Brazil. The data on labour inspections was provided by the Labour Ministry (*MTE, Ministerio de Trabalho e Emprego*), and includes the number of inspectors for each Subregional Office and Regional Office, the towns where these are located, and the towns included within the remit of inspectors in each office. For each town, there is annual data on the number of fines distributed to firms between 1995 and 2010 for several different types of infractions¹⁶. These include the denial of breaks, excessive working hours, wage issues, denial of transport money, failure to pay contribution to workers' pension/severance fund *FGTS* (8% of wage), or to register them for unemployment insurance, failure to respect Health and Safety norms, failure to register employment on worker card (informal employment), child labour, and others¹⁷.

As over a hundred new towns in the mid-1990s and because the data provided by the MTE for 2010 is incomplete, the sample used for the current empirical analysis includes all 1498 towns over the 13 year period running from 1997 to 2009, forming a panel with 19474 observations. Three mayoral elections (2000, 2004, 2008) and three gubernatorial and presidential elections (1998, 2002, 2006) took place during this time period. For each

¹⁵See Almeida and Carneiro (2009)

¹⁶Note that the 2010 data is incomplete, so it is excluded from the analysis. Moreover, because electoral data is not readily available for the 1992 mayoral election, the analysis begins in 1997, the first year for which the party of both the mayor and governor in each town and state is known.

¹⁷At the moment, only the total number of fines is used in the analysis, but next steps could involve looking into the composition of fines distributed to see which types of fines becoming more or less frequent along the electoral cycle.

town, the data obtained from the Superior Court of Electoral Justice (*TSE, Tribunal Superior Eleitoral*) includes candidates' name and party, the vote share obtained in each municipality in each round of the election, the participation rate and size of the electorate. Using this data I construct three dummy variables that take value 1 if politicians at different institutional levels are of the same party. For example, $May - Gov\ Aligned_{ijt} = 1$ if the mayor's party is the same as the governor's party in town i in state j in year t . Similar dummies account for the partisan alignment of governor and president; mayor and president. I also construct a variable $Gov.Margin_{ijt}$ (resp. $Pres.Margin_{ijt}$, $May.Margin_{ijt}$) that measures the difference between the share of votes earned by the incumbent and his closest contestant in town i in the last election. These variables are used to measure the local level of electoral competition faced by politicians in each town. Towns where the margin of votes is small, or negative in the case of towns where the governor actually lost the vote, are considered "swing" towns where the politician has little electoral support¹⁸. On the contrary, towns where the incumbents' margin of votes in the previous election is large are "core supporter" towns. These variables and their interactions with electoral timing and partisan alignment variables allow to study how the targeting of towns for sanctioning is affected by the local political environment. These results are then interpreted in the light of the institutional analysis and of theories of distributive politics in order to identify the likely political channels for influence and attempt to understand the patronage strategies implemented. Finally, I match the names of incumbent politicians with those of politicians in the previous election to identify politicians who face a term limit from those who can run for reelection. This distinction is likely to be important if the manipulation of bureaucrats is done as a favour to a politician at another level. For example, a mayor can repay a governor for his favours by bolstering local support for him at the next election if he still in his first term only.

Table 1 in Appendix A reports summary statistics for all variables. Note first of all that the statistics reported for Town Characteristics reflect averages over all towns for one year, 2007 or 2000, depending on whether the data was obtained from the 2000 Population Census or from a national statistics office, IBGE, except the population data, which is available annually from 1997 to 2008 from the IBGE. Because I currently only have data for one year for all these variables, I cannot use them in the regression analysis to control for time-varying heterogeneities that might be confounding the results. Due to the lack of data, the control variables included in the analysis are municipality population and the total number of job contracts terminated at a state level.

Finally, Table 2 in Appendix B reports, for each variable, the results of a t-test for

¹⁸Note that incumbent governors and president could have earned a minority of votes in some towns and still won the election in the state (resp. nation). Therefore, whilst mayors' margin of votes is necessarily positive, theirs can be null or negative.

mean differences between the two capital cities (Sao Paulo and Belo Horizonte) and the rest of the sample, as these two cities are outliers in the sample. The means of all variables are significantly different across these two subsamples, except for the political characteristics. The inclusion of municipality Fixed Effects and control variables should account for the major differences in the number of inspections, fines, population and economic activity, so that the political effects identified are robust to inclusion of these towns in the sample. Preliminary regressions using dummies for the capitals and interactions with the political variables, not reported here, reveal no significant difference in the results.

4 Methodology

The empirical analysis aims to test whether the enforcement of labour regulations is independent of political considerations. The dependent variable in all regressions is the total annual number of fines distributed at a municipal level. I begin by testing whether the number of fines varies along the municipal and/or state and federal electoral cycles. The initial regression exploits the time-series dimension of the data, regressing the total number of fines on dummy variables for election years. Municipality fixed effects are used to control for time-invariant between-town heterogeneities. A time trend is also included to control for changes in the staffing of the inspectorates¹⁹.

$$Fines_{ijt} = \gamma_i + t + \beta_0 + \beta_1 SF.Election_{ijt} + \beta_2 M.Election_{ijt} + \epsilon_{ijt} \quad (1)$$

where γ_i are municipality fixed effects and t is a time trend. A significant β coefficient indicates that the intensity with which firms are sanctioned for labour regulation infractions changes in election years, possibly with the purpose of swaying voters. However, the significance of this coefficient could be due to other reasons than political manipulation. It is plausible that the work of bureaucrats is affected by the event of an election due to a change in political administration, possible policy readjustments or simply extra workload in election years to report on the inspectorate's activity for the purpose of the political debate.

If the enforcement of regulations is influenced by political considerations, then the variation in the number of fines across municipalities should follow local political characteristics such as the partisan alignment of mayors with state governor or president and the distribution of votes in the previous election. Similarly to Ferraz (2007), I therefore introduce the margin of victory variables into specification (1) as a measure of electoral competition. This aims to capture the use of distributive politics to favour towns through selective sanctioning for labour code infractions based on previous local electoral results.

¹⁹More details on the interpretation of coefficients are given in the next section.

The three dummy variables for partisan alignment are also introduced, taking value 1 respectively if mayor and governor, mayor and president, and governor and president in year t are from the same party in town i of state j . The second specification can be written:

$$Fines_{ijt} = \gamma_i + t + \beta_0 + \beta_1 Elections_t + \beta_2 Aligned_{ijt} + \beta_3 Margin_{ijt} + \epsilon_{ijt} \quad (2)$$

where positive significant coefficients β_2 indicate that incumbent politicians who influence the work of the inspectorate favour political allies from within their party. The combinations of significance on the coefficients from the dummy variables is also indicative of the level at which political influence over regulatory enforcement occurs. A significantly negative β_3 is generally taken as evidence of political patronage in the political economy literature, as it means that politicians favour those towns where they have strong support by lowering sanctioning of firms, or increasing it in towns where they face strong opposition. Alternatively, a positive coefficient is interpreted as politicians reducing enforcement in towns where they need to bolster support from “swing voters”, so that a small margin of victory in the previous election leads them to reduce enforcement in those towns.

Finally, I interact the political variables with election timing dummies to see how the targeting of towns varies along the electoral cycles. Note that politicians’ ability to return favours depends on their opportunity for reelection. I therefore match the names of incumbent politicians with the names of the previous incumbent’s and construct a dummy for “lame ducks”. This takes value 1 for incumbent politicians in their second mandate²⁰. The third specification is:

$$Fines_{ijt} = \gamma_i + t + \beta_0 + \beta_1 Aligned_{ijt} + \beta_2 Election_t + \beta_3 Margin_{ijt} + Aligned_{ijt} * Election_t + \epsilon_{ijt} \quad (3)$$

Note that only the significant results are reported in the results table in the Appendix, although regressions were run using all variables and their interactions.

The dependent variable in all regressions takes on non-negative integer values so a count regression model is used for all regressions. This entails assuming that the conditional mean function for the count dependent variable follows an exponential distribution²¹. In order to control for potential time-invariant confounding factors I use a Poisson Fixed Effects estimation, which allows for arbitrary dependence between γ_i and the regressors. A Hausman, Hall and Griliches (1984) transformation is used to generate a multinomial conditional mean for the dependent variable that does not depend on

²⁰Prior to the 2000 election, mayors were only allowed one mandate. Incumbent governors and politicians could run for reelection in the 1998 election.

²¹See Cameron and Trivedi (1998) for count data regression analysis.

γ_i , allowing to estimate the β coefficients consistently by Quasi-Maximum Likelihood²². Robust standard errors are computed using Wooldridge (1999)'s specification to produce consistent estimates, even in the presence of overdispersion.

Part III

Results and interpretation

5 Main results

The results are reported in the Appendix. The sample used for all estimations includes 1383 towns in which a non-zero number of fines were distributed during the thirteen years included in the period of study, from 1997 to 2009, as null observations for the dependent variable are suppressed in Poisson QMLE. This amounts to a total of 17,979 observations. I also include municipal population and the statewide number of terminated labour contracts in some estimations to control for time varying confounders that might affect the results through changes in labour market conditions²³. This data is available from 1997 to 2008, resulting in a sample of 16,428 observations for those estimations. Finally, a time trend is included in all specifications to control for the increase in labour inspectorate resources and inspections.

The first regression, reported in Table (1), looks at the impact of elections on sanctioning of firms. Beginning with a simple dummy for election years, the coefficient is significant and negative implying that fewer fines are on average handed out in election years. This effect is however not robust to the inclusion of municipality controls, as the coefficient in Column (3) is insignificant. I then separate municipal election years (2000, 2004 and 2008 in the period of study) from years of federal and state elections (1998, 2002, 2006). The results suggest on the one hand that there is no significant change in the number of fines distributed between federal and state (referred to as "General" in the table) election years and non-election years. On the other hand, the coefficient on the dummy for municipal elections is strongly significant and negative, implying that inspectors give out on average between 3.2 and 4.6% fewer fines in years of municipal elections compared to non-election years, depending on whether town controls are included or not. With elections held at the end of October, these reductions in sanctions could be made in the months leading up to or during the elections as a means to sway voters to vote

²²Wooldridge (2002)

²³Ideally, more municipality control variables would be included such as GDP and the intensity of industrial activity, which could affect the incidence of labour infractions, as well as the number of inspections.

for the incumbent. Yet this variation could also be due to the change in the effort made by inspectors in municipal election years, possibly due to a change in administration at the local level whose cooperation is needed in their inspection work, particularly since the magnitude of the effect is very small. Note that this estimation exploits only the time series variation in the data. If the allocation of fines is influenced by political considerations, then we should expect to find significant differences across towns depending on political factors such as the partisan alignment of politicians and the level of political competition they face in each town.

5.1 The use of fines for federal and gubernatorial distributive politics motivations

Tables 2 and 3 address such issues. I introduce a couple of dummy variables taking a value of one respectively if the town's mayor belongs to the same political party as the state governor or is aligned with the president's party. I also include three variables *Pres.Margin_{it}*, *Gov.Margin_{it}* and *May.Margin_{it}* which measure the margin of votes by which the respective incumbent politician won (or lost) the last election *in each town*. These variables allow to test for the use of labour sanctions for distributive politics motivations, by analysing whether the number of fines in towns varies according to the level of local electoral support earned by politicians in the last election. A negative coefficient on the Margin variables is generally interpreted as the incumbent politician rewarding voters for their support in the previous election by reducing the incidence of fines in their town. Alternatively, a positive coefficient indicates the targeting of "swing towns", where the electoral race is tight and the incumbent won by a small margin.

Just as previously, in Table (2) fewer fines are imposed in municipal election years across estimations. This might lead us to expect that towns will be targeted based on mayors' electoral support, but the coefficient on mayors' margin of victory is insignificant across specifications in Columns (3) and (4), implying that on average mayors' electoral interests have no effect on the number of fines issued locally. The partisan affiliation of a town's mayor with president and governor's parties is associated with a significant reduction of 6 and (resp.) 15 per cent in the number of fines in Column (1), but this is not robust to the inclusion of town controls, as shown in Column (2).

Turning to the governor and president's political motivations in columns (3) and (4), notice that the coefficients on the governor's and president's local margin of victory are highly significant, implying that the level of electoral support they enjoyed in a municipality in the last election has an impact on the number of fines distributed locally. The positive coefficient on their victory margins indicates that towns where the governor or the

president fought tight electoral races, or "swing towns", receive on average significantly fewer fines and the significance of this effect is robust to the inclusion of town controls in Column (4) and to using the absolute value of the margin of votes as in Column (5). The magnitude of the coefficient suggests that a one standard deviation decrease in the margin of votes won by the governor in a municipality is associated with a 5.5 to 11.3 per cent reduction in the number of fines²⁴. The coefficient on the president's margin of victory is also significantly positive, implying a smaller reduction of 4 to 8.6 per cent in the number of fines for a standard deviation reduction in the president's margin of votes. The results from Table 2 suggest that political interests at both federal and state levels have an influence on the allocation of fines. However, the specific channel for political influence does not clearly emerge from these results, as it is still unclear whether pressure on the bureaucracy is exerted by politicians at the federal and/or state level.

5.2 A state-level channel for political pressure

In order to identify the channel of political influence, I interact the victory margins with the dummy for alignment of governor and president's parties. I expect that if both have the ability to exert pressure on the allocations of fines, the coefficients on their victory margins will be significant independently of whether they are politically aligned, where as if the channel for influence is only at state (resp. federal) level then the electoral support of the president (resp. governor) should only have an impact on the distribution of fines if they are political allies while the governor's (resp. president's) political motivations should matter independently of partisan alignment. The results, reported in Table 3, suggest that while gubernatorial interests are always a significant in the allocation of fines, the partisan alignment of governor and president is a necessary condition for the president's local electoral support to have an effect on the distribution of fines. Indeed, once the interaction term is introduced in Columns (1) and (2) the coefficient on the president's margin of victory becomes insignificant even at a 10% level, implying that fines are reduced in swing towns for the president only when the state governor is aligned. In Columns (3) and (4) however, the interactions with the partisan alignment dummy has no impact on the effect of governors' electoral interests. Finally, in Column (5) I use a triple interaction term to test whether the possibility of reelection changes the effect of the president's political interests when he is an ally of the governor. The coefficient for the triple interaction is significant and negative, implying that if the president faces a term limit, the effect of the president's political motives on the distribution of fines is reduced to an insignificantly small magnitude. This confirms the fact that the pattern of

²⁴The standard deviation of the governor's margin of victory is 28.23 implying a lower bound effect of $0.00196 \times 28.23 = 5.53\%$.

targeting identified is aimed at boosting the president's electoral support.

The fact that the governors' local political interests are significantly correlated with the targeting of towns for labour sanctions across specifications and independently of his political alignments corroborates the proposition that emerged from the institutional analysis, namely that a potential channel for political interference is at the governor's level, most likely through the Regional Superintendent whom he nominates.

5.3 Distributive politics and electoral strategy

Finally, I investigate whether and how the targeting of sanctions across towns changes during election years. I interact the relevant political variables with the dummies for the timing of elections. The results in Columns (1) and (3) of Table 4 indicate that overall during years of state election there is no significant targeting of towns based on the governor's electoral support, but among towns where the mayor is a political ally, those towns with a strong presence of governor's supporters receive significantly less fines. Indeed, while the coefficient on the interaction of governor's margin of votes and gubernatorial election year is insignificant in Column (1), once interacted with the partisan alignment dummy in Column (3) it is significant and negative. Moreover, the negative coefficient on the interaction of election year dummy with partisan alignment in Column (2) indicates that in gubernatorial election years, towns where the mayor is a political ally of the governor receive on average 9.1 per cent fewer fines compared with other towns.

In municipal election years, while there are significantly fewer fines overall, this is particularly true for towns where the governor faces tough electoral competition, as indicated by the positive significant coefficient on the interaction with the governor's vote margin in Column (1). Note that this reversal in the pattern of targeting is similar to that found by Claudio Ferraz in his study of the approval of environment licenses in the state of Sao Paulo.

Finally, in Columns (4) I look at the impact of binding term limits on the pattern of sanctions by introducing a dummy variable taking value one when the governor is in his second mandate and cannot run for reelection, as well as an interaction with the partisan alignment dummy. The results show that when a governor is in his second term an average of 10.3 per cent more fines are imposed. One could interpret this as efficiency gains from the fact that a second term governor is likely to make less disruptive changes in the Regional Superintendencies - for example, by keeping the same superintendent in place rather than selecting a new inexperienced one. However, this explanation does not account for the much larger increase in the number of fines when the governor is in his second term in towns with an aligned mayor.

Conclusion

This article takes a political economy perspective on the space between institutions and implementation in the context of labour regulatory enforcement in Brazil. It investigates empirically whether labour regulations are selectively enforced according to political motivations, and identifies the political strategies used along the electoral cycle by matching electoral results with a novel dataset of fines imposed on firms for labour infractions in two of Brazil’s largest and most industrialised states. The analysis shows that towns where the governor faces fierce electoral competition (“swing voter” towns) receive fewer fines on average, whilst in gubernatorial election years core supporter towns are instead rewarded for their support, particularly where the mayor is a political ally of the governor. The president’s local electoral interests also affect the distribution of fines, but only when he is aligned with the state governor and the latter is in his first term in office. These results corroborate the evidence from the institutional analysis of the inspectorate, namely that a key channel for political influence on regulatory enforcement is through the Regional Inspectorate superintendents. Although the results of the analysis are statistically significant, it is notable that many of the coefficients reported are small in magnitude, implying that the scale of political manipulation is likely to be marginal. The significant reforms in the organisation of labour inspectorates in Brazil since the mid-1990s to guarantee more autonomy to the inspectors are probably in part responsible for this. Another plausible reason for the low magnitude of the estimated coefficients is the availability of other, more efficient and more effective means to sway voters. In fact, fiscal transfers have received far more attention in the literature about distributive politics precisely for this reason. A notable exception is Ferraz (2007)’s study of environmental licenses in the state of Sao Paulo. In fact, the pattern of electoral manipulation found in his context is very similar to this one.

The results of this analysis could be used to study the effect of actual regulatory enforcement and sanctions on labour market outcomes, as the political alignment and local electoral results provide a means to proxy for effective enforcement so that the reverse causal effect of labour market infraction rate on the level of enforcement can be controlled for.

Appendices

Appendix A: Electoral Timing

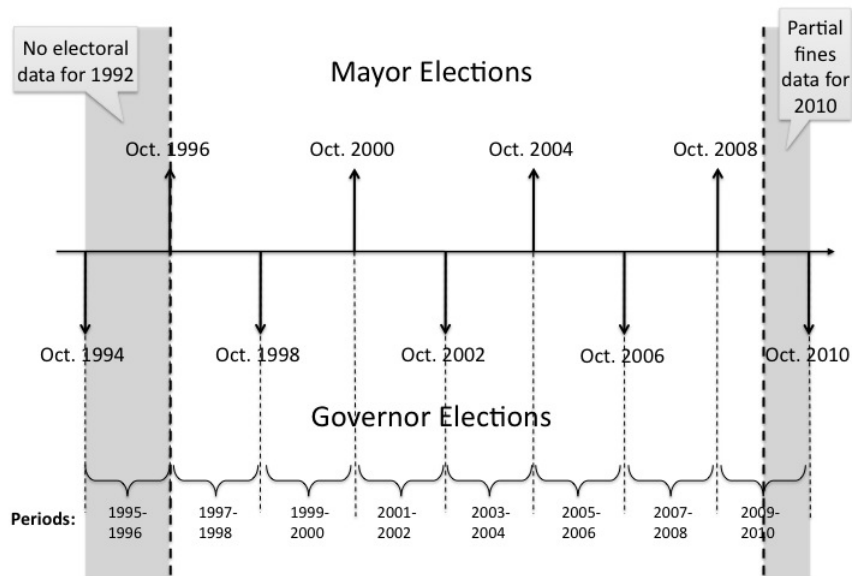


Table 1: Summary statistics

Variable	Mean	(Std. Dev.)	Min.	Max.	N
<i>Town characteristics</i>					
Population	39453.42	(297895.699)	804	10886518	19474
Town GDP per capita (Rs'0000)	1.129	(1.268)	0.243	21.188	19474
Town GVA Agriculture (Rs'0000)	2.124	(3.041)	0	43.569	19474
Town GVA Industry (Rs'0000)	19.457	(164.702)	0.053	5908.07	19474
Town GVA Services (Rs'0000)	43.192	(555.429)	0.488	20911.297	19474
Town GVA Industry (Rs'0000)	6.397	(51.13)	0.211	1881.958	19474
Taxes (Rs'0000)	11.601	(141.711)	0.018	5177.702	19474
Total Employment (2000)	9765.011	(81241.357)	208	2992258	19474
Informality Rate	0.37	(0.146)	0.065	0.907	19474
Capital*May.-Gov. Aligned	0	(0.014)	0	1	19474
<i>Inspections</i>					
Office	0.028	(0.165)	0	1	19474
Regional Office	0.017	(0.128)	0	1	19474
Inspectors	12.457	(6.911)	4	121	19474
Regional Inspectors	8.84	(26.602)	1	121	325
Total Fines	31.938	(278.739)	0	13761	19474
Fine: Breaks	3.546	(36.199)	0	1468	19474
Fine: FGTS	4.869	(43.207)	0	1864	19474
Fine: Working Hours	2.89	(28.939)	0	1483	19474
Fine: Health & Safety (NR)	7.583	(65.775)	0	4546	19474
Fine: Other	5.674	(60.287)	0	2917	19474
Fine: RAIS	0.06	(0.915)	0	52	19474
Fine: Worker Registration	3.991	(29.245)	0	1132	19474
Fine: Wage	2.902	(24.661)	0	991	19474
Fine: Health & Safety	0.194	(0.820)	0	24	19474
Fine: Seguro Desemprego	0.006	(0.121)	0	9	19474
Fine: Child Labour	0.09	(1.401)	0	107	19474
Fine: Transport	0.132	(2.269)	0	124	19474
<i>Political characteristics</i>					
General Election	0.231	(0.421)	0	1	19474
Municipal Election	0.231	(0.421)	0	1	19474
Electorate	25631.915	(204531.763)	834	7953144	4494
Gov. Margin	26.902	(28.499)	-75.393	92.353	19240
May. Margin	18.435	(19.643)	0	100	19470
Pres. Margin	25.711	(28.509)	-73.708	89.22	19240
May-Gov Aligned	0.252	(0.434)	0	1	19474
Gov-Pres Aligned	0.286	(0.452)	0	1	19474
May-Pres Aligned	0.166	(0.373)	0	1	19474
May-Gov-Pres Aligned	0.085	(0.279)	0	1	19474
Mayor Reelection	0.2	(0.4)	0	1	19474
Governor Reelection	0.264	(0.441)	0	1	19474
President Reelection	0.538	(0.499)	0	1	19474

Table 2: T-test on Mean Difference between Capitals and other Towns

(1)		
<i>Town characteristics</i>		
Population	-6619111.3***	(-193.69)
Town GDP per capita (Rs'0000)	-1.134***	(-4.56)
Town GVA Agriculture (Rs'0000)	0.921	(1.54)
Town GVA Industry (Rs'0000)	-3206.8***	(-141.08)
Town GVA Services (Rs'0000)	-11739.9***	(-169.39)
Town GVA Industry (Rs'0000)	-1125.2***	(-188.40)
Taxes (Rs'0000)	-2911.9***	(-158.38)
Total Employment (2000)	-1803346.2***	(-193.13)
Informality Rate	0.167***	(5.81)
<i>Inspections</i>		
Office	-0.973***	(-30.76)
Regional Office	-0.985***	(-40.80)
Inspectors	-106.2***	(-94.57)
Regional Inspectors	-94.20***	(-63.41)
Total Fines	-6836.0***	(-280.82)
Fine: Breaks	-901.6***	(-305.31)
Fine: FGTS	-1032.2***	(-248.95)
Fine: Working Hours	-692.3***	(-250.51)
Fine: Health & Safety (NR)	-1320.3***	(-150.35)
Fine: Other	-1493.3***	(-295.90)
Fine: RAIS	-14.34***	(-97.34)
Fine: Worker Registration	-708.9***	(-265.48)
Fine: Wage	-602.6***	(-275.74)
Fine: Health & Safety	-4.851***	(-30.87)
Seguro Desemplego	-0.957***	(-41.99)
Fine: Child Labour	-13.16***	(-50.95)
Fine: Transport	-51.47***	(-206.48)
<i>Political characteristics</i>		
Electorate	-4575532.3***	(-94.94)
Gov. Margin	5.825	(1.04)
May. Margin	-7.703*	(-2.00)
Pres. Margin	2.178	(0.39)
May-Gov Aligned	0.0979	(1.15)
Gov-Pres Aligned	-0.0214	(-0.24)
May-Pres Aligned	-0.0644	(-0.88)
May-Gov-Pres Aligned	0.0854	(1.56)
Mayor Reelection	0.0464	(0.59)
Governor Reelection	-0.00535	(-0.06)
President Reelection	0	(0.00)
Observations	19474	

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Electoral Cycles in Sanctioning

	(1)	(2)	(3)	(4)
Total Fines				
Election Year	-0.0264 (0.00885)***		-0.00433 (0.0105)	
Municipal Election		-0.0462 (0.0133)***		-0.0319 (0.0160)**
General Election		-0.00645 (0.0133)		0.0203 (0.0196)
Observations	17979	17979	16428	16428
Log Likelihood	-104891.5	-104837.4	-84534.3	-84443.0
Time trend	Yes	Yes	Yes	Yes
Town Fixed Effects	Yes	Yes	Yes	Yes
Town Controls	No	No	Yes	Yes

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

Notes: The data was obtained from IBGE, IPEA, MTE and TSE. See the main text for description of the data.

Table 4: Electoral Cycles, Political Alliances and Labour Fines

	(1)	(2)	(3)	(4)	(5)
Total Fines					
Municipal Election	-0.0438 (0.0125)***	-0.0320 (0.0165)*	-0.0421 (0.0132)***	-0.0304 (0.0157)*	-0.0327 (0.0156)**
General Election	-0.00355 (0.0156)	0.0200 (0.0197)	0.000268 (0.0115)	0.0223 (0.0183)	0.0246 (0.0182)
May-Gov Aligned	-0.177 (0.0900)**	-0.0407 (0.0388)			
May-Pres Aligned	-0.0678 (0.0284)**	-0.0131 (0.0308)			
Gov. Margin			0.00399 (0.00153)***	0.00196 (0.000759)***	
May. Margin			0.00189 (0.00160)	0.000212 (0.00123)	
Pres. Margin			0.00304 (0.00144)**	0.00144 (0.000648)**	
Abs[Gov. Margin]					0.00264 (0.000873)***
Abs[May. Margin]					0.000157 (0.00125)
Abs[Pres. Margin]					0.00182 (0.000723)**
Observations	17979	16428	17821	16274	16274
Log Likelihood	-103534.5	-84394.9	-102326.2	-83778.0	-83726.3
Time trend	Yes	Yes	Yes	Yes	Yes
Town Fixed Effects	Yes	Yes	Yes	Yes	Yes
Town Controls	No	Yes	No	Yes	Yes

Standard errors in parentheses

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

Table 5: Electoral Cycles, Political Alliances and Labour Fines

	(1)	(2)	(3)	(4)	(5)
Total Fines					
Municipal Election	-0.0440 (0.0139)***	-0.0324 (0.0157)**	-0.0424 (0.0126)***	-0.0330 (0.0157)**	-0.0327 (0.0161)**
General Election	-0.0201 (0.0132)	0.0115 (0.0225)	0.00229 (0.0142)	0.0324 (0.0208)	0.00216 (0.0190)
Pres. Margin	0.000805 (0.00127)	0.0000649 (0.000631)			0.000241 (0.000654)
Gov-Pres Aligned*Pres. Margin	0.00269 (0.00114)**	0.00200 (0.00117)*			0.00308 (0.00115)***
Gov. Margin			0.00266 (0.00105)**	0.00190 (0.00101)*	
Gov-Pres Aligned*Gov. Margin			0.00159 (0.00298)	-0.00196 (0.00166)	
Gov-Pres Aligned*Pres. Margin*Pres. Term Limit					-0.00233 (0.00114)**
Observations	17825	16278	17825	16278	16278
Log Likelihood	-103940.3	-84004.1	-103434.8	-83908.7	-83899.1
Time trend	Yes	Yes	Yes	Yes	Yes
Town Fixed Effects	Yes	Yes	Yes	Yes	Yes
Town Controls	No	Yes	No	Yes	Yes

Standard errors in parentheses

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

Table 6: Electoral Cycles, Political Alliances and Labour Fines

	(1)	(2)	(3)	(4)
Total Fines				
Municipal Election	-0.0953 (0.0197)***	-0.0353 (0.0178)**	-0.0957 (0.0202)***	-0.0340 (0.0159)**
General Election	0.0285 (0.0230)	0.0397 (0.0246)	0.0277 (0.0224)	0.0373 (0.0166)**
General*Gov. Margin	-0.000554 (0.000954)		0.000312 (0.00113)	
Munic.*Gov. Margin	0.00288 (0.000675)***		0.00278 (0.000670)***	
General*May-Gov Aligned		-0.0916 (0.0384)**		
Munic.*May-Gov Aligned		0.0157 (0.0409)		
General*May-Gov*Gov. Margin			-0.00270 (0.00138)*	
Munic.*May-Gov*Gov. Margin			0.000397 (0.00140)	
Governor Reelection				0.103 (0.0455)**
May-Gov Aligned				-0.0512 (0.0384)
May-Gov*Gov.Reelection				0.132 (0.0743)*
Observations	16278	16428	16278	16428
Log Likelihood	-83852.6	-84350.4	-83786.9	-83579.9
Time trend	Yes	Yes	Yes	Yes
Town Fixed Effects	Yes	Yes	Yes	Yes
Town Controls	Yes	Yes	Yes	Yes

Standard errors in parentheses

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

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