

# CLIENTELISM AND ELECTORAL COMPETITION: THE CASE OF CHILE'S MUNICIPALITIES

*Clientelismo y competencia electoral:  
El caso de los municipios chilenos*

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## ABSTRACT

Patronage is often considered a subtype of clientelism that arises through reciprocal arrangements between a politician and a citizen, where electoral support is rewarded with public employment. In Chile, there is evidence of clientelist practices at the municipal level. However, these studies have mainly had a qualitative focus. To complement these studies, this research aims to provide quantitative evidence using panel data and two-way fixed effects. Thus, we analyse the personnel hiring through the Mercado Público platform between 2009 and 2017 across the country's 345 municipalities, finding evidence that support two hypotheses: (i) there is a political budget cycle, increasing spending by 14.9% during the election year and (ii) independent politicians spend less on hiring people than mayors who are militants of political parties, being this expenditure -9.8% less for independents than for the latter. These results seek to complement other research on clientelism and patronage in a context of the rise of independent politicians and citizen questioning of traditional political parties, as well as the relevance of public spending in local governments.

**Keywords:** clientelism; patronage; political budget cycle; independents; Chile.

## RESUMEN

*El clientelismo suele considerarse un subtipo de clientelismo que surge a través de acuerdos recíprocos entre un político y un ciudadano, en los que el apoyo electoral se recompensa con un empleo público. En Chile, existe evidencia de prácticas clientelares a nivel municipal. Sin embargo, estos estudios han tenido principalmente un enfoque cualitativo. Para complementar estos estudios, esta investigación pretende aportar evidencia cuantitativa utilizando datos de panel y efectos fijos bidireccionales. Así, se analiza la contratación de personal a través de la plataforma Mercado Público entre 2009 y 2017 a través de los*



*345 municipios del país, encontrando evidencia que apoya dos hipótesis: (i) existe un ciclo político presupuestario, aumentando el gasto en un 14,9% durante el año electoral y (ii) los políticos independientes gastan menos en contratación de personas que los alcaldes militantes de partidos políticos, siendo este gasto un -9,8% menor para los independientes que para estos últimos. Estos resultados buscan complementar otras investigaciones sobre clientelismo y patronazgo en un contexto de auge de los políticos independientes y cuestionamiento ciudadano a los partidos políticos tradicionales, así como la relevancia del gasto público en los gobiernos locales.*

*Palabras clave: clientelismo; patronazgo; ciclo político presupuestario; independientes; Chile.*

## I. INTRODUCTION

According to World Bank data, it is estimated that the average fiscal spending percentage in relation to Gross Domestic Product in the world reached 33.8% during 2020. This expenditure, in a strategic development sense, requires high levels of accountability and coordination between different levels of government. In this context, the main risks are associated with allocations of expenditures with weak standards of probity (OECD 2013), which could facilitate the generation of economic inefficiencies that impact economic development levels, even eroding the quality of democracy (Treisman 2007).

Within the framework of phenomena that impact the integrity of public resources, it is possible to mention corruption and clientelism. Both are often closely related (Singer 2009). (Singer 2009) and affect the trust and legitimacy of public institutions. In the case of clientelism, it is a social-political phenomenon that has been long time studied and debated. It is traditionally associated with young democracies and developing countries (Cerdas 2014). However, works such as that of Piattoni (2001) o Kitschelt & Wilkinson (2012) report a persistence of the phenomenon even in industrial democracies.

But what is meant by clientelism? In narrow terms, clientelism is conceived as an exchange between a politician and an individual, in which electoral support is rewarded with goods and services. Furthermore, there is a subclass of clientelism known as patronage (Stokes 2007) which consists of a retribution of electoral support through public employment (Shefter, 1994; Robinson & Verdier, 2013), revealing an instrumental nature of the political-citizen relationship (or citizen-politician). In both exchanges,, it is possible to appreciate selective, arbitrary and conditioned criteria, where the professional character of the choice may be disregarded (Stokes et al. 2013).

However, there are approaches that question this negatively charged view of the phenomenon, citing a need to incorporate trusted individuals to facilitate the internal government management, blending technical skills necessary for management and administration, as well as political loyalties that contribute to strengthening the performance of governments officials (Kopecký & Mair 2012). In this sense, these types of hiring would put in tension the meritocrat-

ic issue in an objective and transparent process, which in the case of Chile's public administration has been addressed through the creation of the Civil Service and the Senior Public Management, processes that are part of the so-called modernisation of the state (Llano 2014).

Despite this, and considering the need for appointing trusted officials to better articulate the administration, patronage can also be used as a political-electoral tool that affects the efficiency of public spending, highlighting an instrumental relationship, in which the aim is to reduce electoral risk and increase incumbents' chances of winning re-election (Magaloni et al. 2007). Furthermore, the return of favours does not contribute to the selection of the most professionally qualified people for such positions. Among the possible factors associated with this phenomenon is a highly centralised and presidentialist institutional design that facilitates the emergence of clientelist networks (Stokes et al. 2013).

In the particular case of Chile, a country that has grown economically in recent decades through a neoliberal and centralized model, the generation of intra- and inter-regional inequality has generated, for example, suggestions for greater decentralisation (OECD 2017). This path necessarily requires a leading role for regional governments, particularly municipalities. The latter are the first face of the State and, unlike the former, are autonomous corporations under public law, with legal personality and their own assets, whose purpose is to meet the needs of the local community and ensure its participation in economic, social, and cultural progress (LOCM 1988), addressing the specific needs of the territory.

A significant part of the management and satisfaction of community needs is closely related to the administration and use of public funds. However, according to Pacheco et al. (2021), in the case of Chile, there are variations of up to 61% in spending between 2008 and 2018, showing major inefficiencies in the use of the municipal budget. While these expenditures might be linked to different factors, the increase in spending for electoral purposes could increase inefficiency and not respond, for example, to a need for professionalisation of the administration, considering its low percentage of advanced human capital ( Fuenzalida et al. 2014; AMUCH 2018), privileging political favours (Barozet 2003).

Similarly, these expenditure variations are closely related to electoral cycles, what the literature known as Political Budget Cycles (hereafter PBC), which generate expenditure variations either according to a pre-election strategy (Veiga & Veiga 2007; Drazen & Eslava 2010; Meloni 2015) or strategies during the election year itself (Hanusch & Keefer 2014; Stolfi & Hallerberg 2015; Pierskalla & Sacks 2020) that generate increased public spending. In the case of Chile, there has been evidence of resource transfers from the central government to local government, favouring political coalitions, with the aim of gaining electoral advantage (Corvalán et al. 2018; Livert & Gainza 2018) benefiting, for example, local stakeholders from the same governing coalition (Lara & Toro 2018; Gainza & Livert 2021).

Both the PBC and clientelism in its patronage version can emerge as strategic incentive where authorities are elected by citizen vote, blending programmatic and non-programmatic tactics. In Chile, the use of these strategies has already been demonstrated in other works, in fact these strategies tend to be present in areas with political strongholds that experience successive re-elections (Barozet 2003, 2005), areas of greater poverty (Barozet et al. 2020; Pérez 2020) and/or institutional fragility (Moya & Paillama 2017).

Regarding the aforementioned, it can be inferred that this type of practice contributes to increasing distrust and, with it, the loss of legitimacy of public institutions and, above all, of political parties. This lack of credibility has generated a favourable environment for anti-political discourse and the rise of declared independent politicians (Dosek 2017). And although clientelism and patronage have been addressed by considering traditional politics from disciplines such as sociology (Barozet, 2003, 2005; Arriagada 2013; Moya & Paillama, 2017) and history (Pérez 2020), political science needs to provide a more robust political-institutional analysis that interweaves political and economic factors associated with the management and credibility performances of political actors and institutions necessary for democracy, while also addressing the irruption of new agents that could contribute to the political imbalance of representation, but are seen as harmful to democratic representation.

For this reason, this research places particular emphasis on the temporary hiring of individuals by the country's mayors, precisely in discretionary hiring spaces that could favour the payment of political favours over administrative necessity. Likewise, the aim is to verify the existence of PBC and whether there are differences between public spending by traditional politicians and so-called independent politicians. The latter has not been addressed by political science, which has been primarily focused on the role of political parties, even though they may not differ from traditional practices of voter mobilisation. Nonetheless, both traditional politicians and independent agents may resort to strategies that erode the probity of public office, particularly in a scenario of high distrust of public institutions and a loss of legitimacy of traditional political parties.

In this context, a panel data and two-way fixed effects analysis that compares the expenditure on temporary hiring of people and the permanent hiring designated by the administrative statute is generated (Ley 18,834). The data for temporary hiring is obtained through *Mercado Público*,<sup>1</sup> a platform external to the municipalities that has been little addressed by another research. The data for permanent contracts is obtained from SINIM.<sup>2</sup> This way, we seek to observe

<sup>1</sup> *Mercado Público* is the transactional platform managed by the National Government, it is a public procurement platform through which more than 850 public entities buy products and services from companies of all sizes and from all over the country.

<sup>2</sup> SINIM, National Municipal Information System, an agency of the Undersecretariat for Regional and Administrative Development.

whether there are associations between public spending in municipalities and electoral periods, differentiating spending between traditional politicians and independents.

The paper is divided into three sections: the first presents a literature review of clientelism and patronage at a global level, presenting differences and associated variables that can be found in the Chilean institutional political landscape and variables such as the political budget cycle and the growth of independent politicians. In a second section, the hypotheses derived from the previous item are presented, giving way to the presentation of methodological aspects. Finally, the results of the research are analysed, and a discussion of our findings are presented.

## II. LITERATURE REVIEW

### 2.1. Political clientelism and patronage. Discrepancy of views on the same phenomenon

Clientelism is a social-political phenomenon that has been extensively studied and debated by different disciplines over the last decades. Its effects can be perceived over time and in different political systems where the vote has the capacity to designate positions of power. (Piattoni 2001). The informal nature of clientelism makes it difficult to define its presence or absence, and it is considered a phenomenon that is difficult to identify but seems to be everywhere (Schröter 2010). In this sense, its variations around dissimilar institutions and political cultures have contributed to generate a polysemic understanding of the concept, making it difficult to reach a consensus on its levels and scope (Piattoni 2001).

On one hand, clientelism is broadly understood as “a personalised political relationship between actors with unequal resources, in which there is an exchange of goods, usually public” (Vommaro & Combes 2016, p. 31). This relationship is characterised as vertical between a “patron” (party or politician) and a “client” (citizen), where the object of exchange is electoral support. This is why this type of political-electoral practice or strategy is usually associated with developing countries. However, works like those of Piattoni (2001) or Stokes et al. (2013) report a persistence even in countries with a high level of industrial development.

It is worth mentioning that within clientelism there is a sub-type often referred to as patronage, which consists of an exchange of electoral support rewarded through public employment. (Robinson & Verdier 2013), distinguishing it from traditional clientelism, firstly because clientelism has “an economic monopoly over the assets that the patron controls regardless of the outcome of the elec-

tion, whereas the latter (patronage) is characterised by a political monopoly over the assets controlled only if the office is retained.” (Stokes 2007, p. 4) In this sense, a key differentiation can be identified between the two concepts, patronage being a direct derivation of political power, where the politician is subject to victory in the electoral game and is therefore only applicable to incumbents or holders of political authority. (Hopkin 2006).

However, as we have mentioned, it is a concept that is difficult to clearly classify. It is a dissimilar view that departs from the traditional perspective, there are views of patronage that approach it from an organisational point of view, conceiving it as a necessary strategy, where political and governing parties can designate relevant and/or strategic political positions to carry out their programme proposals (Kopecký et al. 2012; Panizza et al. 2018). This would allow parties to select individuals with a mix of technical skills needed for management and administration, as well as political loyalties that contribute to strengthening the performance of those in governance roles (Kopecký & Mair 2012).

Along the same lines, it is interesting to note the findings of Kopecky et al. (2008) who understand patronage as the power of political actors to install individuals in (non-elected) positions within the public sector beyond the motives, capacities and legality of the decision. In this sense, the ‘trust’ factor becomes essential, which can be personal for the politician or for the political party (Panizza et al. 2018) assimilating that the asymmetry generates a dependence on the relationship of personal trust or party loyalty between the politician and the person appointed (Grindle 2012).

This is why it is understood that in a government it becomes necessary to appoint positions that fulfil an articulating role within the administrative-bureaucratic apparatus, granting flexibility and discretionary spaces for hiring, with the aim of facilitating coordination and internal government management. To this end, it is possible to blend the technical skills necessary for management and administration, where the factor of political trust (of the ruler or governing party) is essential at the time of appointment. (Kopecký & Mair 2012).

Nevertheless, it is difficult to determine the extent to which this type of practice affects political performance at the expenses of public resource efficiency, or vice versa. In other words, it is possible that political administration is valued, but at the same time, it may cause little sustainability in the expenditure executed, given the inefficiency that this generates in the fiscal coffers due to the excessive hiring of political figures or operators. Likewise, the selection criteria could favour the instrumental use of hiring for political-electoral purposes, disregarding factors such as the capacities and professional tools of the person appointed to the post (Stokes et al. 2013).

On the other hand, the appointment of positions through this type of non-programmatic strategy reveals an instrumental nature of the political-citizen rela-

tionship, or conversely, of the citizen-politician sense, where the aim is to obtain a personal benefit over a collective one. In both relationships, it is possible to observe selective, arbitrary and conditioned criteria. Similarly, this type of practice can contribute to increasing citizens' distrust towards political parties, increasing the lack of legitimacy of political and public institutions, as well as increasing the idea that they only seek a kind of colonisation of the public-administrative apparatus.

The latter becomes of great importance if we consider that, in contemporary democracies, political parties play a leading role in bringing stability and governance to the political system. Similarly, political parties that exhibit programmatic qualities are believed to better represent the diversity of the groups within society, aggregating their preferences and acting on these interests (Cheeseman et al. 2014). However, as rightly accused by Piattoni (2001), normative ideas of democracy are often diverge from real democracy, and in this sense, "virtually all electorally successful parties in Latin America, even the most ideological, have learned to cultivate clientelistic ties at the grassroots" (Coppedge 2001, p. 176).

On the other hand, these practices can be exacerbated by exogenous factors such as levels of poverty (Remmer 2007) generating a scenario of higher demand for public services, but with a lower supply capacity (Nazareno et al. 2006). Moreover, this reciprocal need could create an environment where such practices are considered acceptable, as evidenced by Magaloni et al. (2007), Stokes et al. (2013) and Weitz-Shapiro (2012).

From the citizen's perspective, in the face of inefficient use of resources that generates insufficient or ineffective public services, voters would use clientelism as a way to obtain a "state" benefit. (Hilgers 2012). However, Weitz-Shapiro (2012) concludes that, although poverty is a relevant factor in understanding clientelism, poverty alone is not enough, but its interaction with political competition increases its binding effects. This competition, which necessarily involves parties and politicians, could increase the attraction for non-programmatic strategies, which do not consider ideological commitments, responsiveness, and accountability.

In this way, non-programmatic strategies would neglect distribution under public criteria that, although not always the case, are generated through prior public debate, or they would not consider public and formal distribution criteria (Stokes et al. 2013). However, it is possible for both political parties and politicians to use both strategies, understanding them as complementary and non-excluding (Tzelgov & Wang 2016). In the search to minimise electoral risk, these actors will seek to diversify their portfolios between particularistic risk-free transfers (non-programmatic distribution) and the provision of public goods (Magaloni et al. 2007).

Such strategies lead to changes in public spending. These variations in the public budget can be cyclical, depending on the proximity of candidacy and

election periods, and this phenomenon is called PBC. Studies focusing on this phenomenon have identified a subtle way of managing public resources, which have contributed to generate a traditional PBC model, where politicians are presented as opportunistic actors in front of a naïve and easily manipulated voting citizenry.

However, advances in knowledge have led to new models, which have considered the relationship between politicians and voters no longer as a mere instrument of easy manipulation, but rather as an opportunistic-rational relationship, where both parties take advantage of each other. On the one hand, this facilitates electoral gain, but this time not based on voter need, but rather as a rational calculation on the part of the voter. This spending manipulation by incumbents would be used to achieve re-election to office. (Veiga & Veiga 2007; Efthyvoulou 2012; Labonne 2016).

The latter is related to clientelism, if we consider that both parties seek to benefit from the relationship (incumbent and voters), and if we consider that in this linkage there is not necessarily an ideological attachment between citizens and the political party (or politician) (Ruth 2016).

## 2.2. Political Budget Cycle and patronage

Political Budget Cycle (PBC) have been studied by various authors who have both agreed and differed in several aspects. On one hand, we can find that the existence of PBC is associated with the information asymmetry of voters (Rogoff 1990; Rogoff & Sibert 1988; Drazen & Eslava 2010). On the other hand, some authors argue that PBC are larger when democracies are young (Akhmedov & Zhuravskaya 2004; Brender & Drazen 2005; Sakurai & Menezes-Filho 2011; Gainza et al, 2021), political parties are young (Hanusch & Keefer 2014), the quality of democracy is more fragile and levels of fiscal transparency are lower (Akhmedov & Zhuravskaya 2004; Alt & Dreyer 2005; Gainza & Livert 2018) or when countries have a lower level of economic development (Shi & Svensson 2006).

PBC studies have found evidence of manipulation of public spending in different types of expenditures. For example, some authors acknowledge that resources are invested in public works (Veiga & Veiga 2007), direct cash transfers (Rogoff 1990; Akhmedov & Zhuravskaya 2004), and others in the hiring of personnel (Stolfi & Hallerberg (Stolfi & Hallerberg 2015; Labonne 2016; Pierskalla & Sacks 2020). Therefore, PBC has been analysed under different perspectives and with different methods, analysing a single country or groups of countries.

It is worth mentioning that works such as that of Remmer (2007) emphasise the dependence and greater adoption of patronage strategies among politicians with a closer relationship with their base, which could be enhanced by transfers between central and local government (Corvalán et al. 2018; Livert



& Gainza 2018) on the grounds of political favour payments. Finally, there are authors who affirm a relationship between clientelism and PBC (Hanusch & Keefer 2014; Stolfi & Hallerberg 2015; Pierskalla & Sacks 2020; Belmar & Morales 2020) as they identify that the increase in spending for electoral purposes is carried out through a clientelistic exchange.

On the other hand, the authors Stolfi & Hallerberg (2015), identify a clientelist budget cycle in Italy's jurisdictions, which differs from that of Rogoff & Sibert (1988), Drazen & Eslava (2010) and Hanusch & Keefer (2014), since there is no asymmetry of information, but rather the voter is economically dependent on the local government and finds in this relationship a greater individual benefit. Hence, incumbents in lower income jurisdictions use clientelistic tools to control public employment for electoral purposes. Evidence of the relationship between clientelism and the political budget cycle can also be found in the research of Pierskalla & Sacks (2020) who, through a panel data set, find that there is an increase in staff recruitment. Therefore, one would expect that local government spending have cyclical variations that show increases in election and candidacy periods.

### **2.3. The crisis of legitimacy and confidence of the traditional political parties. The rise of independent politicians**

Different public opinion polls show an erosion of traditional parties, which is accompanied by low levels of trust in the public institutions (Eurobarometer 2018; Latinobarómetro 2018). This deterioration in trust and the decline of ideological factors in the citizenry (Ruth 2016) could partly explain the rise of independent candidacies in this political scenario (Dosek 2017).

In today's democracies, politicians can run compete in elections in two ways. On the one hand, there is the traditional association, in which the candidate runs as part of a political party or may run as an independent candidate (Bolleyer & Weeks 2009). Although political parties continue to play a leading role in democracy, they have experienced a gradual decline since the 1970s (Blondel 2003). In Latin America, for example, political parties enjoy the trust of 13% of citizens (Latinobarómetro 2018).

This new scenario, according to Reiser & Holtmann (2008), portrays independents as a common phenomenon at the local level. Furthermore, these candidates might perform better where there is greater fragmentation in the electoral competition (Bhattacharya 2010), or where no candidate from the incumbent president's party is running (Ishiyama et al. 2013). Studies related to the presence and/or success of independent politicians tend to focus narrowly on the local level (Dosek 2017), addressing legislative bodies (Golosov 2003; Bolleyer & Weeks 2009; Rodrigues & Brenton, 2010) or, alternatively, cross-country comparative analyses (Brancati 2008; Ishiyama et al. 2013; Weeks 2014).

On the other hand, opinions regarding the contribution of this type of candidates are not usually homogeneous, as there are those who are expectant, granting them strengths that would contribute to improving democracy through new and innovative proposals, even reducing corruption (Brancati 2008). In contrast, there are those who are more sceptical, considering a certain idealisation of this type of candidacy, stating that it may even be a label used by the partisan elite itself (González 2015). They also criticise the lack of experience in government, or politicians who tend to focus on particular and individual issues (Brancati 2008).

In this sense, independent candidates can be seen as rational actors seeking to differentiate themselves from their partisan peers by rationally weighing the advantages and disadvantages of party affiliation (Bolleyer & Weeks 2009; Dosek 2017). Among the possible disadvantages of an independent candidacy, one can consider a lower degree of publicity compared to a candidate who is a member of a political party, or the lack of a loyal core of support (party members) (Bolleyer & Weeks 2009), although the latter might favour the non-payment of partisan favours. For the purposes of this paper, the latter point becomes relevant, since on the assumption that an independent candidate would not have the capacity to mobilise the amount of resources available to political parties, it is expected that they might find it less advantageous to adopt clientelistic strategies and thus hire fewer people in election periods.

However, part of this outcome will depend on the degree of incumbents' independence, and whether they adopt non-programmatic strategies. It is to be expected that politicians from traditional parties are more likely to be obliged to pay back grassroots support and thus significantly increase expenditures. However, as rightly argued (Kopecký et al. 2012), the need to appoint trusted individuals to facilitate programmatic articulation puts a strain on the effectiveness of those politicians who do not have party networks to govern, so that those so-called independents would have to use other strategies to coherently articulate municipal management.

#### **2.4. Local governments, high distrust, and independents**

If we consider the findings of Stokes et al. (2013), Chile is an interesting case for analysing clientelism and patronage, given that it combines the institutional characteristics of strong centralism with a presidential model, which, according to the authors, favours the emergence of clientelist machines. In this scenario, the Chilean state administration has sought to remedy this political-administrative tension through processes of state modernisation, which have given rise to the Civil Service and the Senior Public Management, which precisely aim to go in the direction of more transparent personnel selection processes with objective criteria that reduce allocation under discretionary criteria (Llano 2014).

However, these new tools and processes have been implemented at the central administration level, but not at the local government level, which could be an important step towards a better decentralisation process (Fuenzalida et al. 2014). In the case of the latter, the legal-institutional figure falls on the municipalities, autonomous corporations under public law with legal personality and their own assets, whose purpose is to meet the needs of the local community and ensure its participation in economic, social and cultural progress. (LOCM 1988). These institutions are shown as the first face of the State (Fuentes 2018) for the citizen in a logic of doing politics “from the bottom up” (Pérez 2020).

Additionally, in recent years, the country's strongly centralist model has been questioned as a relevant factor regarding the strong inter- and intra-regional inequality (UNDP 2017). In this scenario, the search for greater decentralisation necessarily requires a more prominent role from municipalities. In Chile, there are currently 345 municipalities, whose highest authority is the mayor, who is responsible for the management, administration and oversight of their functioning. The mayor also has the power to appoint positions of trust, such as the person in charge of communal planning, the person in charge of legal advice, health and education, and the community development department (LOCM 1988).

One of the characteristic features of these institutions are their low levels of professionalisation, which up to 2018 reached only 30.62% (AMUCH 2018). Likewise, the highest percentage of people hired are on a fee-based legal basis, which gives them greater flexibility and less job stability, with greater discretionary space for their appointment by the authority on duty.

However, hiring associated with clientelism is not so easy to differentiate from “nepotism” or “cronyism”, since these are informal institutions that are in a grey zone (Barozet et al. 2020). In this context, mayors can generate rotating or less legally binding contracts, such as fee-based workers, although these do not necessarily respond to clientelistic hiring. Alternatively, it is possible to generate fixed-term contracts, through tenders and public procurement, for the contracting of different services. These types of deals are generated through *Mercado Público*, a virtual platform where different bidders offer services and products required by the State and whose regulations are framed in Law 19,886 (2003).

In both cases, the management of public resources becomes relevant to meet the needs of the community. In the case of Chile, there is evidence of politically biased transfers from the central to the local level (Corvalán et al. 2018; Livert & Gainza 2018; Lara & Toro 2018) in particular periods of the electoral cycle. The hiring or management of people under political criteria with low levels of probity can contribute to inefficiency, according to Pacheco et al. (2021) have even reached variations between 53%-61%. As mentioned, although these expenditures are not directly correlated to clientelism, there is evidence of practices that can be related to the misuse of public funds in different municipalities

(Barozet 2003 2005; Arriagada 2013; Moya & Paillama 2017; Barozet et al. 2020; Perez 2020) and electorally biased resource transfers (Corvalán et al. 2018; Lara & Toro 2018; Valenzuela 1977).

The cultural traits of clientelism at the local level (Pérez 2020) are intertwined with a growing distrust of political institutions. This loss of trust is reflected in public survey results where this variable reaches only 2% CEP (2021) which generates and contributes to a crisis of representation (Luna 2010). It is this scenario of low credibility in Chilean politics that has propitiated a scenario for the advance of independent politicians, who have increased their presence throughout the territory. According to SERVEL data (Electoral service), the 2012 elections left 110 mayoralties governed by independent politicians, while the subsequent election, in 2016, that figure reached 132, of which 52 were presented outside party lists.

The ease of entry of independents runs parallel to a weakening of party representation that has been dragging on for almost a decade (UNDP 2014). This is manifested in a growing anti-party sentiment, which is boosting punishment votes or abstention. According to Luna & Rosenblatt (2017), the current political scenario is characterised by a personification of politics and a loss of identification with parties, increasing anti-party rhetoric that has translated into worrying percentages of trust in political parties (Latinobarómetro 2020; CEP 2021).

Although independent politicians maintain discourses that proclaim a strong differentiation from traditional political practices, they might still consider adopting this type of strategy given that it is presented as a credible, selective and even reversible alternative in case the compromised transaction does not take place (Robinson & Verdier 2013). However, work such as that of Belmar & Morales (2020) have already identified dissimilar behaviours between politicians who are militant members of traditional parties and independent politicians.

Currently, the *Ley Orgánica Constitucional de Votaciones Populares y Escrutinios* (Organic Constitutional Law on Popular Voting and Canvassing) (Ley 18,700 2017), establishes that independent candidates must not be affiliated to a political party for at least nine months prior to their candidacy, subscribing their candidacy before a notary, although independent politicians running within an electoral pact do not require patricians, meaning they must obtain a number of signatures equal to or greater than 0.5% of those who voted in the previous election.

### III. HYPOTHESIS

#### 3.1. H1: Clientelism is related to the Political Budget Cycle

The first hypothesis indicates that clientelism is related to the political budget cycle, and the literature shows us that there is abundant evidence that proves

the existence of a political budget cycle (Rogoff 1990; Akhmedov & Zhuravskaya 2004; Brender & Drazen 2005; Shi & Svensson 2006; Veiga & Veiga 2007; Drazen & Eslava 2010; Aidt & Mooney 2014; Meloni 2015; Stolfi & Hallerberg 2015; Gainza & Livert 2021). It is worth noting that most of the works that study PBC do not investigate a relationship with clientelism, which is a relevant aspect and central focus of this research, so the following is a list of the works that address aspects of clientelism and PBC.

We can find the work carried out by Hanusch & Keefer (2014), which identifies that countries with younger political parties have longer political budget cycles, and in turn, these younger political parties tend to be more likely to engage in clientelistic behaviours (Keefer 2007; Keefer & Vlaicu 2008), as voters are uninformed about their characteristics and capabilities, so the incentive for increased spending prior to an election is greater, which aligns with political budget cycle relationships and voters' knowledge of candidate competence (Rogoff & Sibert 1988; Drazen & Eslava 2010).

In contrast, the authors Stolfi & Hallerberg (2015) identify a clientelist budget cycle in Italy's jurisdictions, which differs from that of Rogoff & Sibert (1988), Drazen & Eslava (2010) and Hanusch & Keefer (2014), because there is no information asymmetry, but rather the voter is economically dependent on the local government and finds in this relationship a greater individual benefit. Therefore, incumbents in jurisdictions with lower economic income use clientelistic tools to control public employment (spending on health personnel) for electoral purposes.

Evidence of the relationship between clientelism and the political budget cycle can also be found in the research of Pierskalla & Sacks (2020) who, using a panel data set, find that there is an increase in recruitment in the education sector, i.e. of teachers in election years.

Meloni (2015) argues for the existence of a political budget cycle in Argentina, which is carried out through clientelistic behaviour, manifested in the increase of current expenditures. The evidence is found in a panel of data from 24 districts between 1984 and 2004. However, this increase in public spending is evident one or two years before the election and not in the election year. According to Meloni (2015) maintaining a clientele requires a continuous flow of public spending.

In the Chilean case, it is possible to mention the qualitative research of Belmar & Morales (2020), who identify an increase in the number of irregular audiences in municipalities during election years. These audiences have been recorded since the implementation of Law No. 20,730 (2014), which requires mayors to make their agendas public. The researchers identify that "These meetings have been held for personal issues and social benefits such as, for example, medicines, construction materials, places in municipal schools, payment of basic services, among others" (Belmar & Morales 2020, p. 570).

This research hopes to identify the existence of patronage, as evidenced by the increase in spending on temporary hiring in the election year, as evidenced in the research of Hanusch & Keefer (2014), Stolfi & Hallerberg (2015) and Pier-skalla & Sacks (2020). In contrast, there is no cycle in the recruitment of permanent staff.

### 3.2. H2: Clientelism is lower among independent mayors

Analyses of expenditure on recruitment have shown variations based on electoral cycles. These expenditures are often associated with political-electoral strategies where voter mobilisation is the main objective. In the case of political parties, they are made up of militants, who are defined as members with a respective membership that grants them certain obligations and privileges. Furthermore, these militants often have ideological ties to their leaders, which may vary depending on how the party is structured and how programmatic it is (Gordin 2006).

In the case of political machines, they would choose to remunerate those who run and work for them (Scott 1969), where ideological factors would not be a significant binding factor among party members. Along the same lines, Ruth (2016) finds that ideology has little influence on voting when there are high levels of poverty and functioning clientelistic networks. However, in order to include also parties with a longer tradition and high ideology, Tzelgov & Wang (2016) argue that ideology is equally compatible with clientelism, indeed, it can be a more binding complement, generating a greater affinity between patron and client and, therefore, a closer and more trusting relationship.

In Chile's partisan context, it is considered that there are no machines party (Rehren 2000). Despite this, there is evidence of clientelistic relations that respond to cultural patterns (Pérez 2020) that become more perceptible precisely in sectors where there are political strongholds that remain in government for long periods of time, carrying out practices such as, for example, hiring for services that have not been performed (Barozet 2003). However, higher spending does not necessarily guarantee electoral victory, according to Nazareno et al. (2006), in the case of Argentina, there is evidence of a null effect between spending on hiring people and electoral performance.

In this sense, the adoption of non-programmatic strategies depends on the observation and monitoring capacity of parties or politicians, otherwise they may not materialise. (Lawson & Greene 2014). In the same way, considering the weakening of the ideological factor of parties and the greater personalism of the political scenario (Luna & Mardones 2017), politicians who are members of traditional parties will have to seek strategies that are not only programmatic to attract less politicised voters, with low percentages of credibility and trust in this type of institutions.

In the case of political parties, works such as those of Mimica & Navia (2019) or Belmar & Morales (2020), show features of patronage in the municipalities, precisely in the case of mayors who are militants of traditional parties. Differences have also been identified between male and female mayors (Alberti et al. 2022) or at the ideological level (Barozet et al. 2020; Pérez 2020). Regarding the latter, a greater use of this type of strategy has been observed in right-wing sectors, particularly when dealing with vulnerable sectors far removed from their ideological conception (Calvo & Murillo 2008; Arriagada 2013; Luna & Rovira 2014).

Independent politicians would have less incentive to mobilise political operators. More sceptical views, however, question independence, particularly for those former militants who are able to maintain their contact networks (González 2015). These independent politicians, by adopting an anti-political discourse, would tend to have better results and explain the inverse relationship between personalism and patronage (Gordin 2006), as well as seeking to portray themselves as innovative and unconventional actors who can break with traditional political practice (Costar & Curtin 2004; Vidal 2019).

Despite the above, it is more complex for such politicians to mobilise the electoral base. For example, in the Argentinean case, rallies require public officials to contribute to activities such as 'door-to-door', pasting posters or painting walls and handing out of leaflets and ballots with a voting mark (Oliveros 2021). It will also depend on the territory's political culture, as where there is a greater reputation of government as a 'clean government', the abuse of public resources will be significantly lower (Allen 2015).

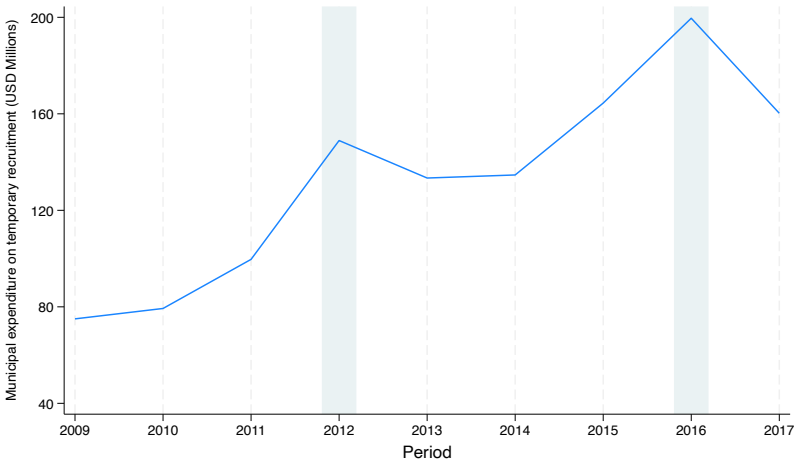
#### IV. METHODOLOGY AND RESULTS

The methodology to determine the temporary hiring of staff for electoral purposes at the local level is the analysis of panel data and fixed effects together with a panel event study. The dependent variable is the logarithm of the expenditure on temporary hiring of people.<sup>3</sup> This variable is obtained through *Mercado Público* between 2009 and 2017. One of the advantages of analysing the *Mercado Público* database is that it contains all public purchases made by municipalities. The objective of this platform is transparency and not the efficiency of public procurement, *Mercado Público* has little oversight. According to a report, there is a need for greater transparency regarding who the owners of supplier companies are (Mora & Von Wolfersdorff 2018), and the National Economic Prosecutor's Office recommended strengthening the *Mercado Público's* oversight system (FNE 2020).

<sup>3</sup> To validate the estimates, we use the number of *permanent recruitment* (permanent staff per municipality), which corresponds to the number of permanent positions assigned by law to each institution.

Municipal spending on hiring people through *Mercado Público* increased from USD 75 million in 2009 to USD 160 million in 2017, with two peaks: in 2012 and 2016 (see Figure 1). This spending represents on average 7% of municipalities' spending through *Mercado Público*. An additional feature is that growth has been heterogeneous, i.e. it tends to be concentrated in certain communes. Figure 2 shows that the average Gini index between 2009-2017 for the 345 municipalities in the country was 0.64. It also shows that the index increases in the municipal election years 2012 and 2016, which indicates an even greater concentration of this expenditure in certain municipalities.

Figure 1. Municipal expenditure on temporary recruitment



Source: Own elaboration based on Mercado Público 2009-2017.

The covariates are associated with the characteristics of the municipality and the mayor. In the first case we have variables such as income from municipal patents (*ing*), regular municipal commitments (*com*), dependence on the Municipal Common Fund (*fcm*) and budget deficit (*def*) and municipal efficiency (*efi*), i.e. the equations control for the level of wealth of the municipalities, dependence on horizontal transfers and resource management capacity. This information is public and available from the Comptroller General of the Republic of Chile (CGR). The municipalities' level of wealth and poverty are determinants of clientelism, and different studies that address this issue use related variables for their research (Meloni 2015; Belmar & Morales 2016; Pacheco et al, 2020).



Figure 2. Gini index for temporary and permanent recruitment in municipalities



Source: Own elaboration based on *Mercado Público* and SINIM 2009-2017.

From the geographical dimension, the variables population (pop) and density (dend) have been incorporated into the model, the first shows the weight of the municipality at the national level, in Chile there are large differences in population, the maximum value is 500 thousand and the minimum 600. Complementarily, the density variable allows controlling for the shape of the territory and whether the municipality is urban or rural (Keefer 2007; Stolfi & Hallerberg 2015; Belmar & Morales 2016; Mímica & Navia 2019; Pacheco et al. 2020). These two variables have been obtained from administrative records of the National Institute of Statistics of Chile.

Another dimension of the covariates is associated with the characteristics of the mayors, i.e. variables such as sex of the mayor (genr), whether the mayor completed higher education (univ), personal income of the mayor (salr) and experience in years as mayor (exp) are incorporated (Meloni 2015; Belmar & Morales 2016). These variables were obtained from the electoral register and the official websites of each municipality. The statistical summary of the variables is in Appendix 1.

Taking these variables into account, the following specifications are proposed to characterise recruitment behaviour:

**HYPOTHESIS**

$\log (\text{hiring}_{it})$

$$= \alpha + \beta_1 \text{ym}0_t + \gamma Z_{it} + \sigma_i + \tau_t + u_{it} \tag{1}$$

$\log (\text{hiring}_{it})$

$$= \alpha + \beta_1 \text{ym}1_t + \beta_2 \text{ym}2_t + \beta_3 \text{ym}3_t + \gamma Z_{it} + \sigma_i + \tau_t + u_{it} \tag{2}$$

Models (1) and (2) are intended to identify whether there is a Political Budget Cycle (PBC), being *ym0* the municipal election year ( $t_0$ ), while ( $t_{+1}$ ), *ym2* ( $t_{+2}$ ) y *ym3*( $t_{+3}$ ) are the years after the municipal election, for example, *ym3* is three years after the municipal election.

**H2. Clientelism is lower among independent mayors**

$\log (\text{hiring}_{it})$

$$= \alpha + \beta_1 \text{independent}_{it} + \gamma Z_{it} + \sigma_i + \tau_t + u_{it} \tag{3}$$

$$\log (\text{hiring}_{it}) = \alpha + \beta_1 \text{independent} - \text{left}_{it} + \gamma Z_{it} + \sigma_i + \tau_t + u_{it} \tag{4}$$

Model (3) analyses the relationship between independent mayors and the use of staff recruitment for electoral purposes, where it *independent<sub>it</sub>* identifies whether the mayor in the commune *t* and period *i* was independent; information from SERVEL (Electoral Service) was used to identify independent mayors. While model (4) analyses whether centre-left independent mayors use staff hiring to a greater extent, to identify the ideology of independent mayors, historical elections and electoral lists/pacts were reviewed, since many of them as candidates or mayors in previous periods were linked to political parties. Additionally, the mayors’ Facebook pages were reviewed. The use of panel data analysis and two-way fixed effects has been implemented in previous work (Corvalán et al. 2018; Luca & Rodríguez-Pose 2019; Gainza et al. 2021).

In all equations, the dependent variables are two (a) logarithm of the expenditure on temporary staff recruitment (*Mercado Público*) and (b) logarithm of the number of permanent staff (SINIM). On the right-hand side of the equations, the variables include a fixed effect for each municipality and a fixed effect for each year ( $\sigma_i$ ) and fixed effect for each year ( $\tau_t$ ). The covariates (*Zit*) vary over time and across municipalities. The municipality fixed effect controls those commune-specific factors that are fixed over time, and the year fixed effect controls those factors that vary over time but are common to all communes.

The results show (Table 1) that in the municipal election year (*ym0*) the temporary hiring of staff through *Mercado Público* increases on average by 14.9%, while in the year *ym1* decreases and *ym2* the difference is not statistically significant. An element of interest is that in the year prior to the municipal election (*ym3*) the expenditure increases by 11.9% compared to *ym0*. In other words, there is an increase in spending on hiring people in the pre-election and election year. In terms of permanent staff, the estimates are not statistically significant. These results would be consistent with the work of Stolfi & Hallerberg (2015) and Pierskalla & Sacks (2020).

Table 1: Results: electoral cycle and clientelism

VARIABLES	Model 1		Model 2	
	Temporary recruitment (log expenditure)	Permanent recruitment (log number)	Temporary recruitment (log expenditure)	Permanent recruitment (log number)
<i>ym1</i>			-0.149*** (0.058)	0.0142 (0.0137)
<i>ym2</i>			0.040 (0.066)	-0.0221 (0.0155)
<i>ym3</i>			0.119* (0.062)	-0.00894 (0.0145)
<i>ym0</i> (municipal election)	0.149*** (0.058)	-0.0142 (0.013)		
Constant	-31.45*** (4.811)	-1.881* (1.333)	-31.30*** (6.598)	-1.896 (1.138)
Remarks	2,994	2,930	2,994	2,930
R2 (within)	0.157	0.039	0.157	0.039
ID number	345	345	345	345

Note: ( ) Standard errors, reported in brackets. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.01$ . All estimates have covariates and fixed effects for entity (commune) and time (years).

The results of models 3 and 4 (Table 2) indicate that independent mayors hire fewer staff than traditional party mayors (-9.8%), while mayors who are independent and who have declared that they are centre-left hire on average less (-13.5%) than traditional party mayors, while there is no statistically significant difference for independent centre-right mayors.

Table 2: Results: Clientelism and Independent Mayors

VARIABLES	Independent (all)		independent centre- left		Independent Centre-right	
	Temporary recruitment (log expenditure)	Permanent recruitment (log number)	Temporary recruitment (log expenditure)	Permanent recruitment (log number)	Temporary recruitment (log expenditure)	Permanent recruitment (log number)
independent	-0.0984* (0.0519)	0.0161 (0.0122)				
Centre-Left			-0.135** (0,066)	0.010 (0.024)		
Centre-Right					-0.025 (0.065)	0.0151 (0.0152)
Constant	-31.99*** (4.817)	-1.793 (1.135)	-31.99*** (4.815)	-1.841 (1.135)	-31.49*** (4.812)	-1.858 (1.133)
Remarks	2,994	2,930	2,994	2,930	2,994	2,930
R2 (within)	0.159	0.040	0.159	0.039	0.157	0.039
ID number	345	345	345	345	345	345

Note: ( ) Standard errors, reported in brackets. \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.01. All estimates have covariates and fixed effects for entity (commune) and time (years).

Finally, several appendices have been incorporated to ensure robustness of the estimates. In Appendix 2, it can be seen that clientelism and the electoral cycle are mainly associated with mayors belonging to political parties. Appendix 3 is a robustness test, as it shows the estimates of models 3 and 4, but the covariates are prior to the treatment, i.e. they are lagged (Montgomery et al. 2018). In Appendix 4, the sensitivity of the estimates is tested, using an event study design, to compare the impact of a treatment (centre-left independents) with counterfactual areas where the treatment has not occurred (party-affiliated mayors), the causal impact of the event can be visually depicted (Clarke & Tapia-Schythe 2021). Finally, Appendix 5 shows that covariates do not influence the treatment (Lechner 2011).

## V. DISCUSSION AND CONCLUSIONS

The difficulty of arriving at a variable that can cogently explain the presence of clientelistic ties continues to be debated in academic circles, as does the difficulty of generating definitive conclusions regarding clientelism and patronage and the variables associated with them. While patronage is presented as

a largely tangible form, which can be used in an organisational manner justified by greater governance (Kopecký et al. 2012; Panizza et al. 2018). However, it also has political-electoral features that seek to maintain advantages in the competition for re-election (Calvo & Murillo 2008). This calls into question the needs and probity of public spending, even affecting the legitimacy and trust of citizens towards public and political institutions.

Similarly, the use of public resources associated with the hiring of people continues to be a weakness at the local level in the Chilean case, where mechanisms such as those applied in the central administration, based on the Civil Service and the Senior Public Management (*Alta Dirección Pública*), have not yet been generated, and discretionary spaces for the hiring of the most suitable people for certain positions are not limited. For this reason, this paper focuses on the temporary hiring of people in the 345 municipalities during three electoral periods, identifying PBC and patronage at the local level. It also includes an analysis of mayors' management according to their independence or not from traditional political parties, which has not been addressed by other studies on patronage before.

For our first analysis, it was possible to verify the existence of an increase in spending on temporary hiring of people in the previous year and in the year of the municipal election, which proves the existence of a cycle. Therefore, the mayors of Chilean municipalities engage in patronage practices in election years with the intention of benefiting electorally, proving our first assumption: "Clientelism is related to the political budget cycle".

Regarding the evidence, we can conclude that there are some overlaps with the literature. In the case of the research by Hanusch & Keefer (2014), the only relationship that can be found is in regards to the increase in pre-election public spending, through clientelistic behaviour. Likewise, the results tend to be in line with other studies such as those by Stolfi & Hallerberg (2015) and Pier-skalla & Sacks (2020). In the case of Meloni (2015), the expenditure variations are generated one or two years before the election. Considering these results, we can affirm the need to generate more knowledge to support the implementation of greater controls on the hiring of people, limiting political and personal benefits over collective ones.

In relation to the second hypothesis, there is evidence of lower expenditure on recruitment by independent politicians. This would coincide with works such as those of Belmar & Morales (2020), finding a disparate behaviour of those militants of traditional parties. Although in the Chilean political system there are no long-standing party machines, the literature does show that clientelist behaviour tends to be a cultural trait. (Pérez 2020) and also cuts across the ideological spectrum (Barozet et al. 2020).

The payment of political favours could be a key determinant of increased spending and competitive advantage. Politicians from traditional parties would tend

to generate higher expenditures in exchange for support and mobilisation of the electorate. However, as mentioned by Pérez (2020), political operators often do not have militancy, so they may feel more likely to be represented by actors outside traditional parties. However, it is necessary to further deepen their links with recruitment, given that lower spending does not imply that they do not make use of non-programmatic strategies.

Independent politicians would not necessarily opt for programmatic strategies despite hiring fewer people, being able to take advantage of personalism over the political-ideological factor. It is necessary to continue analysing this type of politician, given that, if it is considered necessary to hire people of trust in strategic positions, they could also respond to corporate or private interests and not necessarily collective ones. Nevertheless, it is necessary to identify or classify the type of hiring and who is appointed to gain more knowledge about the characteristics of hiring associated with patronage and the political budget cycle.

Nevertheless, we must consider that clientelism, and patronage in particular, is a phenomenon that adapts to different institutional and cultural contexts (Piattoni 2001). It is therefore necessary to complement the quantitative view with a more detailed qualitative analysis. The latter is advisable given that the qualitative character becomes relevant if we consider that macro visions neglect the essence of this type of practices, which are predominantly cultural (Gordin 2006).

Similarly, it is necessary to demonstrate the extent to which national or regional institutions influence and generate relationships with local sectors for the recruitment of people. To the extent that transparency increases, and appropriate accountability improves, a favourable space will be created to increase trust in public institutions and to have greater control over public spending, particularly at the local level, the latter of which is relevant when it comes to advancing towards greater administrative, political and fiscal decentralisation.

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## APPENDIX

### Appendix 1. Definitions and descriptive statistics of variables

#### Definitions and descriptive statistics of variables

	Variable	Description	Obs	Media	Std. Dev.
Dependent variable	Expenditure on staff	Spending on temporary staff through the Public Market, million pesos 2020	3,085	250.039	758.498
	gpersonal (log)	Spending on personnel through public market, logarithm	3,085	18.483	1.307
	Staff	Number of staff or permanent staff, defined by law	3,018	77.734	120.874
Political position	Log staff	Logarithm of the Staff, defined by law	3,018	3.769	0.993
	Independent	=1 if the mayor does not officially belong to political parties	3,101	0.299	0.458
	Centre-right	=1 if the independent mayor is centre-right	930	0.474	0.499
Election cycle	Centre-left	=1 if the independent mayor is centre-left	930	0.525	0.499
	ym0	Municipal election year (2012 and 2016)	3,101	0.222	0.415
	ym1	Year following municipal election (2009, 2013, 2017)	3,101	0.333	0.471
	ym2	2 Years after municipal election (2010, 2014)	3,101	0.222	0.415
Mayor	Ym3	3 Years after the municipal election and presidential election (2011, 2015)	3,101	0.222	0.415
	Genre	=1 if the mayor is a woman, 0 otherwise	3,101	0.126	0.332
	University	= 1 if the mayor has a profession	3,101	1.418	0.493
Institutional	Salary	Mayor's monthly salary in logarithm	3,101	15.492	0.282
	Experience	Years of mayoral experience	3,101	4.876	4.712
	Efficiency	Ratio of personnel expenditure to total expenditure	3,091	29.629	7.886
Socio-economic	Deficit	Ratio total income/total expenses	3,091	97.798	10.782
	Comp	Expenditure commitments currency 2020(Billions)	3,091	8,980	16,930
Geographical	FCM	Percentage of reliance on the municipal pooled fund	3,091	62.675	23.730
	Population	Total annualised population	3,101	51,146	84,628
	Density	Population	3,011	889	2,701

Source: Servel, CGR, Mercado Público, INE

## Appendix 2. Results: Clientelism, Electoral Cycle and Independent Mayors

The estimates in Table 3 show the electoral cycle for a subset of the sample, specifically the electoral cycle is analysed for those mayors who are independent and for those who belong to political parties, for this, a condition is incorporated into the equation of model 1, the condition  $\delta$  can be 1 or 0, for independent or non-independent mayors respectively.

$$\log(\text{contratación}_{it}) = \alpha + \beta 1 \text{ym}0_t + \gamma Z_{it} + \sigma_i + \tau_t + u_{it} \quad \text{if independentes} \\ = \delta \quad (1.1)$$

Table 3: Clientelism and municipal elections for independent and non-independent mayors

VARIABLES	Mercado Publico		Permanent recruitment	
	Non-independent (temporary contracting log)	Independent (temporary contracting log)	Non-independent (permanent contracting log)	Independent (permanent contracting log)
ym0	0.180** (0.0723)	-0.0470 (0.118)	-0.00949 (0.0185)	-0.0199 (0.0225)
Constant	-29.45*** (6.007)	-41.50*** (10.83)	-1.692 (1.553)	-2.196 (2.000)
Observations	2,083	911	2,040	890
R-squared	0.144	0.143	0.033	0.043
Number of id	292	184	292	184

Note: ( ) Standard errors, reported in brackets. \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.01. All estimates have covariates and fixed effects for entity (commune) and time (years).

In this context, Table 3 shows that in the municipal election year mayors belonging to political parties spent on average an additional 18% on temporary staff through the *Mercado Publico*. While there is no statistically significant effect for independent mayors, similarly the estimate is not significant for permanent staff, which is consistent with the estimates in Table 1.

### Appendix 3. Results with lagged variables: clientelism, electoral cycle and independent mayors

#### H2. Clientelism is lower among independent mayors and centre-left independent mayors.

$$\begin{aligned} \log (\text{contratación}_{i,t+1}) & \\ &= \alpha + \beta 1 \text{ independiente}_{it} + \gamma Z_{it} + \sigma_i + \tau_t \\ &+ u_{it} \end{aligned} \tag{3}$$

$$\begin{aligned} \log (\text{contratación}_{i,t+1}) & \\ &= \alpha + \beta 1 \text{ independiente} - \text{izquierda}_{it} + \gamma Z_{it} + \sigma_i + \tau_t \\ &+ u_{it} \end{aligned} \tag{4}$$

VARIABLES	Independent (all)		independent centre-left		Independent centre right	
	Temporary recruitment	Permanent recruitment	Temporary recruitment	Permanent recruitment	Temporary recruitment	Permanent recruitment
	Mercado Publico (log)	Staff (log)	Mercado Publico (log)	Staff (log)	Mercado Publico (log)	Staff (log)
independent	-0.0781 (0.0532)	0.0145 (0.0112)				
Centre-Left			-0.139** (0.0677)	0.00808 (0.0143)		
Centre-Right					0.0200 (0.0668)	0.0150 (0.0140)
Constant	-34.58*** (5.013)	-2.712** (1.053)	-38.72*** (5.113)	-2.784*** (1.052)	-33.98*** (5.004)	-2.774*** (1.051)
Remarks	2,664	2,630	2,665	2,630	2,664	2,630
R2 (within)	0.131	0.055	0.140	0.055	0.130	0.055
Number of id	345	345	345	345	345	345
Covariates (laggards)	YES	YES	YES	YES	YES	YES

Note: ( ) Standard errors, reported in brackets. \*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.01. All estimates have covariates and fixed effects for entity (commune) and time (years).

#### Appendix 4. Event study: clientelism and independent mayors

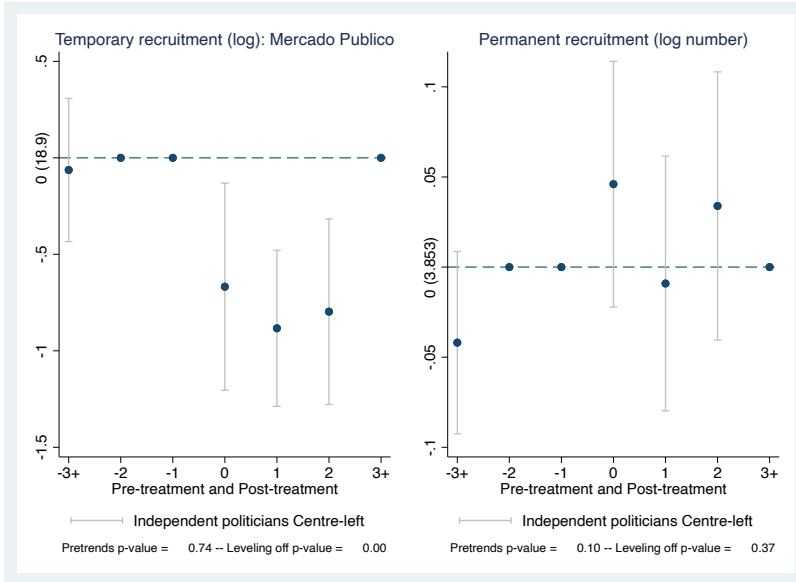
To test the sensitivity of our estimates, we conducted an event-study panel design. This approach can be used as an extension of fixed effects and allows estimating the periods before and after the event of interest (centre-left independent), while controlling for fixed factors (commune and time). Event studies consist of comparing the impact of a treatment (centre-left independents) occurring in certain communes and year with counterfactual areas where the event did not occur (party-affiliated mayors). By taking into account the variation in outcomes around the adoption of the event compared to a reference period, the causal impact of the event can be visually represented (Clarke & Tapia-Schythe 2021). We implement the event study on model 4, to weight the temporal effect of having an independent centre-left mayor. The specification is (Equation 5):

$$Y_{it} = \gamma_i + \gamma_t + \sum_{\tau=-q}^{-1} \gamma_{\tau} D_{it} + \sum_{\tau=0}^m \delta_{\tau} D_{it} + \theta X_{it} + u_{it} \quad (5)$$

Treatment occurs in  $ym0$  (municipal election year),  $q$  captures pre-treatment effects and  $m$  captures post-treatment effects. Figure 3 shows systematic differences between treatment and control groups. The pre-treatment coefficients are around the zero line (mean value), the  $p$ -value of the pre-treatment trends is 0.63 and their standard errors are very small, which means that the difference is very precise. In contrast, after treatment, the coefficients move away from the zero line and the  $p$ -value is 0.03.

Figure 3 (left) reveals that when a centre-left independent mayor governs, spending decreases significantly over the electoral cycle. While when analysing the variation in permanent staff, no significant difference is identified for independent centre-left mayors (Figure 3, right-hand side).

Figure 3. Event study for spending on public market staff for centre-left independent mayors



Source: Own elaboration

### Appendix 5. Exogeneity analysis

Exogeneity analysis refers to the fact that covariates do not influence the treatment. The problem with covariates arises in the post-treatment period, as time-varying trend-confounding variables are more likely to influence (Lechner 2011). In this context, if covariates are exogenous, they could eliminate trend-confounding of those covariates that do not vary over time. Table 9 shows the relationship between the treatment variable and the covariates, using panel data and fixed effects. The results indicate that there is no statistically significant relationship between the variables.

VARIABLES	CentreLeft_ind	CentreRight_ind
gnr	-0.0433 (0.0650)	-0.0601 (0.0701)
unvrsdd	-0.0644 (0.0390)	-0.0377 (0.0484)
slr_in	0.278 (0.143)	0.124 (0.143)
explcld	-0.00512 (0.00343)	-0.00456 (0.00288)
dend	2.29e-05 (2.00e-05)	-9.43e-06 (1.22e-05)



VARIABLES	CentreLeft_ind	CentreRight_ind
pop	-6.61e-07 (7.18e-07)	-4.67e-08 (4.11e-07)
fcm	0.000256 (0.00244)	0.000912 (0.00225)
dfct	-0.000371 (0.000622)	-0.00106 (0.000880)
gsts	-2.01e-09 (2.54e-09)	6.47e-09* (2.86e-09)
rrhh_gtd	-0.000936 (0.00174)	-9.82e-05 (0.00180)
ptnt	3.10e-09 (9.59e-09)	-4.00e-08** (1.65e-08)
Constant	-3.865 (2.234)	-1.523 (2.229)
Observations	3,002	3,002
R-squared	0.030	0.022
Number of id	345	345
Municipal & Year FE	Yes	Yes

Note: ( ) Standard errors, clustered by municipality, reported in brackets. \*\*p < 0.01, \*p < 0.05. All estimates have covariates and fixed effects for entity (municipality) and time (years).

