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Towards upright city halls: Mechanisms of corruption at the local level in Spain.

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A Thesis in the Field of Government
for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

A considerable amount of literature points to the fact that corruption is especially relevant at the local level of government in several countries. However, academia has not paid sufficient attention to the factors that can explain variation in local corruption, at least compared to corruption at the country level.

This research aims to shine new light on the debate around the explanatory factors of local corruption in Spain and explore the causal mechanisms behind these factors. Departing from the assertion that anti-corruption norms and regulations are mostly homogeneous at the regional or state levels, I show evidence of which demographic, political and economic factors can facilitate corruption in cities and towns.

The study uses a mixed methods research approach based on a statistical analysis of different variables that the literature has found to be related to local corruption and, based on these results, a qualitative comparative analysis of corruption in six cities.

The results of the research suggest that longevity in the local government of the same party and strong leadership mayors are risk factors for corruption, as much as a high dependence of the city council on the construction and real estate sectors. The analysis also indicates that anti-corruption controls could be failing in small municipalities, especially when there is a lack of alternation in power. These findings have implications for future anti-corruption strategies. In particular, they may help policymakers to increase the efficiency of public integrity tools by considering these risk factors and reviewing which controls are failing in specific contexts.

Author's Biographical Sketch

She holds a BA degree in Political Science and a BA in Law, both from the Autonomous University of Barcelona (Spain, UAB in its Catalan acronym), and a master's degree in Private International Law from the University of Buenos Aires (Argentina). She carried out training activities at the Academy of International Law in The Hague on international economic crime, and the Institute of Social Sciences of the University of Lisbon on research on corruption.

Her field of specialization is focused on public policy, anti-corruption, and prevention of money laundering, combining professional experience in the public and private sectors with university lecturing and research. Among others, she has advised a Member of the European Parliament and the Barcelona City Council.

Her lecturing activity began in the field of political thought at the University of Buenos Aires and the National University of Avellaneda (Argentina). In the last few years, she has been an adjunct lecturer in public policy at the UAB where she also supervises final bachelor's research projects.

In the field of research, she has been linked to policy analysis and evaluation projects of the Institute of Government and Public Policies of the UAB, she completed her master's thesis on tax havens and international money laundering, and she is now working on her PhD dissertation on anti-corruption. Her research activity has led to the publication of academic articles in peer-reviewed journals, as well as other articles and book chapters on public policy, anti-corruption, and political analysis.

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Chapter I.

Introduction

It is June 2015 and outside the prison of Alcalá de Guadaíra, in Seville, a group of fans burst into applause when Isabel Pantoja appears. The famous singer of Spanish folklore was condemned to two years of prison for money laundering in relation to the Malaya case, the biggest local corruption scandal ever in the country. She was in a relationship with Julián Muñoz, deputy mayor and afterwards, mayor of Marbella, a city in southern Spain Costa del Sol where there was a massive political corruption scheme lead by politicians, real estate investors, and building companies.

These local citizens applauding outside the prison, were they just the proof of a country that does not care about corruption? Was this scene, in some sense, related to the functioning of norms and institutions to prevent and punish corrupt behaviors? Different attitudes about public integrity can partly explain the variation in corruption levels around the world. However, in this study I attempt to provide evidence that certain policies based on improving institutional designs for public integrity can have a central impact on the fight against corruption.

Corruption is a significant barrier to economic development and the delivery of public services both in developed and developing countries. Surveys show that corruption is a citizen concern and neither democracy nor economic development are sufficient factors to eliminate corrupt behaviors (Alt & Dreyer Lassen, 2012; Klitgaard, 1988; Transparency International, 2020).

When we think about corruption, we tend to think about nation states. The Corruption Perception Index of Transparency International (CPI, Transparency International, 2022) or the World Bank database (The World Bank, 2022) are well-known tools for studying corruption but they do not include data at the subnational level.

However, previous studies have found that in several countries a lot of corruption cases happen at the local level of government (Ferraz & Finan, 2011; Funk, Kendall & Owen, 2020; Masters & Graycar, 2016; Olken, 2007). In Spain, the literature has unanimously observed this tendency and shows that corruption cases are more common in city councils than in regional or state administrations (Lapuente, 2009). Nonetheless, research on corruption at the local level is not as developed as at the national level, not only in Spain but in general (Beerli & Navot, 2013).

Thus, it is critical to analyze the factors that can explain variation in local corruption, taking into account that anti-corruption policies are usually implemented at the state or regional level. There are currently some cities, basically, the most populated ones, which have developed their own public administration control measures (for instance, transparency policies or anonymous ways to receive corruption complaints). Nonetheless, the majority of municipalities in Spain rely mostly on regional and state regulations and corruption control traditional bodies, in consequence, other factors should explain the divergence in corruption at the local level.

Concerning the explanatory factors of the variation in municipal corruption, the general literature on corruption offers different broad points of view to deal with this fact. One of the most important theoretical approaches to the factors that explain corruption is based on culture, social norms, traditions and history (e.g., Ensminger, 2017; Fisman &

Miguel, 2008). Another of the more important theoretical approaches to corruption is the institutionalist one, which focuses on the effect of political institutions to tackle corruption (Lapuente, 2009; Thompson, 2018). There are also economic approaches centered on the influence of incentives and organizations (Bardhan, 2006). Of course, these different approaches are not exclusive, and academia tends to find them complimentary and interrelated when researching factors that explain the corruption phenomenon.

Even though the complex nature of corruption suggests it is a multifactorial reality, I will focus basically on the approach based on institutions and, consequently, I do not consider in my research the potential effects of social attitudes or cultural elements on corruption at the local level. This decision comes from the reflection that the high variation in corruption at the intra-state local level suggests that other factors apart from cultural ones should be relevant, since social norms and values should not be much different between municipalities in the same regions or even the same provinces.

Another issue I may explain is the territorial framework of my research. I have chosen the municipalities of Spain, a country that appears as a relevant case because of its remarkably high levels of corruption at the same time that it is a developed and democratic state (Italy could be a similar example as shown in Golden and Picci, 2005, who also use an objective indicator of corruption). The results of the CPI clearly show how Spain has gotten lower grades on public integrity in comparison to the average of the European Union countries (see Figure 1). Similarly, the special Eurobarometer of 2019 about corruption shows high levels of corruption perception among citizens, especially, about the local and regional administrations (see Figures 2 and 3). In this sense, Spain

appears as a relevant case to study the factors that can explain why, even in democratic and developed countries, corruption can remain.

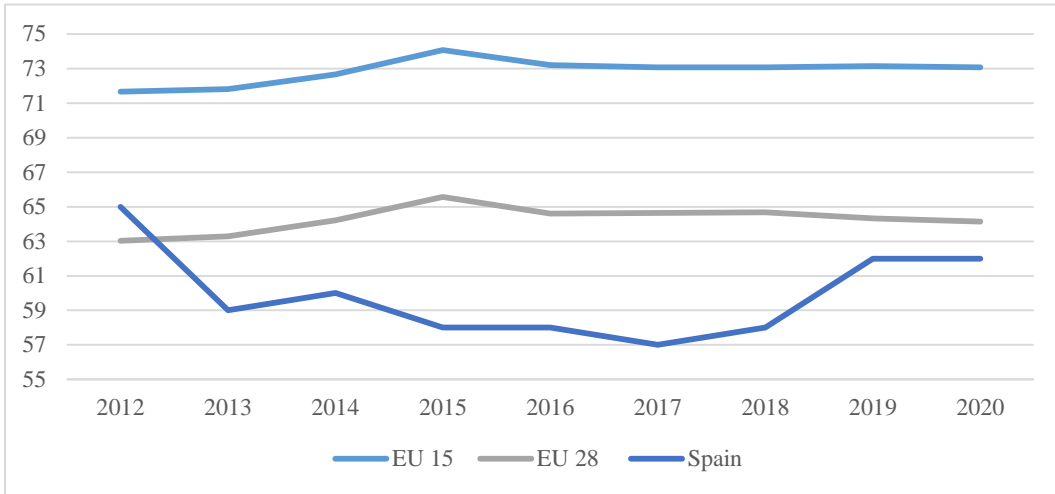


Figure 1. Corruption Perception Index evolution EU15, EU28 and Spain (2012-2020)

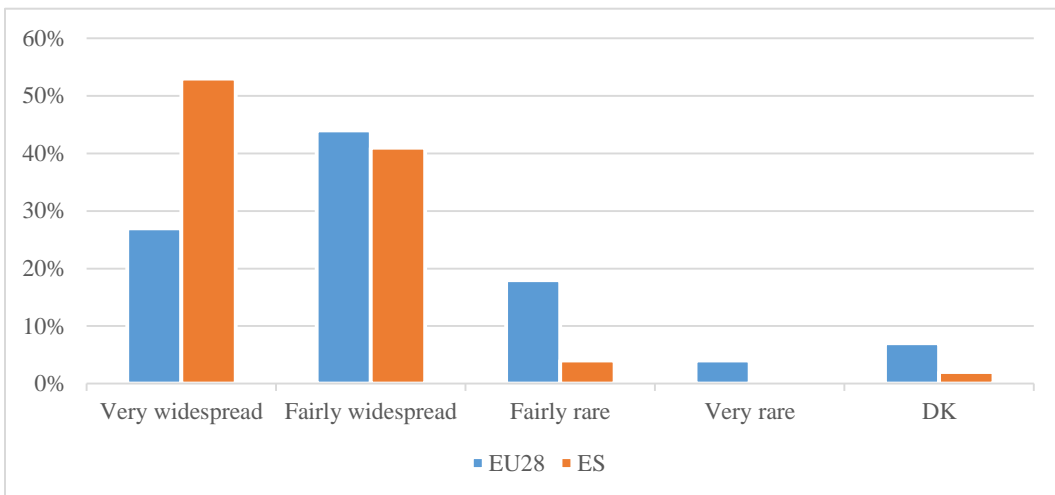


Figure 2. Special Eurobarometer 502, 2019. Question QB5 “How widespread do you think the problem of corruption is in (country)?”

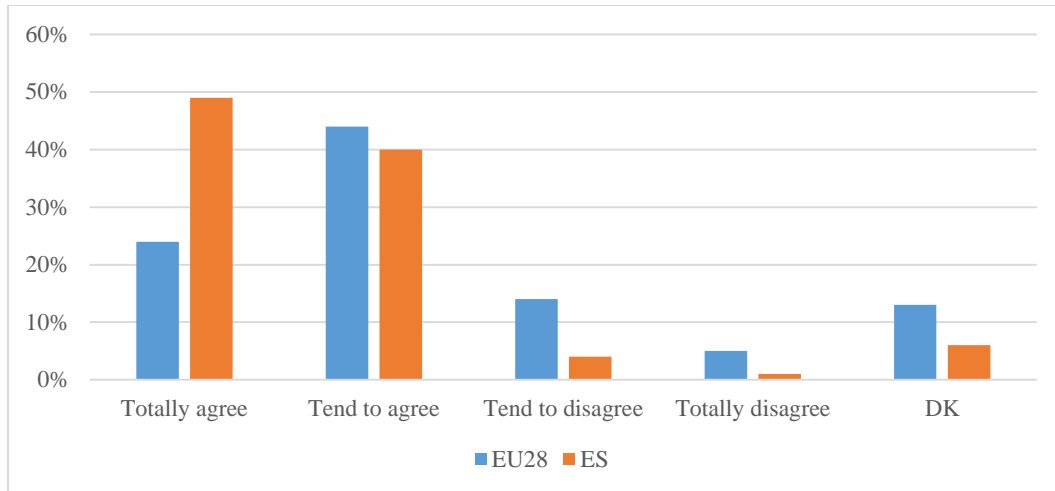


Figure 3. Special Eurobarometer 502, 2019. Question QB15.1 “Please tell me whether you agree or disagree... There is corruption in the local or regional public institutions in (country)”

Within the institutional line, literature in Spain has pointed out different factors that can explain this larger presence of corrupt behaviors at the local level apart from the anti-corruption policies and integrity rules that, as already said, do not generally differ between cities (with some exceptions in larger cities like Barcelona or Valencia). Some of these factors have also been studied by the literature in relation to other countries with some consistent but other contradictory findings.

In this paper I present a case study about local corruption in Spain, trying to understand the causal mechanisms of this kind of corruption with the aim to detect the most important factors that anti-corruption policies should focus on.

The research consists of a mixed methods explanatory design, specifically, a follow-up explanations model. My dependent variable, that is, corruption at the local

level is measured through an objective indicator based on final judgements for corruption and other related felonies that took place in Spain between 1995 and 2015.

First, I conduct a statistical analysis of the following variables that the literature has found to be potentially related to local corruption: the size of the population, as a demographic factor; the concentration of political power in one party consisting of longevity in power, this is, the lack of party alternation; economic factors described as the public budget and the budget per capita; and characteristics of the local productive system detected as relevant risk factors for corruption, that is, the weight of the local construction industry and real estate sectors.

Second, I take the explaining factors that seem more relevant considering the quantitative analysis results and I do a qualitative analysis. This part of the research consists of a comparative method with two different models that follow the most-similar system design. I use the process tracing technique even if in a summarized version due to the high number of cases studied in the comparative models (3 municipalities per each one).

This research design seeks to answer the following research questions:

What factors explain corruption variation across municipalities in Spain? What are the most important risk factors to avoid in order to reduce local corruption?

While the comparative literature is still debating about the size of cities as a predictor for the level of corruption, there is a consensus in the case of Spain that smaller cities are more prone to corruption. However, larger cities are remarkably more present in my dataset of corruption judgement, and I argue that this could be related to the fact that

those cities have better accountability mechanisms and more resources for public activity controls, which makes it easier to get corruption condemned.

Regarding the political factors, I consider that the lack of party alternation in local governments should make corruption more probable because, in line with Klitgaard's formula (1988), this concentration of power might imply higher levels of monopolistic capacities and discretion to take decisions, at the time that it can weaken the accountability mechanisms. The results of this research show, consistently with Klitgaard's theory, that in municipalities where the same party has governed for a long period, public activity controls seem to fail as there is less tendency to prosecute and condemn corruption.

Regarding the economic factors, some authors researching the Spanish case have pointed to the fact that the lack of economic resources in municipalities could be operating as an incentive for corruption. Thus, my initial hypothesis is that cities and towns with lower budgets could be more prone to cases of corruption.

Finally, in respect of the local productive system, a considerable amount of literature on Spanish municipalities' corruption concludes that construction and real estate activity are usually related to corruption because of the discretionary powers of city councils to take decisions about building licenses and land use, and due to the high revenues that these activities can generate both for city councils and for private interests. As seen in the maps of the distribution of corruption cases (Figures 4 and 5), in Spain corruption is mostly present in coastal areas (the Canary Islands, the Balearic Islands, or the Málaga province) and near big cities (Madrid, Barcelona, and Valencia), the areas

with more relevant construction and real estate sectors, what points to the fact that indeed these economic activities are risk factors for corruption.

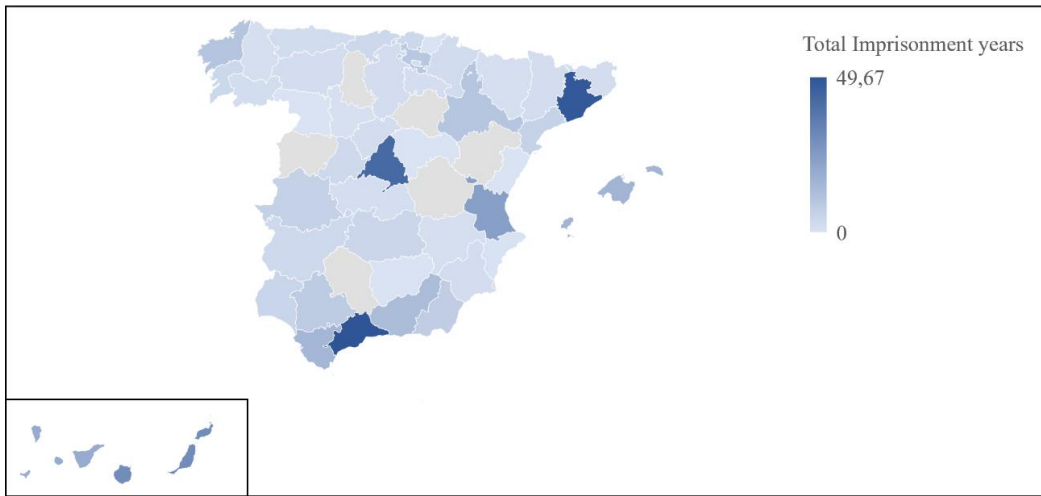


Figure 4. Geographical distribution of corruption by Provinces and Imprisonment years

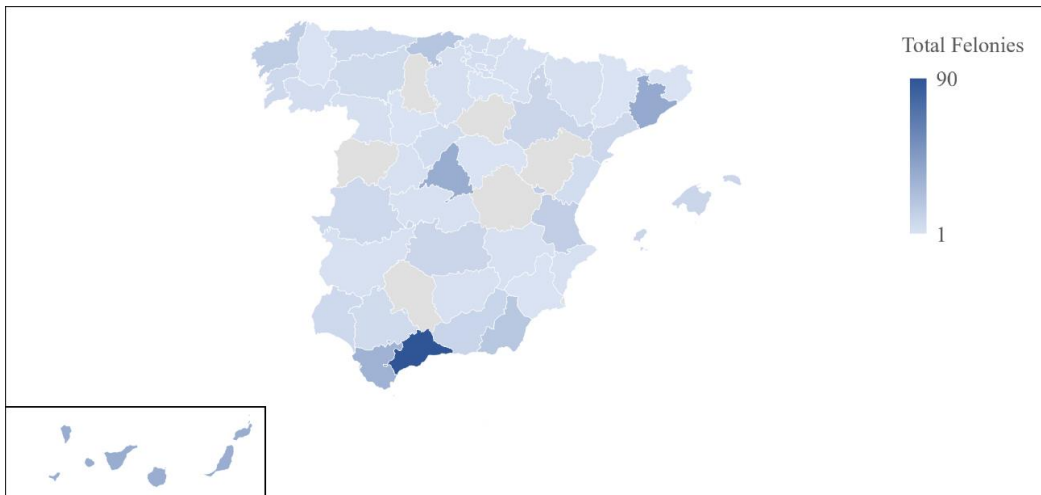


Figure 5. Geographical distribution of corruption by Provinces and Number of felonies

In conclusion, considering that the literature has shown that corruption is mostly present at local levels of government in a wide range of countries, it is relevant to analyze

some factors that can facilitate corruption at the local level and which, in consequence, should be considered when designing corruption prevention policies. Thus, the conclusions of this research could be the basis for relevant improvements in anti-corruption strategies. Rather than a repressive approach, centered on judicial punishment, there is a need for corruption prevention policies based on an in-depth knowledge of the risk factors for corruption.

In the following sections, first, in Chapter II I present a summary of some corruption concepts definitions that I consider useful for a clear and complete understanding of the conceptual framework for this research. Then, Chapter III is a literature review structured in three sections: first, I comment on the two factors more usually studied by literature on local corruption, that is, the size of the city in terms of population and different definitions of the concentration of political power; and, second, I explain the different explanatory factors of local corruption that literature has found to be specific of the Spanish case. Chapter IV is an explanation of the research methods and data. After that, in Chapter V I present the results in two different sections, one for the quantitative analysis, structured by each of the explanatory factors analyzed; and another one for the qualitative analysis, where I explain the results of the three cities studied in each of the two comparative models. Finally, in Chapter VI I comment on the conclusions of the research, dividing the section into the discussion of the research, its limitations, and the concluding remarks.

Chapter II.

Definition of Terms

The previous introduction has already mentioned several concepts that are central to my research and, in consequence, I should clarify them before the following sections. Below I present the definitions of these concepts taken from the literature on corruption:

Corruption

I depart from the definition of corruption of Transparency International (2021b), that is, “the abuse of entrusted power for private gain”, but I limit this broad concept to the actions that are perpetrated by people with public responsibilities (public officers, elected representatives, and other people with public responsibilities) and that are criminally prosecutable (in line with Villoria & Jiménez, 2012).

Typology of Corruption

Even if there are several typologies of corruption, I only present the classification I consider more relevant for my research:

Petty corruption.

Also called bureaucratic corruption, this term defines the abuse by public officials of power in their relations with common citizens, usually when the latter are trying to access basic services such as the health system or education. This is the kind of

corruption done by low-level or non-elites actors in the administration, for example, small bribes asked for by police officers (Ang, 2020; Transparency International, 2021).

Grand or political corruption.

Certain authors consider that grand corruption and political corruption describe two different realities. The first one, in contrast to petty corruption, would refer to the abuse of high-level actors' power to benefit a small minority at the cost of the majority, thus causing general negative consequences to individual citizens and society. The second one would be defined by the authors of the corrupt behaviors and referred to the abuse by elite political actors like decision-makers of their position to sustain their power and wealth through the manipulation of institutions or rules, for instance, influence peddling (Ang, 2020; Transparency International, 2021).

Nonetheless, it seems empirically more suitable to consider only one differentiation depending on the social interest affected. In that case, grand or political corruption is one that negatively impacts the community as a whole harming the legitimacy of the political system (Amundsen, 1999; UNDP, 2008 Villoria, 2006).

Measuring Corruption

In different sections of this research, I define my measurement of corruption and compare it to other ways of measuring this phenomenon. This is why I include below a brief definition of the three basic types of indicators to measure corruption:

Objective indicators.

Objective indicators are those based on undisputed facts, for example, the existence of anti-corruption laws or the funding received by anti-corruption agencies (Heywood, 2015; UNDP, 2008).

Perception-based indicators.

These indicators are based on the opinions and perceptions of citizens or experts about corruption (Heywood, 2015; UNDP, 2008).

Experience-based indicators.

Experience-based indicators are measures of citizens' or firms' actual experiences with corruption, for instance, if they have paid or received bribes (Heywood, 2015; UNDP, 2008).

After this definition of terms that are relevant to this research, in the next section, I present a literature review to explain the theoretical framework on which my research is based.

Chapter III.

Literature Review

Considering that a lot of corruption cases happen at the local level of government in several countries (Masters & Graycar, 2016; some examples that observe this tendency in concrete states are, for the Spanish case, Jiménez, Villoria & García Quesada, 2012; Lapuente, 2009; Parrado, Dahlström & Lapuente, 2018; for the Italian case, Drapalova, 2016; for the Swedish case, Andersson, 2008 or Erlingsson, Bergh & Sjölin, 2008), it appears as a relevant matter to analyze what are the factors that can explain why some cities are remarkably more corrupt than others considering, as said, that anti-corruption policy does not generally differ within regions or countries. Nonetheless, as already mentioned above, research on corruption at the local level is scarce (Beere & Navot, 2013).

As a preliminary background before analyzing literature on the factors that can explain corruption, I should talk about the debate around the measurement of corruption. Traditionally, research on corruption has been based on corruption perception surveys (Golden & Picci, 2005; Olken, 2009) and, less usually, on victimization surveys. However, in this research, I use a measurement based on the analysis of final judgements for corruption and other related felonies, which is considered an objective measure of corruption that can overcome certain limitations of survey information.

I have chosen this operationalization of corruption because of its objectivity, compared to the use of media information, the usual tool of the research on corruption

relating to the Spanish case (for instance, used in Costas-Pérez, Solé-Ollé, & Sorribas-Navarro, 2012 and Jiménez, Villoria & García Quesada, 2012). I have also rejected the use of surveys about perceptions due to the same problem of objectivity but also because, anyway, this tool is only available at the state level, as is the case of victimization surveys.

The direct measures of corruption based on judicial decisions are usually criticized arguing that they can be measuring the efficacy of the judicial system instead of the presence of corruption. Nonetheless, I consider that this is still an interesting tool to measure corruption that overcomes the limitations of other tools, as mentioned, the politicization of media, the effects of subjectivity on corruption perceptions, or the lack of some data at the local level (Olken, 2009).

Concerning the previous academic works around my research question, I should underline that the literature on the institutional causes that explain corruption is extensive (between the most important works, Klitgaard, 1988; Mauro, 1995; Mo, 2001; Rose-Ackerman & Palifka, 2016; Rothstein, 1998; Shleifer & Vishny, 1993). Nonetheless, here I only present a literature review where I analyze works about the current or recent situation in municipalities to try to find tendencies that are repeated in several countries for which I have found quantitative or qualitative research studies about corruption at the local level.

There is a relevant body of literature addressing the following factors as possible explanatory variables of the corruption level in cities and towns: the size of the population of the city, directly linked to the size of the municipal administration; and the

concentration of political power. This latter concept can be divided into two issues following the works of different authors.

First, academia analyzes the concentration of political power in the mayor, or few elected representatives, due to the absence of strong administrative managers in the city council or a higher number of elected councilors. I do not include this perspective in my research because the number of councilors in a Spanish municipality is directly related to the size of the population and, thus, it would not add new information and it could be considered as one of the institutional design consequences of the population size, which is one of the variables that I study in this research. In turn, there is no aggregate data to study the existence of a powerful manager in municipalities.

Second, the concentration of political power appears also in a situation in which there is a single-party majority in the city council. However, I do not include this factor in my research because Spain has a local political system that gives a lot of power to the mayor and, thus, I do not consider local coalitions to be a very relevant factor regarding the concentration of power. There is at least another point of view to analyze the concentration of power in one party related to party alternation, that is, when the same party has governed for several years or, in addition, it has also governed for a long time at the regional level. These last two situations are the ones I consider in my research.

The Size of the City

An element that some institutionalist literature finds to be related to corruption is the size of the public administration that, in the case of municipalities, is directly related to the size of the population that lives in the city (Lapuente, 2009). Table 1 shows that, in general, smaller municipalities tend to have a smaller number of public employees.

Some authors suggest that corruption is positively related to smaller cities and towns. In this line, the table from the work of Mouritzen and Svava (2002) (Table 1) also shows that countries with higher levels of corruption tend to have municipalities with less population. Portugal and Norway are exceptions to that tendency: the former within the group of the more corrupt countries, and the latter within the group of the less corrupt countries. García Quesada, Jiménez Sánchez and Villoria (2013) also find that the reduced size of municipalities in Spain could be a factor that facilitates corruption. These authors argue that this reduced size makes it difficult to have sufficient staff to control public activity and to ensure the independence of these public servants.

Table 1. Population of municipalities, employees per municipality, and corruption

	Average population of municipalities	Average number of public employees per municipality	Absence of corruption (CPI 2008)
Sweden	30,200	1.040	9.3
Denmark	18,800	610	9.3
Finland	10,900	200	9
Netherlands	24,200	90	8.9
Australia	19,100	80	8.7
Norway	9,000	190	7.9
Ireland	103,000	800	7.7

	Average population of municipalities	Average number of public employees per municipality	Absence of corruption (CPI 2008)
United Kingdom	120,000	730	7.7
Belgium	17,000	90	7.3
USA	6,600	130	7.3
France	1,600	220	6.9
Spain	4,800	40	6.5
Portugal	32,000	130	6.1
Italy	7,200	90	4.8

Source: Mouritzen & Svava, 2002 reproduced in Lapuente, 2009.

Despite the conclusions of these authors, the literature does not arrive at conclusive results about the relationship between population size and corruption. For instance, the comparative study of cities from Spain and Italy written by Eliska Drapalova (2016) does not show a clear relationship between the size of the population of the cities and its level of corruption (Tables 3 and 4). In the Italian case, the larger city (Siracusa) shows a higher level of corruption. Nonetheless, all the cases are middle-size cities that range from 72,000 to 120,000 inhabitants what does not permit us to reach general conclusions about this variable.

Nicholas Charron (2013) even arrives at a contrary conclusion to the first authors I cite in this section. With data from several European cities, he finds that corruption is more prone to happen in large cities and considers that this is due to the existence of more opportunities for obtaining bribes in urban areas than in rural ones.

Julia Korosteleva, Tomasz Mickiewicz and Paulina Stępień-Baig (2020) present the same result in their research about corruption in European cities. These authors find an exception in capital cities because of their particular characteristics consisting of stronger social and political mechanisms to make governments accountable, and because they are less fragmented than other big cities.

The study by Naci Mocan (2008) also reaches similar conclusions. Mocan analyses data from 29 countries and relates the higher levels of corruption in larger cities to a more distant relationship between citizens and public officials, and to the more varied and larger economic activity that exists in this kind of city.

Hence, I do not find conclusive results in the literature about the relationship between the size of the population of a municipality and its level of corruption. These differences could be related to the cases studied, but the research that presents a broader dataset including a large sample of 54,209 individuals living in 29 different countries (Mocan, 2008) concludes that larger cities tend to be more prone to corruption. Concerning the Spanish case, the results of García Quesada, Jiménez Sánchez and Villoria (2013; also in Jiménez, Villoria & García Quesada, 2012) could show that Spain is just an exception to the general tendency, as the country indeed is in relation to the generally high level of corruption. Following this literature about Spain, I hypothesize that:

Hypothesis 1 Municipalities with larger populations tend to be less prone to cases of corruption.

However, more in-depth comparative and large-N studies of corruption at the Spanish local level are needed to get more solid conclusions and this research seeks to extend the empirical evidence gap. In the global arena, further research should also keep working on this hypothesis and include data from cities in countries of different regions and levels of development to confirm the potential impacts of other explanatory or conditional variables.

Concentration of Power

Within the institutionalist literature on corruption, it is generally accepted that the concentration of power is a factor that facilitates corruption (Lapuente, 2009). Robert Klitgaard's book *Controlling corruption* (1988), one of the most ever cited works about corruption, presented the "Corruption formula": $C = M + D - A$. The formula summarizes the idea that corruption equals monopoly plus discretion minus accountability. The concentration of power means more monopolistic capacities and discretion and fewer means of accountability by other powerful actors. Thus, it is reasonable that, from an institutionalist approach, the concentration of power is related to higher levels of corruption both at the state and local levels of government.

In line with this argument, Lapuente (2009) suggests that in the Spanish case some factors that could be causing the high level of corruption in the local administration are the concentration of power in a small number of public representatives and the fact that in a relevant number of cities one political party governs alone.

Table 2, taken from one of Lapuente's works (2009), shows a general tendency consisting of higher levels of corruption (that is, lower grades in the column Absence of corruption) for countries with an average of around 20 councillors per municipality or less, except for Portugal. At the same time, the table shows that these same countries with higher levels of corruption have more than half of their municipalities governed by a single-party majority. Finland is a clear exception to this last tendency because, with 53% of this kind of local government, it is ranked as one of the least corrupt countries.

Table 2. Concentration of political power in local governments and corruption

	Average number of councillors per municipality	Percentage of local governments with a single-party majority	Absence of corruption (CPI 2008)
Sweden	45	30	9.3
Denmark	17	31	9.3
Finland	28	53	9
Netherlands	19	7	8.9
Australia	10	Non-relevant	8.7
Norway	29	10	7.9
Ireland	26	15	7.7
United Kingdom	42	59	7.7

	Average number of councillors per municipality	Percentage of local governments with a single-party majority	Absence of corruption (CPI 2008)
Belgium	22	46	7.3
USA	7	Non-applicable	7.3
France	14	53	6.9
Spain	8	63	6.5
Portugal	29	68	6.1
Italy	18	53	4.8

Source: Lapuente, 2009.

In the same line of avoiding a high concentration of power in one political leader, Lapuente and other authors from the Quality of Government Institute of the University of Gothenburg study both the Spanish and the Swedish case and underline the need for a managerial figure to counterbalance the power of elected mayors (Lapuente, 2009; Parrado, Dahlström & Lapuente, 2018). Lapuente (2009) observes that the presence of this administrative position in cities correlates with lower levels of perceived corruption in countries (remember that, in general, there are no available data about corruption perceptions at the local level). Nonetheless, this manager needs to be surrounded by a meritocratic system of human resources management, transparency, independent

watchdogs, and clear rules and procedures to have these anti-corruption effects (Parrado, Dahlström & Lapuente, 2018).

Eliska Drapalova and Fabrizio Di Mascio (2020) present a case study of two Spanish cities where they also find a positive result of the existence of strong managers to struggle against corruption at the local level. These authors explain that building a clear dual system with an administrative structure that can control elected representatives is negatively correlated to corruption (the same results are also presented in more detail in Drapalova, 2016).

The comparative study between cities from Italy and Spain developed by Drapalova (2016) shows interesting results concerning the concentration of power. The two Italian cases with higher levels of corruption (Brindisi and Siracusa) are governed by coalitions. However, the author cannot get solid conclusions because, on the contrary, Lecce shows low levels of corruption with an unstable coalition government. For the Spanish case, Eliska Drapalova uses another measure of corruption where higher figures mean fewer corrupt activities. The two cities with clearly lower levels of corruption (Alcobendas and Sant Cugat) have stable one-party local governments, which goes against the hypothesis defended by Lapuente. Nonetheless, in recent years relevant cases of corruption have been investigated in Sant Cugat (Rocasalva, 2020; Vallespín, 2019).

Table 3. Four Italian cities' characteristics and levels of corruption

City	Region	Size	Corruption	Government
Lecce	Puglia	90,000	0.9	Stable one party
Brindisi	Puglia	90,000	1.75	Unstable coalition
Ragusa	Sicily	72,000	0.81	Stable coalition
Siracusa	Sicily	120,000	1.95	Unstable coalition

Source: Adaptation from Drapalova, 2016 with data from Istat.it.

Table 4. Four Spanish cities' characteristics and levels of corruption

City	Size	Corruption	Government
Alcobendas	110,000	98	Stable one party
Torrejón	120,000	40	Unstable one party
Sant Cugat	90,000	99	Stable one party
Santa Coloma	100,000	78	Unstable one party

Source: Adaptation from Drapalova, 2016.

In conclusion, regarding the concentration of power, even if some comparative studies find exceptions, the literature gets similar conclusions to the ones observed at the national level: more concentration of power means more corruption. Despite this general conclusion observed, I should underline that I have found no authors that study the effect of the concentration of power at the local level with corruption using the operationalization of my research, that is, the longevity in power of the same party (i.e., absence of party alternation). Considering the conclusions of the existent literature and including this new aspect of local concentration of power, my hypothesis is that:

Hypothesis 2 Municipalities with less concentration of political power in one political party due to alternation in power tend to be less prone to cases of corruption.

Thus, my research could contribute to the field finding if this new approach to the concentration of power in municipalities also confirms the previous research's conclusions.

For all the above said, I conclude that it remains a gap in the literature about how the demographic and political factors I have explained can affect local corruption. In the next section, I focus on presenting potential explanatory factors of corruption that the literature observes specifically for the Spanish case.

Factors Studied in the Spanish Case

Several authors have focused on potential factors explaining the high levels of corruption in Spain, especially at the local level, and they find some elements that are specific to the country and that I summarize in this section.

A large body of literature points to construction and real estate activity as one of the explanations for local corruption in Spain (Iglesias, 2007; Jiménez, Villoria & García Quesada, 2012; Villoria & Jiménez, 2012). The academic who probably has worked more in-depth on this issue is Fernando Jiménez (2009, 2014), who has researched the relationship between the Spanish building boom that took place before the 2008 financial crisis and corruption at the local level. The author finds that urban planning was a source of political corruption during those years due to the existing regulations on the matter, a deficient control mechanism in municipalities, and the huge size of the construction industry during the first decade of the XXI century.

Some authors also underline the fact that, at least during the years previous to the 2008 crisis, local administrations were remarkably dependent on the incomes coming from fees and taxes related to construction and real estate activity (Iglesias, 2007; Jiménez, 2009). Iglesias concludes that this dependence is not related to insufficient economic resources in city councils but to a decision of getting benefits using urban planning activities. However, there has been little analysis of this aspect.

In another work about corruption in Spain, this time not focused on the local level, Jiménez (2016) finds that the principal factors explaining the high levels of corruption in the country are the problems with party financing regulations (also remarked in Ramió, 2016), deficiencies on the public procurement system, and the economic incentives created around urban planning and construction. Considering this body of literature, I will test the following hypotheses:

Hypothesis 3a Municipalities with higher budgets tend to be less prone to cases of corruption.

Hypothesis 3b Municipalities with higher budgets per capita tend to be less prone to cases of corruption.

Hypothesis 4 Municipalities with lower dependence on the construction industry tend to be less prone to cases of corruption.

It is relevant for the object of this study to underline the conclusions of Jiménez, Nombela and Suárez-Alemán (2017), who find that the link between the construction industry and corruption is also related to a link between more tourist municipalities (i.e., especially those in islands and coastal areas) and higher levels of local corruption. I also take into account this fact when I study my H4.

Lapiente (2009) comments on other explanatory variables like the strong-mayor local government system in Spain, the lack of meritocratic public appointments, and the unclear separation between the political and administrative arenas. These factors will not be included in this study due either to the homogeneity around all Spanish municipalities, or the problems to find large-N data for all the local governments in the country.

Some authors analyze local integrity systems or public activity controls to find solutions to the high local corruption in the country (García Quesada, Jiménez-Sánchez and Villoria, 2013; Jiménez, Villoria and García Quesada, 2012). These authors consider a central problem the excessive dependence on ex-post controls based on judicial punishment instead of ex-ante administrative measures. As mentioned before, I do not study directly the control mechanism existing to struggle against corruption, even if the discussion around the factors explaining local corruption is closely linked to potential solutions and improvements needed on anti-corruption controls.

In the next chapter, I discuss research methods and the data used for this study.

Chapter IV.

Research Methods and Data

This research uses a mixed methods explanatory design, specifically, a follow-up explanations model. First, I do an initial quantitative analysis of several variables I define as potential explanatory factors of corruption, considering the existing literature. Then, I select the most relevant findings from the quantitative stage and use them to build two models following the comparative method most-similar system design. Within each model, I analyze corruption cases in three different cities or towns through a process tracing technique that I simplify due to the high number of cases studied. This method has both inductive (or theory-generating) and deductive (theory-testing) elements (Bennett, 2008) that are especially useful to combine in my research due to the lack of strong literature on the causal mechanism of local corruption. With this mixed methods design, I aim to get more solid conclusions than with single-method research on the potential explanatory factors and causal mechanisms of local corruption.

My research is based on the exploitation of a dataset of cities where a public servant with a political or administrative responsibility was condemned between 2016 and 2018 for felonies that took place between 1995 and 2015. I have created a dataset through an analysis of the judgements available at the CENDOJ, the documentation center of the Spanish Judicial Power.

The analysis of judicial decisions done before in research about corruption in the Spanish case has not included a systematic analysis of a large-N sample of judgements

issued in the country. Thus, considering the quantitative section, the conclusions of the analysis of this dataset will be one of the first pieces of empirical evidence about corruption in Spain using an objective measure based on judicial decisions. However, its more interesting added value remains in the inclusion of the qualitative section where I present an in-depth analysis of potential explanatory factors and causal mechanisms of local corruption to test the preliminary results of the statistical analysis in a more specific case-by-case study.

Felonies Considered Corruption

The definition of corruption is not clear at the sociological and political level and neither at the legal one. In the Spanish Criminal Code, there does not exist an explicit area of corrupt felonies, but most actions that can generally be related to corruption are included in the section on felonies against the administration.

Taking into account my definition of corruption (that is, the abuse of entrusted power for private gain perpetrated by people with public responsibilities and consisting of criminally prosecutable actions), different felonies could be classified as corrupt actions, but I would always need a specific analysis to discover the final aim of the perpetrator (i.e., obtaining a private gain). Nonetheless, the quantitative technique requires a general determination of the felonies that I consider corruption, which generates a certain loss of accuracy in the analysis but, at the same time, permits a higher generalization of the results.

Considering all the above said, I have defined corrupt behaviors for the object of this study the felonies against public administration included in Table 5 when committed by people with public responsibilities. I also include two felonies not considered against

the administration by the Spanish Criminal Code but that often appear in corruption cases: breach of official duty in urbanism and forgery of official documents.

Although my operationalization of the concept includes both political and petty corruption, this differentiation, if needed for further research based on this dataset, could be done considering the variables about the kind of public officers involved, the amounts of money related to the case, or the gravity of the sentence.

Table 5. Felonies against the Administration condemned in final judgements

Felony	2018	2017	2016	Percent
Breach of official duty	108	115	126	31.21
Embezzlement	87	114	71	25.14
Bribery	67	38	131	19.36
Disloyalty in the custody of documents and disclosing secrets	27	24	25	7.80
Prohibited negotiations for civil servants	22	52	21	6.36
Fraud of authority or public officer	21	41	39	6.07
Influence peddling	14	4	11	4.05
Total corrupt felonies against the Administration	346	388	424	100

Source: INE, 2022a.

Note: One person can be condemned for several offences.

The dataset used for this research consists of a sample of 160 municipalities where there was some public servant condemned for corruption or other related felonies for actions that took place between 1995 and 2015. This sample has been disaggregated choosing the cases that happened in local administrations from a previous sample that includes a total of 883 condemnations for corruption and other related felonies recognized in final judgements issued between 2016-2018, which are a representative sample (99% confidence) of the 1.158 total condemnations for corruption and other related felonies issued in Spain on these three years. The subsample for the three more usual corruption felonies (breach of official duty, embezzlement, and bribery), which represent 75% of all these condemnations, is also representative with a 99% level of confidence.

Definition of Variables

In this section, I present a definition of the two operationalizations of my dependent variable and all the independent variables. Afterwards, I explain a few relevant considerations about some variables like the years to which they refer or why I choose certain proxy variables and not others.

Table 6. Definition of variables

Variable	Description
Dependent variable: corruption	
Operationalization 1: Imprisonment years	Numerical continuous variable. Number of years of imprisonment established in final judgements for corruption and other related felonies committed by public officials in each municipality.
Operationalization 2: Number of felonies	Discrete numerical variable. Number of corruption felonies and other related felonies recognized in final judgements and committed by public officials in each municipality.
Independent variables	
Budget 2005	Discrete numerical variable. Budget of the city council in euros in 2005, considering the total initial spending.
Budget per capita 2005	Discrete numerical variable. Budget per capita of the city council in euros in 2005, considering the total initial spending.
City concentration of political power	Discrete numerical variable. Concentration of political power in one party in the municipality, considering the number of terms within the five terms between 1995 and 2015, that the most usual party in power in the city council has been governing. Index between 0 (there has been a different party in power in each term) and 1 (the same party has been in power all the terms).
City concentration of political power (ordinal)	Categorical ordinal variable. Variable of 6 labels that put in order the results of the variable City concentration of political power from 1 (there has been a different party in power each term) to 5 (the same party has been in power all the terms).

Variable	Description
City less 50km	Categorical nominal variable. Variable that indicates if the municipality is at a distance of less than 50km from one of the tenth Spanish biggest cities, if it is more distant, or if it is one of the tenth Spanish biggest cities.
City on the coast (dummy)	Categorical nominal variable. Dummy variable that indicates if the municipality is on the coast or in the inland territory.
City predominant party (dummy)	Categorical nominal variable. Dummy variable that indicates if there is a party in the municipality that has governed at least for half of the five terms between 1995 and 2015.
Construction licenses province 2007	Discrete numerical variable. Number of municipal licenses for residential buildings issued in the province in 2007.
Population 2005	Discrete numerical variable. Population of the municipality in 2005.
Population 2005 by ranges	Categorical ordinal variable. Variable of 9 labels that put in order the results of the variable Population 2005 from 0-1,000 inhabitants to more than 500,000 inhabitants.
Predominant party coincidence	Categorical nominal variable. Variable of three labels that indicate if the same party is predominant (that is, it has governed for at least a half of the electoral terms between 1995-2015) both in the municipality and the region, if there is a predominant party in the municipality and the region but it does not coincide, or if there is no predominant party at the municipal level (all regions have a predominant party).
Province	Categorical nominal variable. Spanish province in which the condemned corrupt behaviors took place.

Variable	Description
Weight direct taxes	Continuous numerical variable. Weight of the direct taxes within the total revenues of the municipal budget in 2005.

My dependent variable has two operationalizations because I consider the number of felonies and years of imprisonment are two quantifiable proxies that show different approaches to the gravity of corruption cases. It is necessary to maintain both of them since depending on the kind of corruption the two operationalizations can show quite different figures. For example, while in petty corruption the number of felonies and imprisonment years would not differ much, in general, in cases of grand corruption there can be much higher figures for the imprisonment years operationalization than for the number of felonies. In conclusion, I consider that the two operationalizations complement each other and it is relevant to test the relationships between the different variables for both of them.

Concerning the independent variables, I take data from 2005 as this is the middle point of my time frame and the number of municipalities and independent variables studied makes it difficult to calculate an average for each variable and municipality for the 20 years considered in the research. However, for some variables that can show remarkable changes from one year to another (for instance, the local budget or the weight of direct taxes on municipal incomes), I have reviewed data for some years to confirm there are not outliers influencing the results.

Another thing that should be noted is that for some variables there is no annual data at the local level and, in those cases, I have chosen the data from the year closer to

2005. This is the case for the variable on construction licenses and, in the qualitative analysis, for several cases of cities where there is no annual information on the labor market.

I should also comment on the two proxy variables used to analyze the dependence of municipalities on the construction industry and real estate sector. As demonstrated in the qualitative analysis section, there is no local data available for variables related to the weight of each economic sector on the local gross income or the local labor market. Therefore, I use the proxy of municipal licenses issued for the construction of residential buildings that I consider a very precise variable to understand the weight of the construction sector but, unfortunately, the data is aggregated at the province level. In consequence, due to this loss of robustness of the building licenses proxy I use another proxy consisting of the weight of direct taxes within the municipal revenues, an income that in Spain depends mostly on the building and real estate activity in a city or town. This data is complementary to the license one, not only because it is disaggregated at the local level, but also because it includes the relevance of the buys and sells of housing, not only the construction of new buildings.

Descriptive Data

Table 7. Descriptive statistics

Variables and labels	Freq.	Percent	Mean	SD	Min.	Max.
Dependent variables						
<i>Imprisonment years</i>	160	-	2.36	3.99	0.00	28.17
<i>Number of felonies</i>	160	-	2.95	6.07	1.00	70.00
Independent variables						
<i>Budget 2005</i>	-	-	98,553,001.56	392,368,900.50	98,566.00	4,297,192,389.00
<i>Budget per capita 2005</i>	-	-	1,191.87	834.45	349.78	5,283.42
<i>City concentration of political power</i>	160	-	0.63	0.21	0.20	1.00

Variables and labels	Freq.	Percent	Mean	SD	Min.	Max.
<i>City concentration of political power (ordinal)</i>	160	-	3.14	1.03	1	5
1	3	1.9	-	-	-	-
2	45	28.1	-	-	-	-
3	59	36.9	-	-	-	-
4	33	20.6	-	-	-	-
5	20	12.5	-	-	-	-
<i>City less 50km</i>	160	-	-	-	-	-
No	108	67.5	-	-	-	-
Yes	44	27.5	-	-	-	-

Variables and labels	Freq.	Percent	Mean	SD	Min.	Max.
Big city	8	5.0				
<i>City on the coast (dummy)</i>	160	-				
No	125	78.1				
Yes	35	21.9				
<i>City predominant party (dummy)</i>	160	-				
No	48	30.0				
Yes	112	70.0				
<i>Construction licenses province 2007</i>	-	-	4,784.25	3,696.35	30	12,489
<i>Population 2005</i>	160	-	87,903.79	299,556.83	38	3,155,359

Variables and labels	Freq.	Percent	Mean	SD	Min.	Max.
<i>Population 2005 by range</i>	160	100	-	-	-	-
0-1,000	23	14.4	-	-	-	-
1,001-5,000	31	19.4	-	-	-	-
5,001-10,000	25	15.6	-	-	-	-
10,001-25,000	27	16.9	-	-	-	-
25,001-50,000	11	6.9	-	-	-	-
50,001-100,000	17	10.6	-	-	-	-
100,001-250,000	16	10.0	-	-	-	-
250,001-500,000	4	2.5	-	-	-	-
More than 500,000	6	3.8	-	-	-	-

Variables and labels	Freq.	Percent	Mean	SD	Min.	Max.
<i>Predominant party coincidence</i>	160	100	-	-	-	-
No	50	31.3	-	-	-	-
Yes	62	38.8	-	-	-	-
No predominant party in the municipality	48	30.0	-	-	-	-
<i>Weight direct taxes</i>	-	-	0.24	0.10	0.02	0.52

Note: The variable Province is not included here due to the high number of labels.

Empirical Strategy

Quantitative analysis

For the four hypotheses, I structure the statistical analysis into two sections. First, for the categorical variables, I will present descriptive data of each variable comparing the results of my dataset and the results in the whole population of cases, that is, all the Spanish cities and towns (N=8.116 considering the data for 2015). There are two variables for which I only present a descriptive analysis of the sample data because either I do not have data for all the municipalities in Spain (the case of City less 50km), or this kind of comparison is not possible (this is the case of the variables Province).

I have chosen this strategy because, even if I have constructed two ways of operationalizing my independent variable, I consider that the simple fact of appearing in the dataset already suggests that these municipalities have higher levels of corruption than the rest and, in consequence, it remains interesting to compare the characteristics of the cities and towns included in the dataset of corruption cases with the rest of municipalities in Spain.

Second, I run different inferential tests depending on the kind of variables I use for each hypothesis. I only use nonparametric tests as my variables are not normally distributed (except for Weight direct taxes, for which I try a Pearson's correlation to confirm if the information lose of the Spearman's correlation has relevant effects on the results).

With regard to the numerical variables, I run Spearman's correlations to test the association between the variables. In the case of finding any significant relationship in the correlation tests, I will run a partial least square (PLS) regression to confirm the

predictive capacity of the corresponding dependent variable. In the case of the Budget 2005 variable, I run a collinearity test because it can be collinear with Population 2005.

Concerning the categorical variables, I consider that the best way to analyze if there is a relationship between these variables and the presence of corruption cases in municipalities (that is, the inclusion of some Spanish cities and towns in the dataset of condemnations for corruption) is to compare the distribution of each explanatory factor in the sample (i.e., the dataset used for this research) and in the whole population (i.e., all the Spanish municipalities). Therefore, I use Chi-square tests to find significant associations between the different variables and the existence of corruption in cities and towns. For the variables Province and City less 50km I only present the descriptive statistics for the reasons stated above.

Finally, I present a multivariate analysis consisting of a multiple PLS regression to test the strongness and predictability of the complete model for all the variables that show positive bivariate results.

Qualitative analysis

Case selection. I have built two small-N qualitative comparative analysis models following the most-similar system design method for the selection of cases. In consequence, I analyze cases where the independent variables are similar except for two of them. I expect to find variation in the dependent variable to be related to the differences between the two independent variables that are not homogeneous among the analyzed cases.

For the qualitative analysis, I have grouped some of the variables in the quantitative analysis into broader ones, and I consider each of the variables in the

quantitative analysis as one operationalization of my broader variables for this qualitative analysis.

- Model 1

I choose three cases to analyze the potential impact of local corruption on the population of the municipality and its capital status, and the concentration of political power in one party. I analyze Madrid, Rubí and El Ejido.

- Model 2

I choose three cases (different from the ones analyzed in Model 1) to analyze the potential impact of the relevance of the construction industry in the municipality and the concentration of political power in one party. I analyze Marbella, Pamplona (Iruña in its Basque name) and Badalona.

Structure of the analysis. For each of the cities analyzed in each model, I divide the exposition into four sections. First, I present the general trends of corruption in that city, which in the municipalities with a high number of corruption cases is especially useful as an introduction. Then, I describe the characteristics of the city considering the variables analyzed in the quantitative section but enlarging the analysis with more in-depth and qualitative information to understand the specific reality of each city. After that, I explain in brief each of the judgements for corrupt activities that took place in that city. Finally, I present a conclusion consisting of the results of the city analysis in relation to the mechanisms of corruption that I intend to analyze in each of the comparative models.

At the end of each model, I present the conclusions of the comparative analysis considering the results for the three cities about the explanatory factors and mechanisms of corruption studied.

Table 8. Qualitative comparative analysis. Selection of cases for Model 1

	Corruption		Size of the city		Concentration of power				Relevance of the construction sector			
	Imprisonment years	Number of felonies	Population	Capital status	City concentration of political power	City predominant party	Regional concentration of political power	Predominant party coincidence	City in the coast (dummy)	City less 50km	Construction licenses province 2007	Weight direct taxes
Madrid	High	Low	Large	Yes	High	PP	High	Yes	No	Big city	High	Medium
Rubí	Low	Low	Small	No	Low	There is not	Low	Not applicable	No	Yes	High	Medium
El Ejido	(Low) ¹	Low	Small	No	High	PP	High	No	No	Yes	High	Medium

¹ The data used for the quantitative analysis show a low corruption level, but one potentially serious corruption case still waiting for judgement is also analyzed.

Table 9. Qualitative comparative analysis. Selection of cases for Model 2

	Corruption		Size of the city		Concentration of power			Relevance of the construction sector				
	Imprisonment years	Number of felonies	Population	Capital status	City concentration of political power	City predominant party	Regional concentration of political power	Predominant party coincidence	City in the coast (dummy)	City less 50km	Construction licenses province 2007	Weight direct taxes
Marbella	High	High	Med.	No	Low	There is not	High	Not app.	Yes	Yes	High	High
Pamplona/Iruña	Low	Low	Med.	No	Med.	UPN	High	Yes	No	No	Low	Low
Badalona	Medium (Med.)	Low	Med.	No	Med.	PSOE	Low	No	Yes	Yes	High	High

Causal mechanisms. In this section, I summarize the different causal mechanisms I hypothesize concerning corruption at the local level. I divide my analysis of these causal mechanisms into factors potentially related to corruption in municipalities, expected outcomes about these factors, possible explanations of these outcomes (that is, possible causal mechanisms), and possible alternative explanations of these outcomes (that is, possible alternative causal mechanisms). This analysis of potential causal mechanisms comes from previous literature and the results of the quantitative analysis.

- Factor: Population of the city and capital status, related also to higher budgets.

Analyzed in Model 1.

- Expected outcome:

Bigger cities tend to have more serious cases of corruption. Capital cities are the stronger example of this relationship.

- Possible explanation (causal mechanism):

In big cities, and even more in capital cities, there is more economic activity, more public contracts and contests (in part because of their higher budgets) and, as a consequence, there are more opportunities for corruption and more profitable corruption.

- Alternative explanations (causal mechanisms):

Considering that I am measuring the judicial decisions around corruption (not corruption cases *per se*), an alternative explanation to the quantitative analysis results could be that in smaller cities and towns there are fewer means to condemn corruption. However, a more complete explanation could be that the majority of judicial procedures to tackle corruption are driven by the public prosecutor and, taking into account the limited resources of this public office, it can have more interest in prosecuting corruption

in big cities as it implies more serious cases. If this alternative explanation would be confirmed, I would not have elements to state if there are more cases of corruption in big cities, but these cases of corruption would be more serious considering the damage to the public interest (for instance, because of the higher sums of money involved).

- Factor: Economic dependence on the construction industry, linked to tourism especially present in coastal areas.

Analyzed in Model 2.

- Expected outcome:

Municipalities with more relevant construction industries tend to have more cases of corruption.

- Possible explanation (causal mechanism):

The rezoning and other decisions on land use to allow the construction of private buildings are one of the few actions of a municipal government that can have a direct impact on the municipal budget, as they affect the municipal revenues from direct taxes which are related to real estate and construction activities.

The construction activity also implies huge public contracts for public works that are especially attractive for corruption due to the high benefits they can generate.

The construction industry is related to tourism activity mostly relevant in coastal areas. The sector also has major relevance in big cities due to the labor possibilities and economic activity there. In conclusion, this mechanism would be more visible in coastal municipalities or municipalities near big cities.

- Alternative explanations (causal mechanisms):

The relationship between cities where the construction industry is more relevant and higher levels of corruption could be in fact related to the size of the city, as bigger municipalities or those near bigger cities are the ones where there is more economic activity and, thus, also more construction activity. If this alternative hypothesis would be confirmed, then the relationship of this factor would indeed be a spurious relationship showing actually the relationship explained for the previous factor.

- Factor: Concentration of power in one political party

Analyzed in models 1 and 2.

- Expected outcome:

Cities with more concentration of power in one party tend to have fewer cases of corruption.

- Possible explanation (causal mechanism):

This result taken from the previous quantitative analysis could be explained by the fact that more experience in governing a municipality generates a higher knowledge of the administration and about the better ways to control potential corruption risks. However, this is against the literature on corruption and alternative explanations should be specially considered.

- Alternative explanations (causal mechanisms):

Considering that I am measuring the judicial decisions around corruption (not corruption cases *per se*), an alternative explanation to the quantitative results could be that in municipalities with more concentration of power there are fewer means to

prosecute and condemn corruption. This could be explained because more concentration of power is related to lower means of accountability and higher monopolistic power in the governing party.

Research Ethics

Regarding the ethical principles that must be respected during the whole research process, I will apply the guidance of the European Commission publication Ethics in Social Sciences and Humanities (EC, 2018) and the American Political Sciences Association Guide to Professional Ethics in Political Science (APSA, 2022).

This research does not include the use of human subjects considering the definition stated in the Federal Regulations (45 CFR 46.102(f)(1)(2)). The research does not include any intervention or interaction with individuals and it neither includes any identifiable private information. All the information used in the research is obtained through a public database of the Spanish Ministry of Justice made of documents with anonymized data. Thus, the research does not need the approval of an Institutional Review Board. The author got written permission to use the database for research purposes.

Chapter V.

Results

Quantitative Analysis

Size of the city: the population size and its institutional consequences.

First, I observe that almost 50% of the municipalities included in the dataset are below 10,000 people and that cities with more than 100,000 inhabitants account for 16.25% of the cities analyzed (Table 10). At first sight, this could be interpreted as a relevant presence of small cities and towns in my dataset of condemnations for corruption. However, in Figure 6 and Table 10 I compare the observed frequency in the dataset of municipalities by each range of population and its expected frequency considering the weight of each range within the whole population of municipalities in Spain (i.e., all the cities and towns in the country). When analyzing this data, I observe that the towns of 1,000 inhabitants or less are clearly more present in percentage within the whole population of cities and towns in Spain, than is their presence in my dataset of municipalities with cases of corruption. On the contrary, the municipalities of 5,001 inhabitants or more are overrepresented in my dataset in comparison to their weight in the whole population of cities and towns in Spain.

Table 10. Population 2005 by range. Distribution in the sample and the population

	Frequency	Sample Percent	Population Frequency	Population Percent
0-1,000	23	14.38%	4,900	60.43%
1,001-5,000	31	19.38%	1,974	24.34%
5,001-10,000	25	15.63%	538	6.63%
10,001-25,000	27	16.88%	418	5.15%
25,001-50,000	11	6.88%	147	1.81%
50,001-100,000	17	10.63%	74	0.91%
100,001-250,000	16	10.00%	42	0.52%
250,001-500,000	4	2.50%	10	0.12%
More than 500,000	6	3.75%	6	0.07%
Total	160	100.00%	8,109	100.00%



Figure 6: Population 2005 by range. Distribution in the sample and the population

I run a Chi-square test of independence (Table 11) and it shows a significant relationship between the size of the population in a city or town and the presence of corruption cases ($p < 0.01$). Despite this, I am very cautious when analyzing the result of this test because more than 55% of the observed and expected frequencies are under 5, which undermines the robustness of the result. Thus, I will continue my tests of H1 using the numerical variable Population 2005.

Table 11. Chi-square test. Population 2005 by ranges

	Observed N	Expected N	Residual
0-1,000	23	97.0	-74.0
1,001-5,000	31	39.0	-8.0
5,001-10,000	25	11.0	14.0
10,001-25,000	27	8.0	19.0
25,001-50,000	11	3.0	8.0
50,001-100,000	17	1.0	16.0
100,001-250,000	16	1.0	15.0
250,001-500,000	4	.0	4.0
More than 500,000	6	.0	6.0
Total	160		
	Value	df	Asymp. Sig.
Chi-Square	52604,031a	8	0.000

Note: a. 5 cells (55.6%) have expected frequencies less than 5. The minimum expected cell frequency is .0.

The correlation (Table 12) shows that there is a significant relationship between corruption and the population of the municipality using both operationalizations of the variable ($p < 0.01$) and with almost the same strength.

Table 12. Coefficients of correlation. Population 2005; Imprisonment years and Number of felonies

		Imprisonment years	Number of felonies
Population 2005	Spearman's rho correlation	.211**	.233**
	Sig. (2-tailed)	.007	.003
	N	160	160

*Note: ** means that correlation is significant at the 0.01 level (2-tailed).*

I run a PLS regression to test the predictive capacity of the variable Population 2005 once confirmed that there is a significant association with my independent variable. Results in Table 13 and 14 show that the relationship is still significant ($p < 0.01$). To analyze the B coefficients it is preferable to look at standardized values because of the huge differences in the ranges of the dependent and independent variables. The B standardized coefficient is low for the Number of felonies independent variable (0.094) but it is higher for the Imprisonment years operationalization (0.419). Indeed, in the Imprisonment years model, the R square figure of 0.175 suggests that the capacity of Population 2005 to predict changes in the corruption of a city or town is quite high considering the multifactorial characteristics of local corruption.

Table 13. Partial least square regression. Population 2005; Imprisonment years

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.
(Constant)	1.856	0.285	0.000	.000
Population 2005	0.000	.000	.419	.000
R square	0.175			

Note: a. Dependent Variable: Imprisonment years

Table 14. Partial least square regression. Population 2005; Number of felonies

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.
(Constant)	2.771	0.499	0.000	.000
Population 2005	0.000	.000	0.094	.239
R square	0.009			

Note: Dependent Variable: Number of felonies

In conclusion, I can reject the null hypothesis and confirm that there is a relationship between the population of a city and its level of corruption. However, the results suggest that my H1 should be rejected because the association between the variables would be in the opposite direction, that is, bigger cities tend to have more cases of corruption and more serious corruption cases, considering the years of imprisonment stated in the sentences. This result could be related to the kind of measurement of corruption I am using and, in that case, it could suggest that in smaller cities and towns there are fewer prosecutions and condemnations for corruption, which does not necessarily mean that there are fewer cases of corruption. This is a relevant finding that will be discussed more in-depth in the conclusions section of this research.

Concentration of power: party alternation or longevity in power.

The existence of a local predominant party. Concerning the concentration of political power, Table 15 shows that in 75.6% of the municipalities included in the dataset, one political party has governed for at least three of the five terms included in the time frame of the research (which means 12 of the 20 years between 1995 and 2015). That is to say that in these cities and towns the figure for the concentration of power is 0.6 or higher and, thus, I consider that there is one predominant party at the local level.

When I compare this data with the corresponding one for the whole population of municipalities in Spain (Table 15 and Figure 7), that is, the expected values, I observe that the percentage of cities and towns without a predominant party is higher in my sample of corruption than in the complete data for all Spanish municipalities.

Table 15. Predominant party city (dummy). Distribution in the sample and the population

	Sample (Municipalities with corruption cases)		Population (All the Spanish municipalities)	
	Freq.	Percent	Freq.	Percent
No	39	24.4	1,197	14.7
Yes	121	75.6	6,919	85.3
Total	160	100.0	8,116	100.0

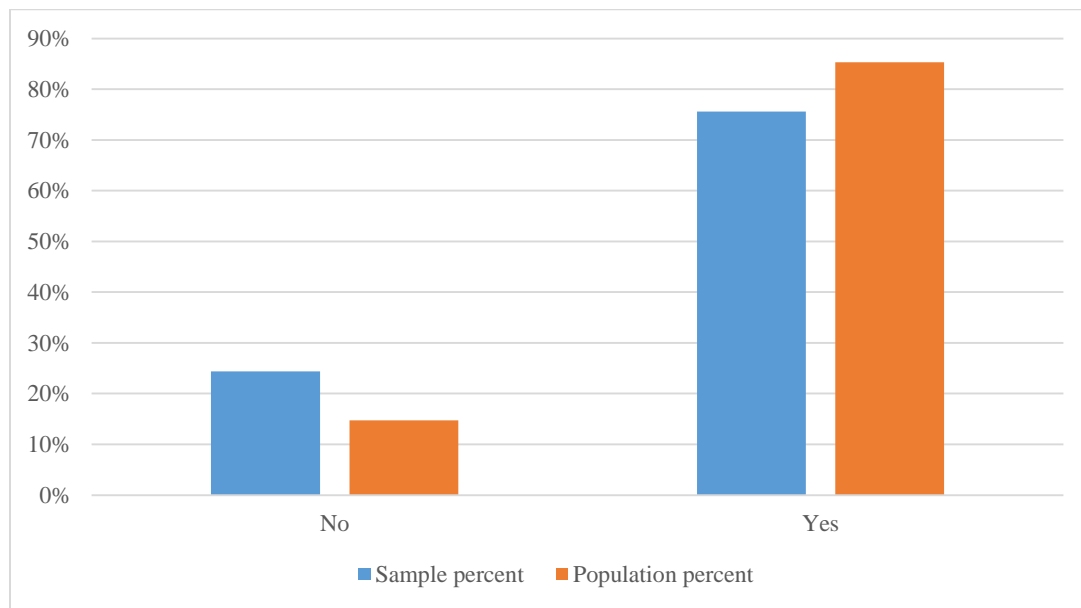


Figure 7. Predominant party city (dummy). Distribution in the sample and the population

I should underline that this suggested association between the variables shows the contrary direction to the one expected in my H2 and observed by the literature. My data,

considering the variable Predominant party city dummy is showing that cities with less concentration of political power in one predominant party are more prone to corruption. This could be a relevant finding but in the following section, I will analyze other results to go more in-depth on the issue before getting any conclusions.

To confirm if there is a significant relationship in the sense that this descriptive data is pointing to, I run a Chi-square test (Table 16). The results confirm ($p < 0.01$) that there is a positive association between corruption in municipalities and the absence of a predominant party.

Table 16. Chi-square test. Predominant party (dummy)

	Observed N	Expected N	Residual
No	39	24	15
Yes	121	136	-15
Total	160		
	Value	df	Asymp. Sig.
Chi-Square	11.029a	1	0.001

Note: a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

The level of concentration of power in one local party. To continue testing my H2, now I analyze the results of the variable of concentration of political power, which is more

precise than the previous dummy variable. The descriptive data in Table 17 shows the information commented on for the previous set of tests but with more detail.

Table 17. Concentration of political power. Distribution in the sample and the population

	Sample (Municipalities with corruption cases)			Population (All the Spanish municipalities)		
	Freq.	Percent	Cum. Percent	Freq.	Percent	Cum. Percent
.20	4	2.5	2.5	144	1.8	1.8
.40	35	21.9	24.4	1,053	12.9	14.7
.60	55	34.4	58.8	2,424	29.9	44.6
.80	37	23.1	81.9	1,978	24.4	69.0
1.00	29	18.1	100.0	2,517	31.0	100.0
Total	160	100.0		8,116	100.0	

When I compare the data of the sample with the distribution for all the Spanish municipalities (Figure 8), the graph shows a remarkable difference between the observed and expected values for the labels 0.4 and 1. Municipalities where one party has governed during the 20 years between 1995 and 2015, that is, the concentration of political party label is 1, are underrepresented in the sample of corruption cases. At its time, municipalities where the party that has governed for more time during this period has

stayed in the city council for just eight years, that is, the concentration of political power label is 0.4, are overrepresented in the sample. This data is again suggesting that cities with less concentration of political power are more prone to cases of corruption.

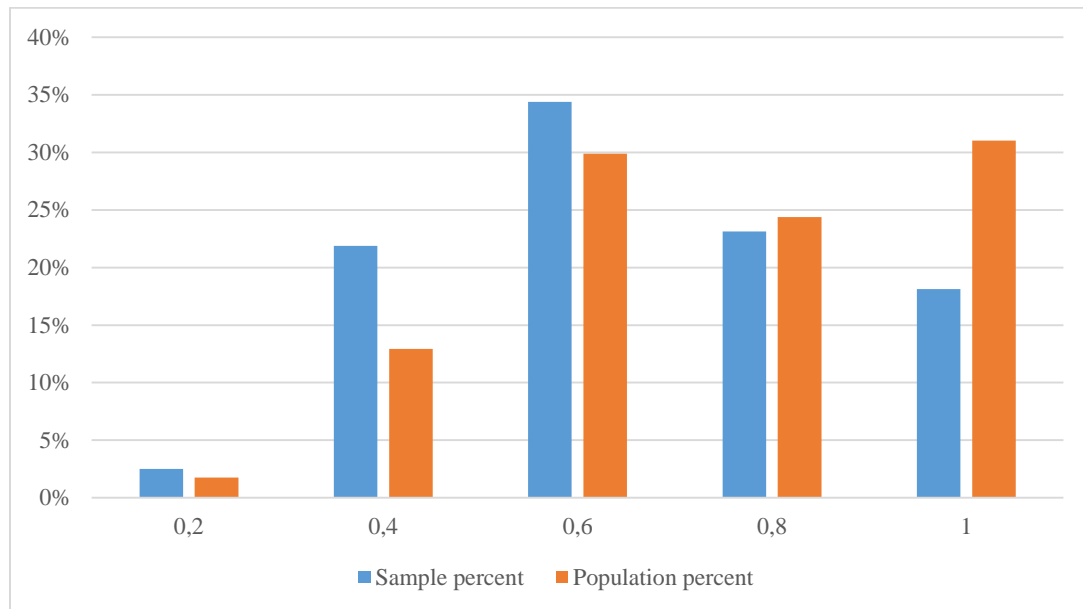


Figure 8. Concentration of political power. Distribution in the sample and the population

To run a Chi-square and test this association, I convert the variable of concentration of political power into an ordinal one (Power concentration city (ordinal)). The results (Table 18) confirm that there is a significant relationship ($p < 0.01$) where municipalities with less concentration of power tend to have more cases of corruption. Nonetheless, the high percentage of cells of the Chi-square table that have labels below 5 reduces the robustness of this result and I should be careful when getting conclusions from it.

Table 18. Chi-square test. Concentration of political power city (ordinal)

	Observed N	Expected N	Residual
1	4	3.0	1.0
2	35	20.9	14.1
3	55	47.7	7.3
4	37	38.8	-1.8
5	29	49.7	-20.7
Total	160		
	Value	df	Asymp. Sig.
Chi-Square	19.726a	4	.001

Note: a. 1 cell (20.0%) has expected frequencies less than 5. The minimum expected cell frequency is 3.0.

In this case, as I have a numerical discrete variable, I also run a Spearman's rho test to see if it shows a significant relationship between the concentration of political power at the local level and any of the operationalizations of my independent variable. The results of the correlations in Table 19 show that, following this test, there is no significant relationship between the variables. Nonetheless, I consider that this result should not make me reject also the previous results obtained through the tests for the categorical variable.

Table 19. Correlation coefficients. City concentration of political power; Imprisonment years and Number of felonies

		Imprisonment years	Number of felonies
City concentration of political power	Spearman's rho correlation	.081	-.009
	Sig. (2-tailed)	.307	.907
	N	160	160

Coincidence of a predominant party both at the regional and local levels. To study another manifestation of the concentration of political power, I analyze if the predominant party in the local and regional governments is coincident. I should underline that in some municipalities there is no predominant party considering the definition stated in this research. On the contrary, all the Spanish regions have a predominant party taking into consideration this same definition.

Once again, to get solid conclusions I compare the data from the sample with the distribution in all the Spanish local governments (Table 20 and Figure 9). These descriptive results show a higher percentage in my sample than in the population of municipalities where there is not a coincidence of the same predominant party at the local and regional levels. Thus, the current results one more time suggest a relationship on the contrary sense than the one stated in H2: more concentration of power would mean less corruption at the local level.

Table 20. Predominant party coincidence. Distribution in the sample and the population

	Sample (Municipalities with corruption cases)			Population (All the Spanish municipalities)		
	Freq.	Percent	Cum. Percent	Freq.	Percent	Cum. Percent
No	55	34.4	34.4	2,094	25.8	25.8
Yes	66	41.3	75.6	4,667	57.5	83.3
No predominant party in the municipality	39	24.4	100.0	1,197	14.8	98.0
Missing	0	0	0	158	2.0	100.0
Total	160	100.0		8,116	100.0	

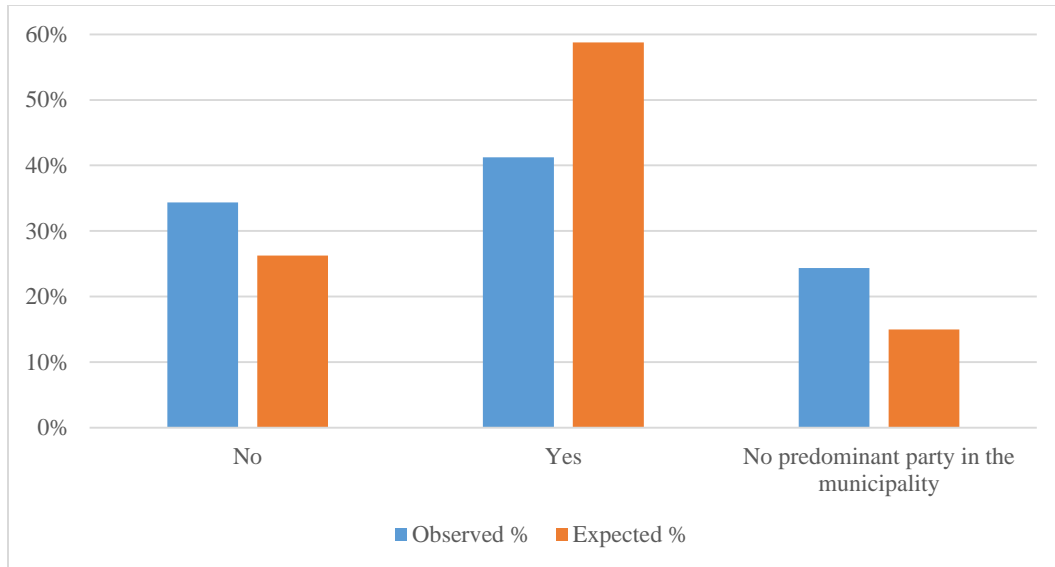


Figure 9. Predominant party coincidence. Distribution in the sample (observed) and the population (expected)

I run a Chi-square to see if these results are confirmed. The observed and expected frequencies in Table 21 suggest that in municipalities with higher levels of concentration of power in one political party, due to its predominance both in local and regional governments, there are fewer cases of corruption than in the rest. The results of the Chi-square test in Table 21 confirm this relationship at a level of significance of $p < 0.01$.

Table 21. Chi-square test. Predominant party coincidence

	Observed N	Expected N	Residual
No	55	42.0	13.0
Yes	66	94.0	-28.0
No predominant party in the municipality	39	24.0	15.0
Total	160		
	Value	df	Asymp. Sig.
Chi-Square	21,739a	2	.000

Note: a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.

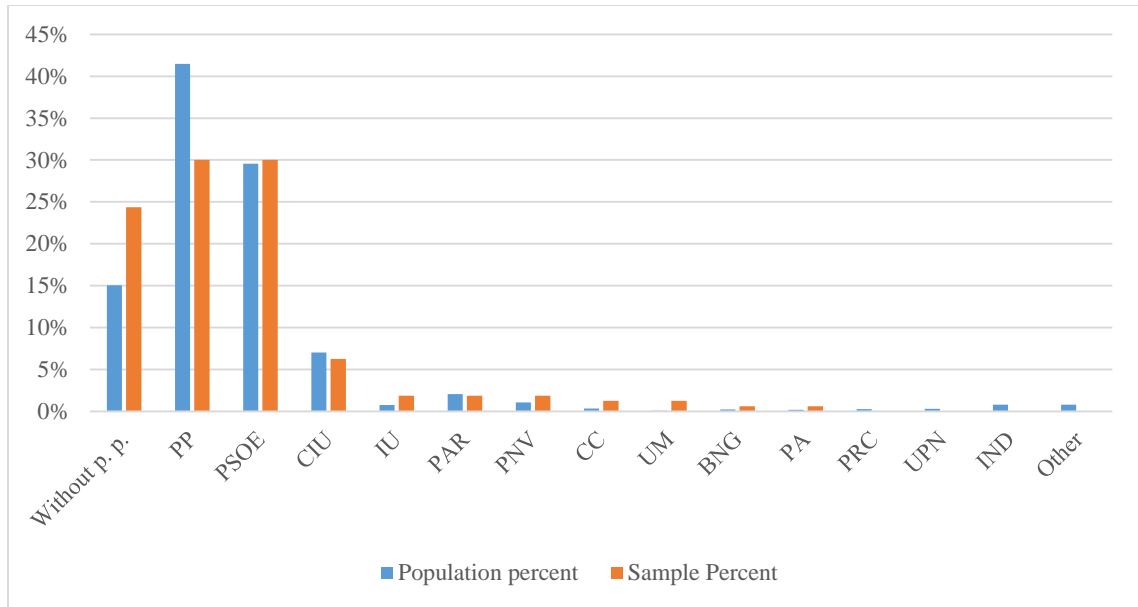
In conclusion, all the tests run to confirm H2 permit me to reject the null hypothesis and confirm that there is a relationship between the concentration of political power and corruption at the local level. Despite this, the different statistical tests have repeatedly pointed to an association of the variables in the opposite direction than the one stated in H2, in other words, the results suggest that municipalities with lower levels of concentration of power in one party due to longevity in power tend to have more cases of corruption. At a first sight, this finding is counterintuitive and goes against all the literature on corruption, thus, again the more plausible explanations would be related to the kind of corruption measurement. It could be the case that in cities and towns where

the same party governs for long periods it is more difficult to get prosecutions and condemnations for corruption. In the conclusions section of this research, I will expose in more detail this possible explanation that would not deny the previous literature on the issue.

The predominant political party: organizational culture or power concentration?

As a complementary section around H2, I present a short analysis that tests if the corruption level could be related to which one is the political party predominant in a municipality.

The descriptive analysis of the presence of different predominant political parties in the cities and towns in the sample shows that the municipalities with no predominant party are overrepresented, as already commented, and the municipalities governed by the conservative Popular Party (*Partido Popular* or PP in Spanish) are underrepresented (Figure 10).



PP	<i>Partido Popular</i>	CC	<i>Coalición Canaria</i>
PSOE	<i>Partido Socialista Obrero Español</i>	UM	<i>Unió Mallorquina</i>
CIU	<i>Convergència i Unió</i>	BNG	<i>Bloque Nacionalista Galego</i>
IU	<i>Izquierda Unida</i>	PA	<i>Partido Andalucista</i>
PAR	<i>Partido Aragonés</i>	PRC	<i>Partido Regionalista de Cantabria</i>
PNV	<i>Partido Nacionalista Vasco</i>	UPN	<i>Unión del Pueblo Navarro</i>

Figure 10. City predominant party. Distribution in the population and the sample

Due to the low figures for the majority of labels, I group all the parties with a frequency below 5 to run a Chi-square. The result shown in Table 22 is only significant at a $p < 0.10$ level and, in consequence, the information obtained is not very robust and I will be careful before getting any conclusions.

Table 22. Chi-square test. City predominant party (grouped)

	Observed N	Expected N	Residual
PP	48	59.0	-11.0
PSOE	48	42.0	6.0
CIU	9	10.0	-1.0
Other	16	10.0	6.0
Total	121		
	Value	df	Asymp. Sig.
Chi-Square	6.608a	3	.085

Note: a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.

Despite the result of the Chi-square test, it seems interesting to try to find potential explanations for why the PP municipalities are underrepresented in the sample. Considering that the PP is one of the major parties in Spain and has traditionally had a relevant political presence at all levels of government, one possible reason could be the collinearity between municipal governments of the PP and higher levels of concentration of power at the local level.

To test this hypothesis, first I present the descriptive data comparing the concentration of power in municipalities where the PP is the predominant party with all the municipalities in the sample with a predominant party (Figure 11). The results

confirm that in the sample of local corruption cases the PP has remarkably higher levels of concentration of power than other parties (this is especially visible for label 1).

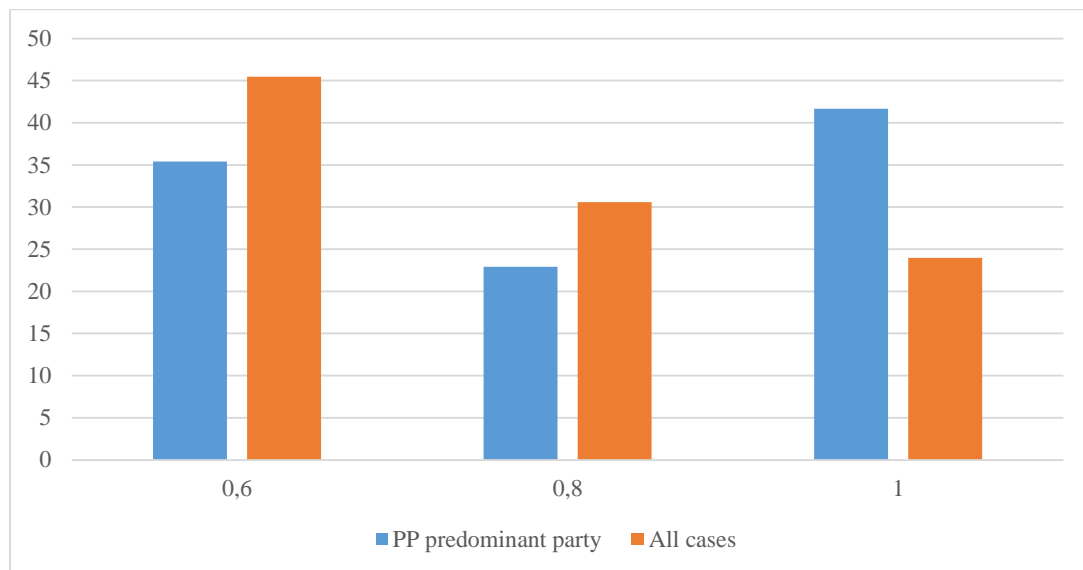


Figure 11. City concentration of political power by PP predominant party. Distribution in the sample

Then, I present descriptive data for all the municipalities in Spain to confirm if the collinearity only appears in my dataset or if it is a characteristic also present in the population. In Figure 12 I compare the presence of the Spanish political parties in all the municipalities in the country and the municipalities with 0.8 or more concentration of power following my operationalization, that is, those where the same party has governed at least 16 of the 20 years of the time frame of this research. For more clarity of the results, I group all the parties which are predominant in less than 5% of the Spanish municipalities. The results show that the PP is more present in municipalities with high levels of power concentration considering the absence of party alternation in local government.

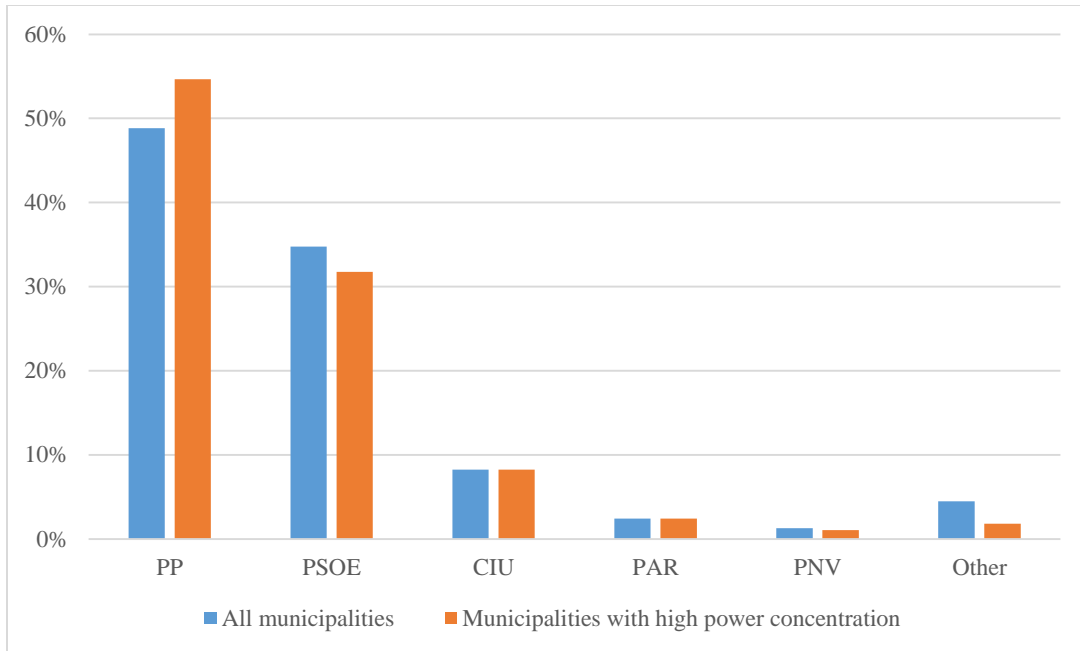


Figure 12. Municipalities by predominant party. Distribution in the population and in the municipalities with a high concentration of power (≥ 0.8)

I run a Chi-square test with the data on predominant parties in all the Spanish municipalities (without the grouping used in the graph above). The results shown in Table 22 confirm that the PP is overrepresented in Spanish cities and towns with a higher concentration of power concerning its general presence in local governments ($p < 0.01$), that is, this party uses to govern for longer periods than other parties.

Table 22. Chi-square test. Predominant party (all Spanish municipalities)

	Observed N	Expected N	Residual
BNG	6	11.0	-5.0
CC	15	18.0	-3.0
CIU	366	366.9	-0.9
IU	20	40.0	-20.0
PAR	108	108.0	.0
PNV	47	56.0	-9.0
PP	2,428	2,167.5	260.5
PRC	13	15.0	-2.0
PSOE	1,411	1,543.7	-132.7
UPN	10	16.0	-6.0
Other	17	99.0	-82.0
Total	4,441		
	Value	df	Asymp. Sig.
Chi-Square	127.324a	10	.000

Note: a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 11.0.

In conclusion, the results suggest that the explanation of why the PP is underrepresented in the dataset of local corruption condemnations could be the collinearity existing between the PP as a predominant party and the higher concentration of power in municipalities. Therefore, I could not establish a direct relationship between which is the predominant party in a city or town and its level of corruption because the relationship that initially seems to appear with the PP would be in fact a spurious relationship consequence of the underlying relationship between the concentration of power and corruption analyzed in the previous section.

Public resources to be assigned: the municipal budget

To test H3 I start running a correlation analysis between the two variables related to the municipal budget and the two operationalizations of my dependent variable (Table 23). The general budget, not the budget per capita, shows a significant relationship ($p < 0.01$) for the operationalization of Imprisonment years.

Table 23. Spearman's rho correlation coefficients. Budget 2005 and Budget per capita 2005; Imprisonment years and Number of felonies

		Imprisonment years	Number of felonies
Budget 2005	Spearman's rho correlation	.230**	.259**
	Sig. (2-tailed)	.004	.001
	N	152	152

		Imprisonment years	Number of felonies
Budget per capita 2005	Spearman's rho correlation	.029	.047
	Sig. (2-tailed)	.722	.562
	N	152	152

*Note: **. Correlation is significant at the 0.01 level (2-tailed).*

Even if these results point to a positive relationship between the budget of a city council and the corruption cases in the municipality, I should underline that, among other factors, the budget is mostly influenced by the city or town population. Thus, this could be a mediated relationship through the population of the municipality. To confirm if this is the case, I run a multiple partial least square regression with the two variables that show a significant relationship following the correlation results (Budget 2005 and Imprisonment years) and including Population 2005 as an independent variable to test the collinearity between the two potential explanatory factors. Indeed, the VIF result (38.084) clearly states that the Population 2005 and Budget 2005 are collinear.

Table 24. Partial least square regression Budget 2005 and Population 2005; Imprisonment years. Collinearity statistics and diagnostics.

	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics
	B	Std. Error	B	Sig.	VIF
(Constant)	1.799	0.290	0.000	0.000	
Budget 2005	-0.000	0.000	-0.469	0.294	38.084
Population 2005	0.000	0.000	0.882	0.050	38.084
R square	0.181				
Adjusted R square	0.171				

To summarize, I reject my H3b but I cannot confirm or reject my H3a as the budget is too strongly related to the population of a city or town to get individual conclusions on the effect of each variable on local corruption. Nevertheless, in line with some authors commented in the Literature Review section (García Quesada, Jiménez Sánchez and Villoria, 2013; Lapuente, 2009), I would suggest that the population is a demographic variable that indirectly affects the corruption risk in a city through other variables like the local budget or the number of city councilors.

Productive structure: weight of construction industry and real estate

Finally, I analyze the variables related to my H4, that is to say, the construction licenses for residential buildings issued in the province in 2007 and the weight of direct taxes in the municipal budget, which are proxies to approximate the relevance of the construction industry and the real estate activity in the city.

The correlation coefficients show significant relationships for both of the variables related to the weight of the construction industry (in the case of Weight direct taxes, my only normally distributed variable, I use Pearson's correlation as Spearman's rho is not significant probably due to the information lose implied in its calculation).

First, concerning the Weight direct taxes variable, there is a significant relationship ($p < 0.05$) for the operationalization of my dependent variable Number of felonies and a more significant relationship ($p < 0.01$) for the operationalization based on Imprisonment years. Second, for what refers to the variable about construction licenses, the results show a significant relationship ($p < 0.05$) with the Imprisonment years operationalization (Table 25).

Table 25. Spearman's rho correlation coefficients. Construction licenses province 2007 and Weight direct taxes; Imprisonment years and Number of felonies

		Imprisonment years	Number of felonies
Construction licenses province 2007	Spearman's rho correlation	.175*	.135
	Sig. (2-tailed)	.027	.089
	N	160	160
Weight direct taxes	Pearson Correlation	.221**	.198*
	Sig. (2-tailed)	.006	.015
	N	152	152

*Note: **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).*

I run a PLS regression for the significant relationships that appeared in the correlation tests (Table 26). The results show that the relationship between the issuing of construction licenses and local corruption measured as Imprisonment years is slightly significant ($p < 0.10$), the Beta standardized value is low (0.151), and the R square point to very low predictability of this variable (0.023), what makes me consider that this factor has little impact on local corruption. However, I should note that this proxy has some validity problems as it is an aggregate measure for all the municipalities within a

province, which can be affecting the results and, in consequence, does not permit to reject the possibility of municipal building licenses being related to local corruption.

Unfortunately, disaggregated data at the municipal level is not available to be tested.

Table 26. Partial least square regression. Construction licenses province 2007; Imprisonment years.

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.
(Constant)	1.581	0.488	0.000	.001
Construction licenses province 2007	.000	.000	.151	.057
R square	0.023			

Note: a. Dependent Variable: Imprisonment years.

Concerning the variable linked to direct taxes, I only run the PLS regression for the dependent variable Imprisonment years, because of its higher significance in the correlation results and because it has shown to be the operationalization with better results in the whole research. The results in Table 27 show a significant relationship ($p < 0.01$) and a Beta value of 8.665 which is a quite high figure considering the range of the dependent variable Imprisonment years. Nonetheless, the R square figure of 0.052 indicates that the weight of direct taxes has a low capacity to predict changes in local corruption.

Table 27. Partial least square regression. Weight direct taxes; Imprisonment years.

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.
(Constant)	0.214	0.773	0.000	.783
Weight direct taxes	8.665	2.937	.229	.004
R square	0.052			

Note: a. Dependent Variable: Imprisonment years.

To sum up, the previous results make me reject the null hypothesis and confirm that municipalities with lower dependence on the construction industry tend to be less prone to cases of corruption (H4) even if the impact of this factor is slight.

Geographical distribution of corruption: relevance of coastal areas and big cities

To complement the analysis done for the fourth hypothesis, it is also interesting to consider some of the literature that comments on a possible link between tourism and the building boom in Spain. The construction industry and real estate activity in the country would be in a relevant proportion linked to tourism and, in consequence, more present in coastal areas.

To analyze this hypothesis, first I present two maps of the distribution of the dependent variable in Spanish provinces for both operationalizations (Figures 4 and 5 in

page 8). The results are very similar but the ones for Imprisonment years appear as clearer because the range of Number of felonies goes from 1 to 22 and there is one outlier of 70 (for the city of Marbella), while the variable Imprisonment years has a more homogeneously distributed range that goes from 0 to 28.17. Thus, I will only analyze the results in Figure 4.

The map shows in general a higher relevance of coastal areas and islands, which is confirmed by the fact that all the provinces with zero cases are inland territories. The provinces where corruption is more relevant following the map information are Barcelona (in northeast Spain), Málaga (in southern Spain), and Madrid (in the centre of the country), even if some other coastal areas like Valencia, the Canary Islands (remarkably Las Palmas province), the Balearic Island, and the Andalusian provinces of Cádiz and Granada also show some of the higher figures. In consequence, the summary of the information could be that corruption is more present in coastal areas and near big cities (remember that Barcelona and Madrid, where there are the two Spanish bigger cities, are within the provinces with higher values).

To confirm these hypotheses, first I present some descriptive data on the distribution of coastal municipalities in the sample and the population (that is, in all of Spain) (Figure 13). The graph shows that cities and towns on the coast are more present in the dataset of local corruption than their relative weight among all the Spanish municipalities.

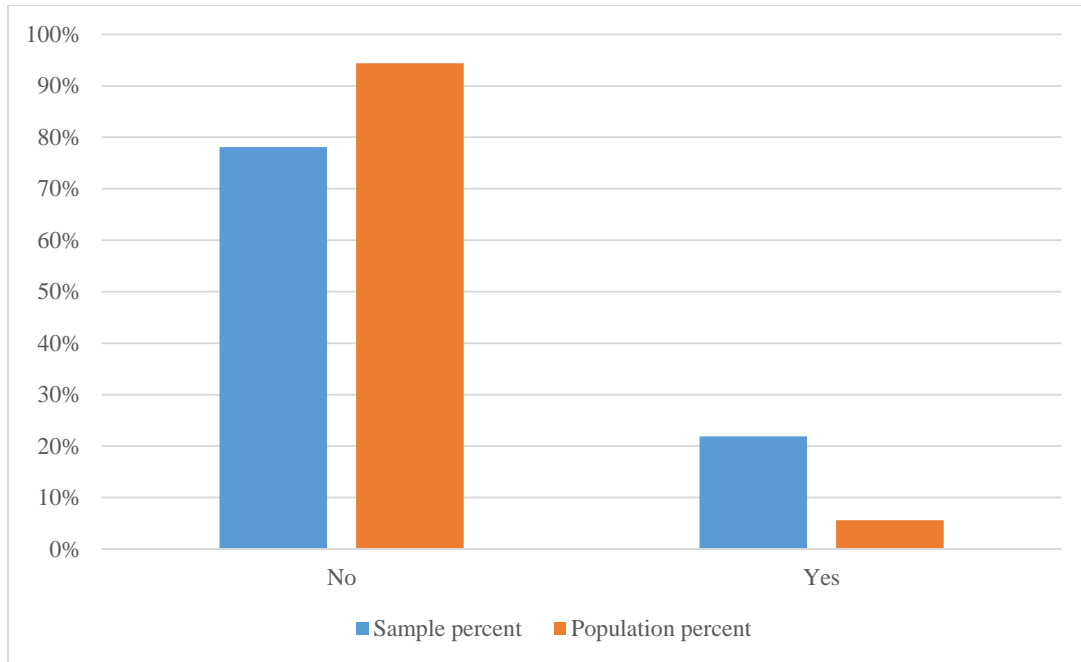


Figure 13. City on the coast (dummy). Distribution in the sample and the population.

In the case of municipalities near the biggest Spanish cities, I do not have data at the aggregate level of the country. In consequence, I can only present the descriptive data for the distribution in the sample that shows a higher presence of municipalities that are far from the biggest cities. However, taking into account that there are more than eight thousand municipalities in Spain and that I am only considering the tenth biggest cities for this classification, it could be supposed that municipalities near big cities are overrepresented in the sample. Despite this supposition, I do not have enough evidence to get any clear conclusion from this data.

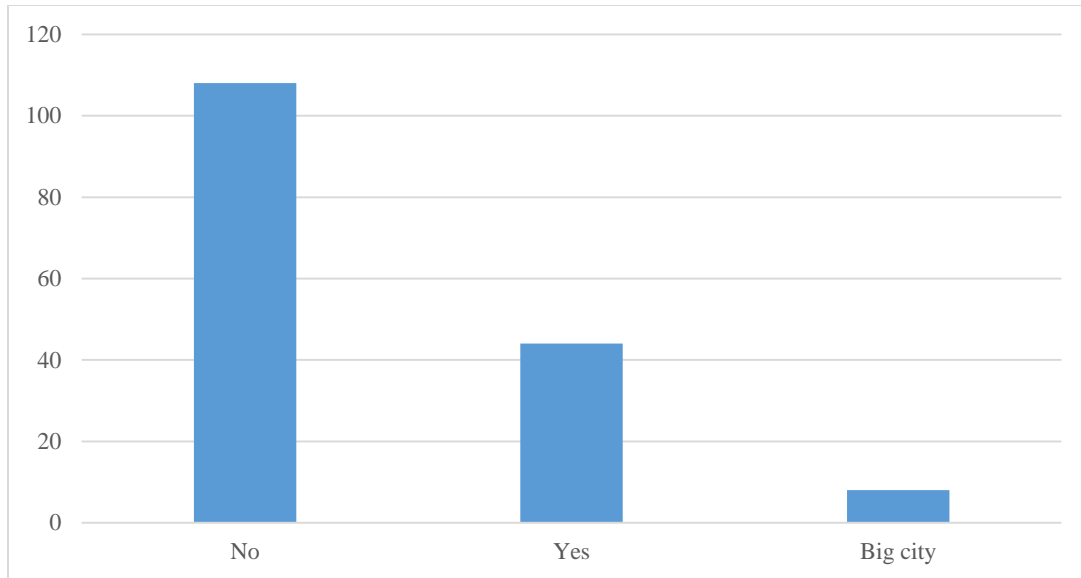


Figure 14. City less 50km. Distribution in the sample.

I run a Chi-square test for the variable City on the coast (dummy), as there is no data available to calculate the Chi-square for the variable City less 50km. The test shows a significant relation ($p < 0.01$) with coastal municipalities overrepresented in my dataset compared to their weight in the whole population of Spanish municipalities (Table 28).

Table 28. Chi-square test. City on the coast (dummy).

	Observed N	Expected N	Residual
Inland	125	150.5	-25.5
Coastal	35	9.5	25.5
Total	160		
	Value	df	Asymptotic

			Significance (2-sided)
Chi-Square	72.768a	1	.000

Note: 0 cells (0.0 %) have expected count less than 5. The minimum expected count is 9.5.

The correlation analysis shows a significant relationship ($p < 0.05$) between the variables Imprisonment years and City less 50km and a slightly significant correlation ($p < 0.10$) between City on the coast (dummy) and Number of felonies (Table 29). Since both independent variables are categorical and this fact has a relevant impact on the correlation analysis, despite their low significance I consider these results to suggest a confirmation of the previous results observed in the descriptive and inferential analysis, that is, that both variables would be positively related to higher levels of local corruption.

Table 29. Spearman's rho correlation coefficients. City less 50km and City on the coast (dummy); Number of felonies and Imprisonment years.

		Imprisonment years	Number of felonies
City less 50km	Spearman's rho correlation	.174*	.121
	Sig. (2-tailed)	.028	.127
	N	160	160

		Imprisonment years	Number of felonies
City on the coast	Spearman's rho correlation	.088	.140
	Sig. (2-tailed)	.267	.078
	N	160	160

*Note: *. Correlation is significant at the 0.05 level (2-tailed).*

Multivariate quantitative analysis

To finish this quantitative analysis section, I include a multiple PLS regression to test the performance of a model consisting of the variables that show positive results in the bivariate analysis. For this analysis, I only use the operationalization Imprisonment years for my dependent variable as it shows better results for most of the independent variables.

The results of the multiple regression (Table 30) show that Population 2005 is the only variable whose effect on the dependent variable is individually significant. Even so, the overall regression model is statistically significant ($F=6.264$, $p<0.01$) and its predictability is not negligible (with an R square of 0.188) considering the exploratory nature of this research and the characteristics of the data.

Table 30. Multiple partial least square regression model.

	Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.
(Constant)	0.623	1.106	0.000	0.574
Population 2005	0.000	0.000	0.323	0.000
Predominant party coincidence	-0.065	0.650	-0.007	0.920
City predominant party (dummy)	-0.259	0.651	-0.029	0.691
Construction licenses province 2007	-0.000	0.000	-0.004	0.965
Weight direct taxes	4.415	2.949	0.116	0.136
Coastal city	0.740	0.718	0.081	0.305
City less 50km	0.942	0.599	0.144	0.118
R square	0.224			
Adjusted R square	0.188			
F	6.264			0.000

Note: a. Dependent Variable: Imprisonment years.

Conclusions of the quantitative analysis

In this section, I summarize the results of the quantitative analysis to clarify which variables are suggested to be relevant explanatory factors of local corruption. These variables are the ones I use for the case selection in the qualitative analysis and on which the two models of comparative qualitative analysis focus.

Concerning H1, the results both at the bivariate and multivariate levels confirm the hypothesis and suggest that municipalities with larger populations tend to be less prone to cases of corruption. Nonetheless, I could interpret this result in another sense considering the kind of measurement I am using. As explained above, there is the possibility that corruption in larger cities could be more usually prosecuted and condemned because there are more means of accountability and resources to control public activity, and also because corrupt cases tend to imply bigger sums of money and the public prosecutor, in consequence, prioritizes this kind of prosecutions. I will study the two potential explanations in the qualitative analysis: either there are more cases of corruption, or there are more prosecutions and condemnations but not necessarily more corruption cases, which implies that the observed relationship could be mediated by the possibilities to prosecute and condemn corruption.

For the political factors, the results seem to reject my H2 and suggest that municipalities with more concentration of political power in one political party due to low levels of party alternation tend to be less prone to cases of corruption. This conclusion is striking because it goes against generally accepted statements about corruption summarized, for example, in Klitgaard's formula. Therefore, the qualitative analysis makes significant attention to this factor to try to solve if the relationship

observed in the quantitative analysis is, in fact, a mediated relation through the possibilities to prosecute and condemn corruption.

Concerning which is the political party with more longevity in power in municipalities, the results do not show any significant relationship with the level of local corruption.

My H3 focuses on economic factors, specifically, on the potential impact of the municipal budget (H3a) and the municipal budget per capita (H3b) on local corruption. In this case, the initial statistical tests point to a positive relationship between the municipal budget and the level of corruption. Despite that, the collinearity tests distinctly show that the municipal budget is collinear with the local population. In consequence, I consider that the central variable to study is the local population size which, in its turn, influences multiple variables than can affect corruption: the resources for the control of public administration, the accountability through opposition councilors or local media and stakeholders' organizations... Consequently, the qualitative analysis focuses on the population size as one of the relevant variables to study and I do not analyze the municipal budget.

For H3b the results do not permit me to reject the null hypothesis as they show no relationship between the budget per capita and the level of corruption in the municipality.

Finally, following the literature on Spanish local corruption, I study the weight of the construction industry in the municipality in H4. The results confirm that municipalities with lower dependence on the construction and real estate industry are less prone to cases of corruption. In this case, I also go more in-depth on the analysis and try to find if the areas with more tourism are more prone to corruption, in line with the

literature on Spanish corruption and the construction boom. The results show that indeed coastal municipalities tend to have more cases of corruption as is the case of municipalities near the Spanish biggest cities. This last result can be explained by the fact that in municipalities surrounding the biggest cities the construction industry uses to have more importance because of the higher residential demand due to work opportunities or a more dynamic economic activity.

To sum up, the four variables related to the relevance of the construction industry and real estate sector are studied in the qualitative section since the quantitative analysis suggests that they are related to the level of local corruption.

In the next section, I present the qualitative analysis consisting of the previously defined comparative models where I analyze corruption in six Spanish municipalities.

Qualitative Analysis

Model 1: Capital status, size of the city and longevity in power.

Madrid: Administrative corruption at the capital city.

- Corruption observed in Madrid: general trends.

Madrid is the sixth city in the dataset considering the number of felonies for corruption and other related felonies, but the second one in years of imprisonment condemned for corruption. The dataset includes seven judgements of condemnation to different individuals for actions that took place in Madrid.

Concerning the involved administration, one case took place in a university, two in a local criminal court, two in the national police, and two in other areas of the state administration.

Three of them were related to the security policy and one to customs control. Between those, two actions took place in the development of inspection powers.

In none of the cases is mentioned the action or warning of any control organism or responsible.

All the cases in Madrid city happened between people with administrative public responsibilities, not political ones.

The principal felonies condemned are embezzlement in three of the cases and bribery in four of them.

- The characteristics of Madrid.

Madrid is the Spanish capital since 1561. It had a population in 2005 of 3,155,359 inhabitants, which means it is the biggest city in Spain followed by Barcelona which has around half of its population. Between 1996 and 2015 the population of the city grew by 10.42% (INE, 2022c). Madrid has no coast, as it is in the geographical center of Spain.

The Spanish administration is very centralized in Madrid, with all the Ministerial offices and the vast majority of public agencies and institutes sited there. Recently it has emerged a debate that blames Madrid for having the possibility of reducing its taxes compared to other Autonomous Communities due to the high level of concentration of economic activity there, because of its capital status and the mentioned centralized tendency (Delle Femmine, 2021; Pérez García & Reig Martínez, 2020).

During the time frame of this research, Madrid was always governed by the Popular Party, the traditional conservative party in Spain (Ministerio de Política Territorial, 2022). The Autonomous Community of Madrid had been always governed by the PP (Senado de España, 2020).

In 2005 the city had a budget of more than 4 thousand million euros, 4,297,192,389 euros, and a budget per capita of 1,361.87 euros (Ministerio de Hacienda y Función Pública, 2022). In 2007, in the province of Madrid, which is coincident with the territory of the Autonomous Community, there were 12,489 licenses for the construction of residential buildings issued, which means 2 licenses for every 1,000 people, below the 3.64‰ at the state level (Ministerio de Transporte, Movilidad y Agenda Urbana, 2022). In 2005 the weight of direct taxes in its revenues amounted to 27%, a bit more than the average of all the state municipalities which was 25.30% (Ministerio de Hacienda y Función Pública, 2022).

Unemployment in the city was 6.47% in 2005, below the figure for the state level (9.15%) (Ayuntamiento de Madrid, 2022, INE 2022a). Madrid's productive system was basically centered on services considering the labor statistics. The distribution of the labor market had a 0.64% of people working in agriculture, a 9.24% in industry, an 8.86% in construction, and an 81.26% in services in 2005; while at the state level the figures were 5.30% for agriculture, 17.24% for industry, 12.33% for construction and a 65.13% for services (INE, 2022b, Ayuntamiento de Madrid, 2022).

- Analysis of causal mechanisms in corruption convictions.
 - Madrid Judgement 1 (SAP M 13407/2018)

This judgement condemns two agents of the National Police Force for bribery. The judgement states that they accepted a bribe to illegally arrest one woman in revenge by her former couple who was the person who paid the bribe. The illegal arrest took place in April 2014.

- Madrid Judgement 2 (SAP M 10993/2017)

In this case, the judge condemns a public officer of the Provincial Traffic Agency for issuing reports of information between June and December 2009 to a man who paid him 3,000 euros. This information could be requested by any citizen but with the previous due procedure and paying a fee. The officer was condemned for bribery.

- Madrid Judgement 3 (SAP M 9292/2017)

This judgement states that between August 2007 and February 2008 a public officer in the airport customs received 2,000 euros from a business owner to facilitate confidential information from the tax agency. She was condemned for bribery and secret disclosure.

- Madrid Judgement Madrid 4 (SAP M 3324/2017)

In this case, a public officer in a public university in Madrid, Universidad Complutense de Madrid, where she was the chief of Economic Affairs took sums of money from the accounts of the university in 2013 to an amount of 10,024.89 euros. Two high-level officers of the university had a meeting with her where she confessed her action and, afterwards, she was condemned for embezzlement.

- Madrid Judgement Madrid 5 (SAP M 11899/2016)

This judgement condemns a judicial secretary in a local criminal court in Madrid for embezzlement and forgery of official documents. The judge considers proven that between April 2001 and December 2014 she emitted transfer orders of amounts related to judicial procedures to the bank accounts of two of her acquaintances. The total amount illegally removed was 1,822,672.97 euros.

- Conclusion.

In conclusion, in Madrid, there are cases of administrative corruption in different kinds of administrations, mostly at the state level and with a relevant presence of the national police. Thus, it seems that the figures for corruption in Madrid are especially remarkable due to the nature of capital city and the fact that, because of the centralization of the Spanish state, a high proportion of the cases of corruption at the state administration take place there.

Rubí: Low corruption in an industrial city

- Corruption observed in Rubí: general trends.

Rubí is within the minor third of cities and towns in the dataset considering the number of corruption condemnations, with just one judgement that condemns one person for embezzlement.

- The characteristics of Rubí.

Rubí is a city of 68,102 inhabitants (2005) in the metropolitan region of Barcelona², which amounted to a total of 4,770,180 people in the same year. Thus, it is among the hundred more populated cities in Spain and the 12th of the Barcelona province. During the time frame of this research, the population of the city had a relevant growth, of a 38.98% (INE, 2022c).

In 2005 Rubí had an unemployment rate of 8.15%, similar to the province one (7.75%). At the beginning of the economic crisis, 13.10%³ of the working population was employed by the construction industry and 41.42% in other industrial activities, 45.43%

² In this research I consider the division of the territorial plan of Catalonia which includes in the metropolitan region a bigger territory than the municipalities under the Metropolitan Area of Barcelona.

³ Data of employment per sector is referred to 2008 as there is no previous data disaggregated at the local level in this case.

worked in the services sector and no people were working for the primary sector (Ajuntament de Rubí, 2022). This shows a slightly higher relevance of the construction industry compared to the data at the country level (12.0%) and higher relevance of industry (15.8% at the Spanish level) (INE, 2022b). During these years, the province of Barcelona emitted around 11,132 (2007) licenses for residential buildings per year, which means 2.07 licenses per 1,000 inhabitants which is a figure similar to Madrid's one and below the country's average (3.64‰ inhabitants) (Ministerio de Transporte, Movilidad y Agenda Urbana, 2022).

Between 1995 and 2003, the city was governed by *Iniciativa per Catalunya-Verds* (ICV in its Catalan acronym), the Catalan left-wing and ecologist party that appeared after the divisions of the communist party, in coalition with the Socialist Catalan Party (*Partit dels Socialistes de Catalunya*, PSC, in Catalan), part of the left-wing socialist party that was one of the most relevant parties in Spain during the bipartisanship that lasted until the second decade of the XXI century (*Partido Socialista Obrero Español* or PSOE in its Spanish acronym). From the 2003 local election to 2011, the mayor was from the PSC (Ministerio de Política Territorial, 2022). In consequence, the governing party was the same in the city and the region from 2003 to 2010, but not during the rest of the years studied, when CIU (*Convergència i Unió*, in Catalan) was the conservative nationalist party governing at the regional level (Senado de España, 2020).

The budget of the city in 2005 was 77,568,768 euros and the budget per capita amounted to 1,139.01 euros. The direct taxes, linked to the construction and real estate activity, represented 34% of the revenues of the city council, a remarkably higher figure

than the average of all the Spanish municipalities (25.30%) (Ministerio de Hacienda y Función Pública, 2022).

The data describes the city as an industrial center and one of the cities that grew remarkably during the economic boom of the construction industry in Spain probably due to its short distance to the second city in the country, which could make it an interesting living destination due to the high prices of housing in Barcelona.

- Analysis of causal mechanisms in corruption convictions.
 - Rubí Judgement 1 (SAP B 6421/2017)

The only sentence for corruption in Rubí dates from 2017 for actions of an administrative officer in a local criminal court that took place between July 2013 and May 2014. This person emitted several orders of payments from the court bank account to a man following what they had planned to do for their enrichment. He was condemned for embezzlement.

- Conclusion.

Rubí appears as a city with almost no corruption cases, considering the dataset analyzed in this research. The only condemned case is related to a person working at a local criminal court under the jurisdiction of the Ministry of Justice.

The city has had quite important construction and real estate activity during the studied time frame, but the productive system remained clearly linked to the industrial sector. The city has always been governed by left-wing parties but not by the same party for very long periods (eight years ICV and twelve years PSC), and the governing party at the local level only coincided with the one governing at the regional level for seven years.

El Ejido: Political corruption in a coastal city?

- Corruption observed in El Ejido, general trends.

El Ejido is one of the cities in the dataset with a lower level of corruption, with only one condemnation for the forgery of an official document that was not even punished with prison but with disqualification for public jobs. However, a serious local corruption case that could take place during the years of this research is still waiting for judgement. I comment on the case due to its relevance but I should underline that there is no still a judicial decision of condemnation.

- The characteristics of El Ejido.

El Ejido is a coastal city in the region of Andalucía, in southern Spain. The city center *per se* does not have a coast but it is just 9km from Almerimar, a small town recently built for tourism and leisure purposes that in fact is part of the administrative term of El Ejido. The population of the city was 84,710 inhabitants in 2005, so it was the third biggest municipality in the province and placed just 35km from its capital, Almería. It had an enormous population growth between 1996 and 2015 that almost doubled the size of the city (86.41% increase) (INE, 2022c).

In 2001 5.8% of the population worked in the construction industry, 2.5% in other industries, and 38% in agriculture and farming (Junta de Andalucía, 2022). This data shows that El Ejido is mostly a rural city centered on the primary sector since in the first years of the century agriculture only amounted to 6.5% of employment at the state level and construction almost doubled the figure in this city (11.6%) (INE, 2022b).

The city had a budget of 101,508,750 euros in 2005 and a budget per capital of 1,474.82 euros. 22% of its revenues came from direct taxes, which is not a high rate in

comparison to other municipalities (the average was 25.3%). However, this moderate figure is due to a high volume of incomes coming from the alienation of property rights (between 15 and 40 million euros a year for the period 2005-2009), which could be related to a decision of selling public land for private uses. When I eliminate the effect of this concept, the revenues coming from direct taxes amounted to 38% in 2005, which confirms the high dependence of the city council on the construction industry and real estate activities (Ministerio de Hacienda y Función Pública, 2022). The reason why this importance of the building sector does not appear in previous data about the labor market could be related to high levels of informality or to people coming from other cities to work in the local building companies.

El Ejido was governed by the Popular Party during the complete time frame of this research, except for the term 2007-2011 when the government was in hands of the *Partido de Almería* (Ministerio de Política Territorial, 2022). Nonetheless, this party appeared as a consequence of internal disputes in the Almería PP, due to which the mayor of El Ejido created the new organization followed by other local leaders of the PP. Juan Enciso, who was the mayor of the city between 1991 and 2011, was arrested in 2009 in the Poniente Operation, the biggest corruption case ever prosecuted in Almería that at the time of writing those lines is still awaiting the Provincial Audit judgement (Martín-Arroyo, 2020; Pajarrón, 2022). During these years, the Autonomous Community of Andalucía was governed by PSOE, which had been in power there since the democratic transition (Senado de España, 2022).

In conclusion, El Ejido is defined by its huge population growth over the years studied, which comes hand in hand with a relevant impact of the construction industry

and real estate sector on public budgets. Another important characteristic is the fact that the same mayor stayed in power for 20 years from 1991, and the same party (PP) governed for most of the time frame of this research (1995-2007 and 2011-2015).

- Analysis of causal mechanisms in corruption convictions.
 - El Ejido Judgement 1 (SAP AL 548/2018)

The only case of corruption condemned for activities that took place in the city during the time frame of this research happened in a state administration, the Tax Agency delegation in El Ejido. There, a public officer received bribes for the expedition of two tax certificates between August 2008 and March 2009. The bribes were paid by a group of people with a company of assistance in administrative procedures that had organized similar bribery schemes with the Migrations Office of the National Police in Almería city.

- Poniente Operation

As stated in the methods section of this work, the undergoing qualitative comparative analysis considers the object and units of observation the same ones as in the previous statistical analysis. However, for an in-depth analysis of the El Ejido case, I cannot overlook the relevant Poniente Operation, which is not included within the quantitative dataset of corruption because there is no still final judgement.

In 2009 around 20 people were arrested in an anti-corruption operation of the Spanish police focused on the El Ejido city council, between whom was the mayor Juan Enciso. The investigation finished with 49 people prosecuted for corruption felonies, five of them were absolved in January 2020 because of the felonies prescription and the rest

are waiting for the first judgement from July 2021 (Martín-Arroyo, 2020; Pajarrón, 2022).

The public prosecutor estimates that 71.5 million euros were taken from Elsur, a company owned by the city council, with 30% of participation, and by a private multinational company. The public-private company had contracts with other companies that emitted invoices for higher sums than the real ones, or even they were paid for services that never developed. All this money, following the accusation of the public prosecution, went back to politics and public officers in the city through presents like, for instance, a house and winery for the mayor. The former mayor is accused of embezzlement, forgery, bribery, and breach of official duty; and the former inspector of the city council and the production director of Elsur are also prosecuted (Martín-Arroyo, 2020).

- Conclusion.

The Poniente Operation, even if it has not still a final judgement, obliges me to rethink the conclusions of corruption in El Ejido. Considering the corruption cases included in the dataset, the city would show low levels of petty corruption related to the state administration. Nevertheless, the Poniente case could be an indication of a kind of corruption scheme similar to the one in Marbella (see the description in Model 2), where publicly owned companies are used by the city council to take money from public budgets. This would be a case of political grand corruption potentially related to problems of public administration controls concerning public procurement for services in public companies.

In case this corruption case would be confirmed, the most important factors with which it could be related are the importance of the construction industry and real estate sector and the longevity in the power of the same mayor and party for a long period.

Conclusions of Model 1

In this model, I compared three similar Spanish cities that differ in terms of the size of the population, their capital status in the case of Madrid, and the level of concentration of political power. Considering the relevance of the Poniente case, even if there is still no final judgement, the results point to the fact that the longevity in power of the same party or, moreover, the same mayor, can facilitate structures of grand political corruption.

Despite this variable was not part of the object of this model, the importance of the construction industry and real estate sector in the case of El Ejido could be pointing to a risk factor that is not necessarily related to corruption, but that can be a facilitator of grand corruption. I will comment more on that element in the next comparative model.

Regarding the size of the city, there are no clear indices that bigger cities tend to have more cases of corruption, in fact, Madrid appears as a big city where the same party governed for more than two decades but there are no condemnations for corruption cases in the city council.

Model 2: Concentration of power and construction boom.

Marbella: Construction boom and public companies

- Corruption observed in Marbella: general trends.

Marbella is clearly the city with a higher level of corruption considering the dataset analyzed in this research. I find judgements for 70 felonies of corruption and other felonies related to corruption and a total of more than 28 years of imprisonment sentenced.

In Marbella, there appear condemnations related to some big corruption cases that implied long and complex judicial procedures, the central one of them with relevant media impacts (the Malaya case).

The majority of condemnations of individual people (35 of the 37) are related to corrupt actions that took place in the city council and the other two happened in the national police. Within the ones at the local administration, 24 of the condemnations were related to actions taken by the local government committee in different policy areas, four in the urban planning area, and two in the security area.

Concerning the public activity related to the condemned behaviors, 20 of the condemnations are related to building licenses and decisions on land use, seven to public procurement for public works (six of them including also other kinds of services), and four to public procurement for services not related to public works.

All the cases related to building licenses and land use are linked to public companies of the municipality, which appear as the tool used to perpetrate corrupt actions.

In 19 of the condemnations, it does not appear the intervention of any control organism or responsible but indeed it appears in the rest of the cases. The more usual public control organism present in the corruption cases in Marbella is the Court of Auditors or the regional Court of Auditors which intervenes in ten cases.

In this city, most of the condemned people have elected political positions (25 of 37, that is, a 67.6%) and five cases are not easy to classify between administrative or political as they are high-rank responsible people of the public companies involved in the cases. Only seven of the condemned people have administrative positions, among which are the two police officers already mentioned, three people in different kinds of administrative positions and I should underline that two of the condemnations are against the municipal secretary, who is the responsible person for legal advising in the city council.

The felonies condemned correspond mostly to breach of official duty, a felony included in 28 of the condemnations, embezzlement in 12 of the condemnations, and with a lower presence, there are also cases of fraud and forgeries of official documents.

- The characteristics of Marbella.

Marbella is a coastal city that had 124,333 inhabitants in 2005, which means that it is among the 50 most populated cities in the country and the most populated of its province after the capital, Málaga city. The population grew in a relevant figure between 1996 and 2015, arriving at a 42.42% increase (INE, 2022c).

The unemployment rate in the city was 14% (2001), higher than the one at the state level (10.55%). 14.2% of the population worked in the construction industry, 2.4% in agriculture, farming and fishing, and 3.8% in other industries, thus, services amounted

to around four-fifths of the working population (79.56%). I should underline that 19.48% of the people were employed in the hospitality industry and 10.13% in real estate services (Junta de Andalucía, 2022). This shows a slightly higher relevance of the construction industry compared to the data at the country level (11.62% at the state level), a clearly lower relevance of industry (19.68% at the Spanish level), and remarkably higher importance of services (62.23% at the country level) (INE, 2022b).

In 2007 the municipalities in the province of Málaga emitted 5,318 municipal licenses for housing buildings, that is, 3.48 per 1,000 inhabitants, a figure around the average at the state level (3.64‰). However, direct taxes represented 48% of Marbella's revenues in 2005, remarkably above the average of Spanish municipalities (25.30%). This figure suggests that the dependence of the city council on the construction industry and real estate activities was notorious.

Marbella was governed by Jesús Gil, a popular mayor who founded the party *Grupo Independiente Liberal* (GIL) in 1991 and governed from then until 2002, when the Spanish Supreme Court confirmed his disqualification for public positions for 28 years (El País, 2002; Sánchez, 2019; Soria, 1992). Then, the GIL continued in power until the local election of 2007 when the PP gained, as it did in the following election, governing until 2015 (Codina, 2017; Ministerio de Política Territorial, 2022). At the regional level, the government was in the hands of PSOE during the time frame of the research (Senado de España, 2020).

- Analysis of causal mechanisms in corruption convictions.
 - Marbella Judgement 1 (STS 3991/2018)

This resolution condemns the interim mayor, the municipal secretary, and an administrative officer for breach of official duty and fraud for acts committed between June 1998 and April 2000, except for the administrative office whose condemnation is for an instant felony in April 2000. The interim mayor and the municipal secretary influenced the results of a public bid of three homes to make the administrative officer win one of those homes at an irregular price.

- Marbella Judgement 2 (STS 3947/2018)

In this resolution, eight city councilors from the city government committee, among which is the interim mayor, and the manager of a municipal public company are condemned for breach of official duty for actions that took place between May 1998 and June 2000. They approved an illegal expropriation of a country estate intending to obtain benefits from real estate speculation. One building businessman and his business were also involved in the case.

- Marbella Judgement 3 (STS 2953/2018)

In this corruption case, the mayor of the city is condemned for fraud and breach of official duty in urbanism for signing an agreement with a building company to transfer a piece of public land without following all the necessary procedures and at an inferior quantity than the corresponding one, actions that took place between August 2000 and June 2003. Afterwards, the mayor also irregularly benefited the company with the emission of permits and licenses for the rezoning of the area. The regional government presented lawsuits against the decisions of the mayor.

- Marbella Judgement 4 (SAP MA 518/2018)

This judgement condemns the mayor of Marbella for breach of official duty for another case related to the emission of building licenses and land use decisions that happened between November 2000 and July 2003. He let the manager of a municipal public company prepare the urban planning regulations of the city to increase the building land. In this specific case, the mayor signed several agreements with the public company to transfer public lands and increase its building possibilities at an irregularly reduced price. None of these agreements was passed for approval by the city assembly as they should.

- Marbella Judgement 5 (SAP MA 41/2018)

In this case, two national police officers are condemned for embezzlement. In January 2013 they took a watch seized in a police operation that imitated a luxurious brand. The watch had a value of 20 euros.

- Marbella Judgement 6 (STS 3211/2017)

This resolution comes from the report of the Court of Auditors about the Marbella city council, which stated that the public company Contratas 2000 S.L. had no accountancy registers to understand the destination of the public funds transferred to the company (around 27 million euros from the city council between 1994 and 1999, and more than 30 million in the same period coming from other public companies). To keep using public money without the proper controls, in September 2000 the city council created the public company GCCM S.L. and transferred to this company the works and payments pending from Contratas 2000. The president of the board of directors of this new public company, who was also a city councilor, continued with the activity of

Contratas 2000 between November 2001 and January 2003 without any public control or procedures and paying for obligations with money transferred by the city council. He is condemned for embezzlement and the judge imposes a personal civil liability of more than 13.5 million euros.

- Marbella Judgement 7 (STS 2808/2017)

In this resolution, the manager of Planeamiento 2000, a municipal public company, and Mancosol Urbanismo, another public company from the association of municipalities of Costa del Sol, is condemned for breach of official duty and embezzlement. In his role as responsible for Mancosol, he approved a contract for the construction of a desalination plant with a private company for which the city council should expropriate some terrains. Planeamiento 2000 was designed by the city council as the company that should do the expropriation, but between August 1996 and January 1997 the manager took the sums of the prices for the terrains that the company had received.

- Marbella Judgement 8 (STS 570/2017)

The judges condemn the interim mayor, the manager of a public company, a city councilor, two city council officers and two representatives of another public company for embezzlement, forgery of official documents and, in the case of the interim mayor and the public company worker, also a breach of official duty.

The resolution stated that between May 2001 and December 2002 the municipal public company Fergocon S.A. emitted 502 invoices to another public company of the city council GCCM S.L. for more than five million euros. These invoices were related to supposed public works in the city that were never completed. These unreal services were

paid through the public company GCCM S.L. in cash and transfers of buildings that did not accomplish the established regulations.

The case was denounced by the regional court of auditors and the city inspector.

- Marbella Judgement 9 (SAP MA 2746/2017)

This resolution condemns the interim mayor and the municipal secretary for breach of official duty. One person was awarded a public concession to open a restaurant in three municipal buildings without the required public contest procedure and valuation. In May 2000, the municipal secretary accepted this procedure as legal even if the city council had omitted the necessary formalities.

- Marbella Judgement 10 (SAP MA 2107/2017)

In this case, the judges condemn the city mayor and a member of the board of directors of several public companies participated by the city council for breach of official duty and embezzlement due to the irregularities in the local public companies. The resolution states that at the end of 2001 the city council owned a 100% of 32 municipal companies directly or indirectly, as most of them were also participated by other public companies. These companies did not accomplish their financial and legal obligations, there were uncontrolled cash payments, and their activities were not controlled by the city assembly. The city council inspector asked in 1994 for the possibility of doing an internal control of the companies' accounts but the response was that there were already external auditors (which the law does not consider a sufficient procedure in the case of a public company). Given the situation, the inspector did several proposals to change the companies' controls that received no answer.

The two condemned people used one of the public companies to pay legal and auditing services from March 2000 to August 2003 without any public control to respond to the requirements done by the Court of Auditors inspections of the city council. The contracts did not follow the procedures required by the public administration and were of an unreasonably high sum compared to the market prices.

Both the city inspector and the Court of Auditors denounced this irregular use of public companies.

- Marbella Judgement 11 (SAP MA 1298/2017)

This judgement condemns the city mayor for fraud and breach of official duty in urbanism for issuing illegal building licenses between August 2000 and June 2003. The former mayor had a building company with another partner and the following mayor illegally benefited this company with agreements for the transfer of public land at a price under the proper one and without following the necessary procedures. The operation was denounced both by the regional government and the Court of Auditors.

- Marbella Judgement 12 (SAP MA 9/2017)

This resolution condemns several felonies of breach of official duty by the mayor, the interim mayor and five city councilors for the approval between March 1995 and May 1996 of four building licenses for petrol stations that were against the urban planning regulations.

- Marbella Judgement 13 (STS 1229/2016)

This resolution condemns a city councilor for breach of official duty, fraud, and bribery. The text states that the political party GIL had a relevant interest in changing the general urban planning regulations of the city. However, the request for money from

building companies to get agreements with the city council made the process of the new 1998 regulations on urban planning absolutely irregular. In 2003 the governing political party was internally divided and a vote of no confidence ended in the appointment of a new mayor from the same party.

The city councilor, who was not part of the local government from 2003 on, is condemned for having received a bribe of 12,000 euros to vote in favor of the new mayor in the vote of no confidence and for staying with the government when needed in future votes. He is also condemned for having received other bribes between December 2004 and February 2005 to vote in favor of illegal urban planning regulations promoted by the government.

- Conclusion.

In conclusion, in Marbella there are basically cases of grand political corruption that involve the elected politicians of the city council who used public companies to commit corruption concerning the construction industry and other related activities. The judgements show a huge scheme of corruption in the city council involving people and companies from the building and real estate sectors.

The factor that seems more relevant to explain this case is the concentration of power in one political party that stayed in government in the city council for 16 years, eleven of them under the same mayor that seems to be a very powerful leader within its organization. At the same time, the use of public companies for corruption appears as a central instrument to evade public procedures and controls. Finally, the money coming from the construction industry and its related activities (decisions on land use, building licenses...) do not seem to be the explanation for corruption, but an incentive or a risk

factor because of the high sums of money involved and the possibilities of the city council to decide on its own in those matters.

Pamplona/Iruña: Longevity in power and public integrity

- Corruption observed in Pamplona/Iruña: general trends.

Pamplona is within the cities with low levels of corruption in the dataset, with only one corruption felony condemned and, indeed, corresponding to a case of bribery of a person from the state security forces, that is, it did not even affect the local government.

- The characteristics of Pamplona/Iruña.

In 2005 the city had 193,328 inhabitants and it was the capital and biggest city with a relevant difference in the region of Navarra. Between 1996 and 2015 the population of Pamplona grew by 17.66%, which is not a very high proportion compared to other municipalities (INE, 2022c).

In 2005 there were 8,193 unemployed people, which means an unemployment rate of around 7.3% approximately⁴. There is no historical data available for this city, but in 2021 services meant 76.6% of employment, industry 16.7%, construction 5.6% and agriculture 0.6% (Ayuntamiento de Pamplona, 2022b). This data does not permit me to take conclusions on the productive and labor structure of Pamplona for the time frame of this research, but it suggests a city focused on services and with a quite relevant industrial sector.

In 2005 the city had a budget of 215,917,826 euros and a budget per capita of 1,116.85 euros. Just 18% of the city's revenues came from direct taxes, a remarkably lower figure than the average (25.30%) (Ministerio de Hacienda y Función Pública, 2022). The construction licenses issued in the province of Navarra in 2008 were 3.62 per

⁴ There is no disaggregated data of unemployment for years before 2018.

1,000 inhabitants, which is almost the same figure as the average of Spanish provinces (3.64‰) (Ministerio de Transportes, Movilidad y Agenda Urbana, 2022).

Between 1995 and 2015 Pamplona was governed by three different mayors, one of them who governed for twelve years. After the election of 1995, which was won by *Unión del Pueblo Navarro* (UPN), the mayor was the candidate of *Convergencia de Demócratas Navarros* due to an alliance with left-wing parties, but he came from UPN with which he had already been mayor between 1987 and 1991. UPN is a nationalist conservative party that had an agreement with PP to present joint lists of candidates in elections until 2011. This party won the municipal election and had the mayor of the city between 1999 and 2015 (Ayuntamiento de Pamplona, 2022a; Ministerio del Interior, 2022; Ministerio de Política Territorial, 2022). During all this time, the regional government was also in the hands of UPN (Senado de España, 2020).

- Analysis of causal mechanisms in corruption convictions.
 - Pamplona/Iruña Judgement 1 (SAP NA 21/2018)

There is only one condemnation for corruption in Navarra during the analyzed time frame. The judgement states that in October 2012, a police officer from the Civil Guard (a state security force) in charge of traffic agreed with a lawyer that the former would send him information about the traffic infractions and the latter would contact the affected people to offer his legal advisory services. He sent the lawyer information about ten people with traffic infractions and other internal reports about traffic security procedures. The police officer was condemned for bribery and disloyalty in the custody of documents.

- Conclusion.

Pamplona appears as a city with very low levels of corruption even if the concentration of political power in UPN should be high considering its longevity in power both at the local and regional governments. At its time, the other factor indeed analyzed in this model, the relevance of the construction industry in the city's productive system, does not seem to be present. Thus, Pamplona is a city with a high concentration of political power but with no presence of other risk factors linked to the construction industry and real estate sector, as shown by the low number of building licenses emitted or the relatively low population growth.

Badalona: Petty corruption in a Barcelona suburb

- Corruption observed in Badalona: general trends.

Badalona appears as one of the cities with medium-low levels of corruption in the dataset, with three condemnations for corruption accounting for six felonies and condemnations to 14.5 years of prison. However, the three cases relate to administrative corruption. One of the condemned people was an officer of the public post company, who was condemned for embezzlement, and the other two were local police officers condemned for bribery.

- The characteristics of Badalona.

Badalona is a city that had 218,553 inhabitants in 2005, it was the 21st most populated city in the country and the third in the Barcelona province. During the time frame of this research, Badalona's population was in general terms stagnated. Even if some years show higher growth figures, as a whole the city grew only 2.2% during the period (INE, 2022c). It is less than 10km from the Barcelona city center and it has a long stripe of the coast all along the city.

In 2008 the unemployment in the city was 13.8% a little bit more than the national figure (11.25%) (IERMB, 2022; INE, 2022b). In 2005, agriculture was almost inexistent within the labor market of the city, representing only 0.09% of jobs, other industries had a relevant weight (19.33%, while 17.24% at the state level), the construction industry employed 15.18% of the population, also above the average at the state level (12.33%), and services meant the 65.36% of employment (IERMB, 2022; INE, 2022b).

This data shows a city with a relatively high percentage of construction industry and other kinds of industries. Even if the data on building licenses for building in the province (2.07 per 1,000 inhabitants) is low and there is a slight increase in the city population, the direct taxes amounted to 40% of the city budget, clearly above the Spanish municipalities' average (25.30%) and suggesting a huge relevance of the construction industry (Ministerio de Hacienda y Función Pública, 2022; Ministerio de Transportes, Movilidad y Agenda Urbana, 2022).

The city budget in 2005 was 132,431,127 euros and the budget per capita was 605.95 euros (Ministerio de Hacienda y Función Pública, 2022).

Badalona was governed by the PSC from 1995 to 2011, when the PP won the local election (Ministerio de Política Territorial, 2022). During this period, the Catalan government was in hands of CIU between 1980 and 2003 with Jordi Pujol as the President, and between 2003 and 2010 a coalition led by PSC governed the region. From this year until the end of my period of study CIU was governing again (Senado de España, 2020).

- Analysis of causal mechanisms in corruption convictions.
 - Badalona Judgement 1 (STS 2800/2017)

In this judgement, two local police officers are condemned for bribery. In August 2010 they accepted 500 euros from a group of individuals in exchange for sending personal information and try to find two people that had supposedly committed a robbery.

- Badalona Judgement 2 (SAP B 5188/2016)

This resolution states that between July 2009 and May 2011 an officer of the public post company working in the Badalona office took money from the fees paid by clients. He is condemned for embezzlement.

- Conclusion.

In this city, there are only administrative petty corruption cases, which would make me consider the city as one with low levels of corruption even if the case of the police officers implied serious punishments. Thus, neither the concentration of power nor the relevance of the construction industry seemed to have increased corruption in the city.

Concerning the concentration of power, despite the same party being in power for 16 years, I do not find the strong leadership of one mayor during long-lasting periods like in the case of Marbella. At the same time, the construction industry was relevant, but it is not clear it implied great growth in terms of new building construction as the size of the city remained stable.

Conclusions of Model 2

In this second model, I compared three similar Spanish cities that differ in the concentration of power and the importance of the construction industry in the city. Regarding the concentration of power, the results in this model are not as clear as the ones obtained in Model 1. Marbella clearly stands out in the longevity in power of one party and the strong leadership of one mayor for a long period, while it is also the case

with higher levels of corruption. However, it should be noted that both Pamplona and Badalona had low levels of alternation of political parties in power, despite the lack of a strong mayor like the one in Marbella, and they show low levels of corruption.

This fact suggests that high levels of longevity in power and concentration of power in the same mayor can facilitate structures of grand political corruption, but that also other risk factors have a relevant impact and the absence of alternation in power does not necessarily mean that corruption would be higher.

Regarding the impact of an important construction industry and real estate sector, the results reinforce the idea already stated that risk factors can facilitate the appearance of grand corruption schemes but that this is not a direct and necessary relation, since corruption is a multifactorial phenomenon affected by multiple risk factors.

Marbella and Pamplona seem to be examples of the fact that quick and high development of the construction and real estate sectors in a city is a notorious factor for the appearance of political corruption: the former would be an example of high corruption related to the construction industry and, the later, an example of a city with a weak construction industry and low levels of corruption. Nonetheless, Badalona again appears as a middle case, with a relevant construction industry considering the employment and the weight of direct taxes on public revenues, but a city that has not lived a strong growth due to the real estate boom and that shows low levels of corruption.

After the presentation of the empirical analysis for the two qualitative comparative models, in the next chapter I present the conclusions of the entire research.

Chapter VI.

Conclusions

Discussion of the Results

My results suggest some interesting conclusions that could be considered a relevant contribution to the current state of the academic literature on corruption at the local level of government.

The quantitative results obtained about the first hypothesis (H1) suggest that cities with more population tend to be more prone to cases of corruption. However, the results of the qualitative analysis make me cautious about this statement as they do not show a clear relationship between the size of the population of a city and its level of corruption.

Thus, the relationship observed in the statistical tests could be mediated by the relevant impact of other variables related to the size of the city, for instance, the political contacts and resources of the internal controls in the city councils to feel protected to denounce corrupt behaviors, or the impact of closer personal relationships between public officers in a small town that can be counterproductive to denounce a case of corruption. A relevant number of more specific explanatory variables could be concealed behind the population of a municipality.

There is one of these variables on which I would like to focus as it goes in line with the usual criticism received by objective measurements based on judgements. There could be a lower judicial efficacy to condemn corruption in small cities and towns explained by the fact that the public prosecutor's office, which is the usual driving force

of the judicial procedures for corruption in Spain, has limited resources and it is reasonable to think that it prioritizes more serious corruption cases. One of the reasonings used by part of the literature that defends that corruption is more prone to happen in big cities is that these cities mobilize more economic resources and relevant political activity and, in consequence, there are more incentives for corruption there. I think that this argument could be linked to the lower interest of the prosecutor to investigate cases of corruption in smaller municipalities, that in general imply smaller sums of money or, more broadly, less detrimental impacts on the public interest. In fact, the stronger correlations that appear in my tests for the variable Imprisonments years than the ones for the variable Number of felonies are an argument to support this possible explanation and, in some sense, it builds a point in common between the different results of the literature that relates corruption with the population of municipalities.

If my reasoning is correct, I could not state if there is more corruption in bigger or smaller cities, but I would confirm that corruption in big cities usually consists of more serious cases, that is, what is considered grand and political corruption. Further research should analyze if this explanation is correct both by the part of the lower efficacy of the judicial system to prosecute corruption in small cities and towns and by the part of confirming if cases of corruption are more serious in big cities.

Concerning my second hypothesis (H2), the quantitative results repeatedly point to the fact that cities with a lower concentration of political power in one party, the one that usually governs the municipality, are related to higher levels of corruption. Nonetheless, one more time the qualitative analysis facilitates relevant information to understand this unexpected finding and the case of Marbella suggests that longevity in

power of the same party at the local level and, mostly, of the same political leader could be related to higher levels of corruption risk (not necessarily of corruption as shown by the Pamplona case).

Therefore, the relationship that the statistical tests are showing could be concealing a conditional relationship where other explanatory variables would have a mediating effect between the concentration of power and the levels of corruption. Municipalities with more party alternation in government could have more tools to make corruption cases come to light and be condemned. This alternation could generate higher means of accountability, as there would not exist long-lasting political and economic relationships between the same actors and could motivate local governments to denounce potential corrupt behaviors that do not take place during their mandates. Indeed, this perfectly fits Klitgaard's explanation of corruption, as the concentration of political power in one party that governs for long periods can generate a monopolistic power that is not submitted to accountability by other powerful political actors in the institution. Future research should focus on confirming if the concentration of power in one political party makes it more difficult to denounce, investigate, and condemn suspicions of corruption.

Regarding my third hypothesis, the statistical analysis has shown that the high collinearity between the municipal budget and the local population does not permit me to get individual conclusions from the former variable considering my research design. The local budget might be one of the variables mediating the effect of the local population size on local corruption in the line commented for the first hypothesis. In sum, concerning H3a I cannot reject nor confirm the null hypothesis as further research

specifically focusing on this variable would be needed. However, the quantitative results permitted me to reject the hypothesis about the potential relationship between the local budget per capita and corruption at the local level (H3b).

Finally, the different variables analyzed regarding the dependence of municipalities on the construction industry suggest that H4 should be confirmed. The quantitative analysis points to the fact that there is more corruption in municipalities with a higher dependence on the construction sector, especially shown by the weight of direct taxes on revenues. The geographical distribution of local corruption suggests, in line with the literature, that coastal areas and the surroundings of big cities are more prone to cases of corruption due to the higher relevance of the construction industry in these territories.

One more time, the results of the qualitative analysis allow for a more in-depth comprehension of the potential relationship between these variables. The difference between the case of Marbella and Badalona, both of them with relevant construction industry and real estate sectors, suggests that it could be more appropriate to consider the relevance of the construction industry as a risk factor than an explanatory factor for corruption, considering that the relationship between the variables is not necessary but that the presence of a relevant construction and real estate sectors can facilitate the appearance of grand political corruption.

After summarizing the results of the mixed methods design for the different hypotheses, in the next section, I present some considerations about the limitations of this research.

Limitations

After the presentation of the conclusions of this work, I would like to discuss several limitations of my research that should be considered.

First, as I explained before, some authors are quite skeptical about the use of objective measures of corruption based on judicial decisions because they can lead to confusion between the existence of corruption and the efficacy of the judicial system in controlling corruption. Despite my decision of using this kind of measure, for reasons already stated, I think that this criticism should be considered when analyzing the results of the research.

Second, my dataset only includes three years of judgements for corruption cases. Even if the sample is representative, some of the results could be affected by outliers, especially considering that some cases of corruption can include a relevant number of condemnations for corruption and other related felonies or remarkably serious corruption cases (i.e., with condemnations implying a lot of imprisonment years).

Third, my different operationalizations of the concentration of political power could be discussed as they only consider the power of parties that govern a municipality or region, dismissing other relevant actors as political leaders or lobbies. The concentration of political power is a broad concept that needs to be specified to permit rigorous research. In this sense, even if I have limited my research to political parties in government, I have tried to include several manifestations of the concentration of power in those parties to obtain more specific but also more solid results.

Fourth, in a similar sense to my first limitation, my definition of corruption is limited to the actions of people with public responsibilities that are judicially condemned

as corruption. This, of course, sets aside other actions that can be socially considered as corruption, but which are not included in the criminal code, corrupt felonies of private subjects, or corrupt felonies that are not condemned for different reasons (death or disappearance of the accused person, insufficient evidence, expiration of the criminal responsibility...).

After commenting on possible limitations of the study, in the next and final section, I present a more general reflection on the potential answers obtained for the research question, the practical implications for policymaking, and the possible future research lines that this work indicates.

Concluding Remarks

The results of the first and second hypotheses of this research, that is, the hypotheses related to the size of a municipality and the concentration of power in one party, suggest a problem of corruption control and prosecution. The lower presence of small cities and towns in the dataset could be related to more difficulties to prosecute and condemn corruption in those places due, at least in part, to insufficient resources of the public prosecutor's office. At the same time, the higher presence of municipalities with more alternation of parties in power would suggest that the corruption control systems fail when longevity in government generates more concentration of power in one party. Thus, the first relevant implication of the research to rethink anti-corruption measures would be that there is a problem with corruption control mechanisms at the local level since in small cities and towns or in municipalities where one party governs for long period these mechanisms show a low efficacy to condemn corruption.

Apart from that, the results suggest that some characteristics of cities are risk factors that could be considered to improve the corruption control efficiency. First, as already commented, longevity in power of the same party and, even more, of the same political leader are risk factors that should be considered. Second, results also suggest that the relevance of the construction industry and the dependence of the municipality on the construction and real estate activity, considering public revenues and job offers, could be a relevant risk factor to take into account when controlling public activity.

Finally, two more risk factors have not been part of the interest of this research but appear in several cases of the qualitative analysis. On the one hand, the presence of corruption cases in the police and security forces is notable in relation to petty corruption bribery cases. On the other hand, there is a high number of cases where local public companies are used as a means to commit corruption by local politicians. These two factors are not studied in this research, but the results suggest that they could also be risk factors to be considered in the design of public activity controls.

Further research should, first, analyze new reforms and regulations implemented in recent years that were not present during the period studied in this research. To keep working on the idea of improving local anti-corruption tools, it would be interesting in-depth research on how to include potential risk factors for corruption in these control tools and consider the potentialities (and limitations) of big data and artificial intelligence as the subjects of a new era on anti-corruption strategies.

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