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The structure of local bureaucracies in Mexico

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This paper provides a systematic characterization of the organizational architecture of municipal governments in Mexico and how it varies with municipal size. Using detailed data from the National Census of Municipal Governments, the analysis documents patterns in the number of organizational units, staffing levels, sectoral specialization, and the allocation of budgetary and labor resources across functional areas. The results show that municipal bureaucracies expand initially through the creation of new units and, at later stages, through increased staffing within existing units, and that core functions such as public works, public services, and public security account for a large share of organizational resources. By describing these patterns, the paper helps address the scarcity of empirical evidence on the internal organization of the public sector and motivates further research on the relationship between organizational form and local state capacity.

KEYWORDS

Local governments, Bureaucratic organization, State capacity

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Estructura de las burocracias locales en México.

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Este documento presenta una caracterización sistemática de la arquitectura organizacional de los gobiernos municipales en México y de cómo esta varía con el tamaño de los municipios. Utilizando información detallada del Censo Nacional de Gobiernos Municipales, el análisis documenta patrones en el número de unidades organizacionales, los niveles de empleo, la especialización sectorial y la asignación de recursos presupuestarios y laborales entre áreas funcionales. Los resultados muestran que las burocracias municipales se expanden inicialmente mediante la creación de nuevas unidades y, en etapas posteriores, a través del aumento del personal dentro de las unidades existentes, y que funciones centrales como obras públicas, servicios públicos y seguridad pública concentran una proporción significativa de los recursos organizacionales. Al describir estos patrones, el documento contribuye a subsanar la escasez de evidencia empírica sobre la organización interna del sector público y motiva futuras investigaciones sobre la relación entre la forma organizacional y la capacidad estatal a nivel local.

KEYWORDS

Gobiernos locales, organización burocrática, capacidad estatal

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1 | INTRODUCTION

Despite the extensive literature on state capacity developed over recent decades, surprisingly little is known about the organizational structure of the bureaucracies that materialize these capacities. The majority of studies treat state capacity as an aggregate or latent variable, measured through fiscal performance, administrative density, or governance quality. However, few studies examine the organizational architecture of public executives, that is, the number of units they comprise, the distribution of personnel, the prioritized functions, and the allocation of budgets across areas.

The existence of this gap can be attributed to at least two factors. Firstly, the literature lacks theoretical models that generate predictions about how the organizational structure of state bodies should evolve or how these structures relate to organizational performance¹. Secondly, a significant empirical constraint must be acknowledged: the paucity of comparable data regarding the organizational structure of governments. Administrative records are frequently characterized by fragmentation and inconsistency. Information pertaining to internal divisions, including secretariats, directorates, departments, and technical units, is often not systematically organized and is not readily available for quantitative analysis. Consequently, empirical research in political economy has relied on aggregate proxies (e.g., public employment, per capita spending, budget size) that reveal little about the internal functional composition of the state apparatus.

To help bridge this gap, the present document offers a characterization of the manner in which local executives in Mexico are organized, utilizing data from the National Census of Municipal Governments. Municipalities offer a natural laboratory to study the construction of administrative capacity because they are numerous, operate under similar institutional frameworks, face comparable problems of scale and coordination, yet display substantial heterogeneity in size, complexity, and resources. Furthermore, these units play a pivotal role in governance, assuming substantial responsibilities for the delivery of public and governmental services, a responsibility that is particularly pronounced in a nation as decentralized as Mexico.

The analysis reveals several stylized facts about the organizational architecture of local bureaucracies. First, the size of the municipality is the primary determinant of bureaucratic size. Less trivially, bureaucracies tend to grow first "horizontally" (by creating new units with few staff) and only later "vertically" (by adding personnel to existing units). Second, systematic patterns emerge in the sectoral areas as units are created. The smallest governments are typically composed of a presidency, a treasury, and units devoted to public works, security, public services, and internal control. Beyond this basic core, units related to transportation, social development, urban development, and other functions begin to appear. Third, the sectoral priorities implicitly revealed in the sequencing of unit creation are also reflected in the allocation of organizational resources: a considerable portion of municipal employment and budget is allocated to areas such as security, public works, and public services. Fourthly, the sectoral configuration of municipal executives demonstrates stability over time, although there is a tendency for growth in size. The average number of units increased from 18 to 20 between 2017 and 2023. With respect to senior officials, tenure in office is generally brief, consistent with high turnover linked to political cycles. Women's participation remains limited and disproportionately concentrated in portfolios associated with social issues (e.g., women and family, health, and education). Furthermore,

¹For private organizations, there is literature that models them as hierarchical problem-solving structures and analyzes how the form of that structure responds to the firm's objectives (Garicano, 2000; Hart and Moore, 2005; Caliendo et al., 2015). Applying the same logic to public organizations is complicated, among other reasons, by the multidimensional nature of their functions and the absence of a well-defined objective function.

a significant degree of heterogeneity is observed in the salaries of senior officials across various areas, with discrepancies reaching up to 47 percent.

The results presented herein are primarily descriptive in nature. In this regard, the most closely related study is [Martínez et al. \(2024\)](#), which provides a similar characterization for a subset of municipalities in Colombia. In a broader sense, the stylized facts documented here give rise to a wide range of questions regarding the causes and consequences of the observed organizational arrangements. Consequently, this study adds to the extant literature on the organizational and personnel aspects of the state ([Finan et al., 2017](#); [Besley et al., 2022](#)). A significant portion of this research has centered on understanding how public officials are recruited, emphasizing factors such as clientelism, wages, and public service motivation ([Brassiolo et al., 2020](#); [Dal Bó et al., 2013](#); [Xu, 2018](#); [Spenkuch et al., 2023](#); [Deserranno, 2019](#); [Colonnelli et al., 2020](#)). Other studies have examined the relationship between employment arrangements—such as monetary incentives, monitoring schemes, and task assignment—and bureaucratic performance ([Muralidharan and Sundararaman, 2011](#); [Dhaliwal and Hanna, 2017](#); [Bandiera et al., 2021](#); [Szucs, 2024](#); [Banerjee and Duflo, 2006](#)). The primary contribution of this paper is its emphasis on organizational form as a relatively unexplored dimension of variation across governments. This aspect may hold significant implications for comprehending state action and capacity.

2 | INSTITUTIONAL CONTEXT AND DATA SOURCE

2.1 | Mexican municipalities

Mexico is a federal republic composed of 32 federal entities (31 states and Mexico City). Each of these entities is subdivided into local political-administrative units—most commonly referred to as municipalities—whose governments are headed by a mayor elected by universal suffrage, who serves as the chief executive of the local government and presides over the municipal council (ayuntamiento). Two federal entities deviate from this institutional arrangement and are therefore excluded from the analysis: Mexico City and the state of Oaxaca².

Mexican municipalities enjoy political, administrative, and fiscal autonomy. Although the country's federal structure may give rise to some variation across states, the national constitution establishes a common minimum set of municipal responsibilities in the provision of public services and the administration of municipal finances. Municipalities are responsible for the direct provision of the public services closest to the population (such as drinking water, sewage, public lighting, solid waste collection, street maintenance, and public security, among others), as well as for tasks related to local development promotion and territorial management. In terms of expenditure, municipalities account for approximately 6 percent of total public spending, equivalent to about 1.5 percent of GDP.

Mayors serve three-year terms. Until 2014, federal law prohibited the reelection of these authorities; a reform enacted that year granted states the option to allow immediate reelection for a second term, which the majority have adopted. Local governments have the authority to regulate municipal public administration and enjoy broad discretion in defining the structure of their bureaucratic apparatus, subject to the obligation—imposed in some states—to establish internal oversight bodies. Given that the vast majority of municipalities are small, their bureaucracies tend to be correspondingly small and weakly professionalized

²Mexico City is subdivided into 16 units called territorial demarcations, which differ from the municipalities existing in other states in legal, fiscal, and governmental aspects. Oaxaca, in turn, differs from the institutional norm because in most of its municipalities, authorities are not elected through universal suffrage in a party system but through arrangements based on the customs and traditions of indigenous peoples.

2.2 | Data

The primary data source for this study is the National Census of Municipal Governments and Territorial Demarcations of Mexico City (CNGMD). This census is conducted by Mexico's national statistical institute (INEGI) with the objective of producing detailed, municipality-level information (and territorial demarcations in the case of Mexico City) on local government management, organization, personnel, functions, infrastructure, and performance. Each municipality designates one or more of its own officials as respondents, who are responsible for completing the questionnaire with technical support from INEGI staff.

The census is conducted biennially and collects information as of December of the preceding year. The most recent edition available is the 2023 wave, which constitutes the main data source for the analysis presented in this paper, although some sections also draw on earlier waves. All municipalities in the country—whose total number varies only marginally over time—are surveyed. Of the 2,459 municipalities included in the 2023 edition, the main analytical sample consists of 1,882 municipalities, after excluding the 570 localities in the state of Oaxaca and an additional seven municipalities that lack information on key variables of interest³.

Among other topics, the census collects information on municipal organization. Respondents are asked to provide a complete list of the “institutions” that make up the organic structure of the public administration. Broadly speaking, these “institutions” correspond to functional organizational units; henceforth, we refer to them simply as “units”. For each unit, respondents report its administrative classification—either centralized public administration or parastatal (paramunicipal) administration—as well as its type, according to a closed list of nine categories defined by INEGI. Table 1 reports the total number of units (referred to as institutions in INEGI's terminology) by administrative classification and type for the municipalities in the sample.

TABLE 1 Number of units by type of institution

Administrative classification	Type of institution	Freq.	%
Centralized Public Administration	Office of the municipal president or mayor	2,380	5.89
	Secretariat or equivalent	26,988	66.75
	Executive Legal Counsel or equivalent	478	1.18
	Decentralized administrative body	897	2.22
	Another type of Centralized Public Administration institution	7,537	18.64
Paramunicipal Public Administration	Decentralized public body	1,741	4.31
	Majority-owned company	1	0.00
	Public trust	9	0.02
	Another type of paramunicipal public administration institution	383	0.95
	Does not have the information to respond	20	0.05
Total		40,434	100

Source: Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

A central variable in this study is the number of organizational units within each municipality. The analysis includes only units classified as part of the centralized public administration⁴. As shown in Table 1, there are a total of 38,280 units in this category, the

³As previously noted, the sample excludes the municipalities of Oaxaca and the territorial divisions of Mexico City.

⁴It is important to emphasize the self-reported nature of this information, which implies that there is room for subjectivity and differences in criteria between municipalities when listing what counts as an institution in

majority of which (26,988) correspond to secretariats—roughly equivalent to ministries or sectoral portfolios at the municipal level. Units classified as paramunicipal, which include decentralized agencies and public enterprises, are excluded from the analysis.

Based on their names, organizational units are classified by us into 25 functional categories (such as treasury, public works, social development, among others), using a keyword-based dictionary for each category. In some cases, a single unit may fall into more than one functional category. This information is used to examine which sectors are prioritized as municipalities expand their organizational structures. In addition, respondents report selected characteristics of each unit's director, as well as aggregate data on personnel and budgets at the unit level. These variables exhibit varying degrees of noise and incompleteness, which are discussed as they are introduced in the analysis.

3 | SCALE AND ADMINISTRATIVE STRUCTURE

Two basic features of municipal administrative structures are the number of organizational units they comprise and the size of their workforce. Both dimensions vary systematically with population size: larger jurisdictions tend to exhibit broader structures (more units) and larger staffs. This pattern is clearly observed in Mexico. The median municipality has 18 administrative units and 183 employees, and both the total number of units and municipal employment increase with population size (see Figure 1)⁵.

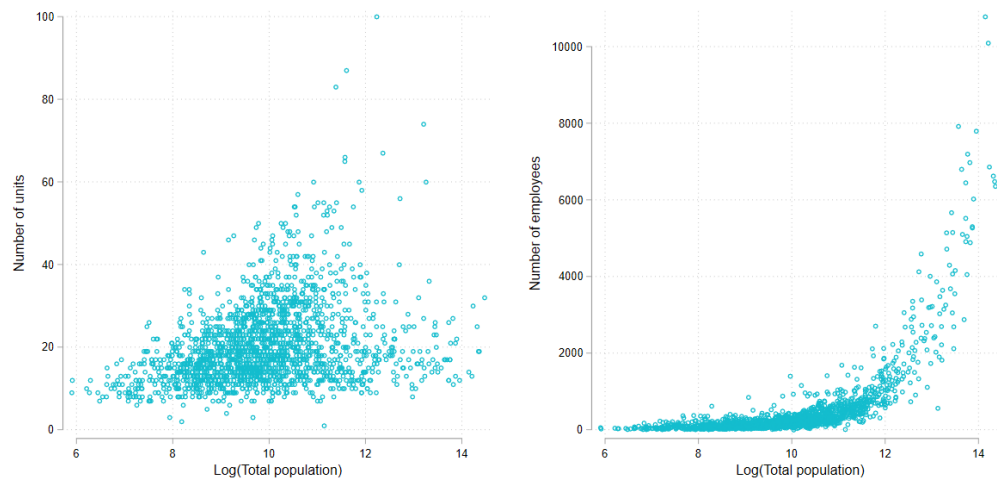


FIGURE 1 Municipal administrative scale and population size. *Notes:* Each point represents a municipality. The horizontal axis shows the logarithm of the total municipal population, while the vertical axis shows the total number of administrative units (left panel) and the total number of municipal employees (right panel). *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

The figure also highlights two additional facts. First, population size alone does not fully determine administrative configuration. For a given population level, there is substantial dispersion in the number of units across municipalities and, to a lesser extent, in total employment: municipalities of similar size operate with markedly different organizational architectures. This suggests that, beyond scale, institutional choices and local contexts play

each case.

⁵Martínez et al. (2024) document that municipalities in Colombia are smaller, with a median of 23 employees.

an important role. Second, the relationship is nonlinear: the increase in the number of units flattens at higher population levels, while employment exhibits a steeper slope beyond a certain threshold.

This asymmetry in the patterns of growth of organizational units and employment becomes clearer when municipalities are grouped into population brackets. The average number of units increases steadily among small and medium-sized municipalities and stabilizes—indeed, slightly declines—in the highest population bracket. By contrast, average employment grows slowly in the lower brackets and accelerates sharply among municipalities with more than 60,000 inhabitants (Figure 2). Taken together, these patterns suggest that as municipalities grow, the administrative apparatus initially expands “horizontally” (through the creation of new units) and, once a certain threshold is reached, expansion occurs “vertically” (through the addition of personnel within existing units).

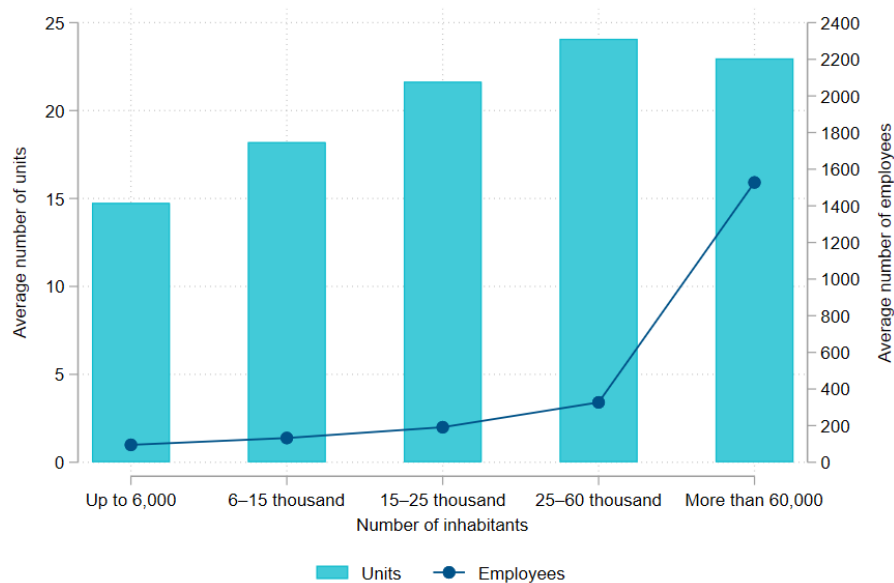


FIGURE 2 Averages of units and personnel by municipal population segments. *Notes:* The bars show the average number of administrative units, while the line shows the average number of municipal employees. Municipalities are grouped into five population brackets defined by round limits (up to 6,000; 6,000–15,000; 15,000–25,000; 25,000–60,000; more than 60,000 inhabitants). These brackets are similar to quintiles, but do not coincide exactly because more easily interpretable cutoffs are used. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

Consistent with this dynamic, the number of employees per unit remains relatively stable—or increases only modestly—across the lower and middle population brackets, before rising sharply in the top bracket: it increases from 7 in municipalities with up to 6,000 inhabitants, to 8 (6,000–15,000), 10 (15,000–25,000), and 16 (25,000–60,000), but jumps to 87 in municipalities with more than 60,000 inhabitants. This level is more than five times that of the fourth bracket and nearly twelve times that of the first.

Finally, personnel expenditure per capita is highest in small municipalities and declines as municipalities move into intermediate population brackets, suggesting the presence of economies of scale. Beyond that point, spending stabilizes and shows a slight uptick among the largest municipalities, consistent with the incorporation of more specialized profiles and higher labor costs in urban contexts (refer to Figure 3).

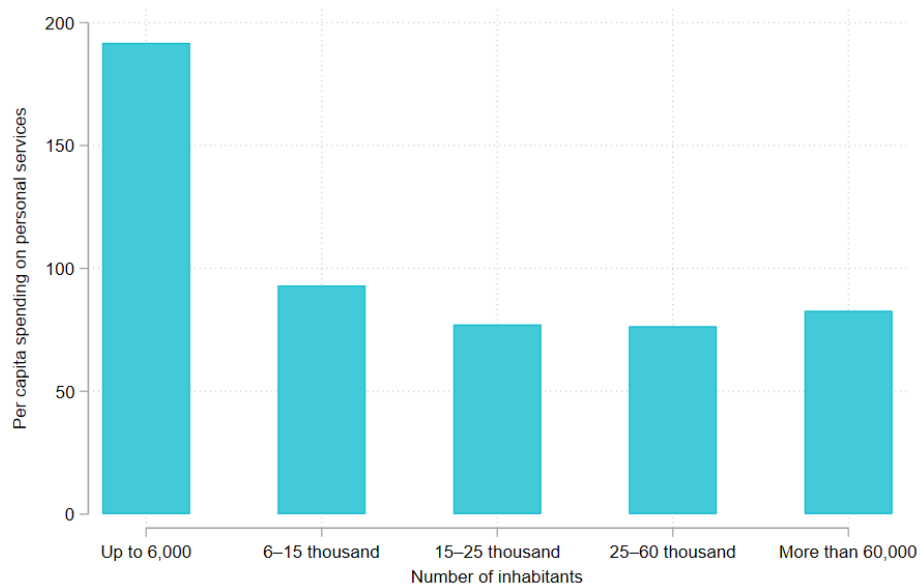


FIGURE 3 Per capita personnel expenditure by municipal size. *Notes:* The bars show the average per capita expenditure on personal services (payroll and benefits) by population bracket. The amounts are in US dollars, using the average annual exchange rate for 2022. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023) and from the Bank of Mexico’s daily historical series of the peso-dollar exchange rate.

4 | FUNCTIONS AND SPECIALIZATION

To link organizational structure to functions, administrative units are classified into 25 sectoral categories using keyword lists constructed from unit names⁶. The classification strategy seeks to balance precision and coverage: specific terms are prioritized to minimize multiple assignments, while the dictionary is expanded to reduce the number of unclassified units. For instance, units whose names include terms such as “education” or “training” are assigned to the Education function, whereas those containing “culture” “heritage” or “recreation” are assigned to Culture/Sports. When the name of a unit includes keywords associated with more than one category, the unit is considered present in all corresponding categories. For example, a “Secretary of Education and Culture” is assigned to both Education and Culture/Sports.

Overall, there is a set of core functions that is present in nearly all municipalities, regardless of their size, alongside more specialized functions that emerge as population increases. The core includes the Mayor’s Office, the Treasury, Public Works, Internal Oversight, Public Security, and Public Services, all of which exhibit very high coverage across population brackets.⁷. This pattern is already evident at the lower end of the distribution: among municipalities in the first population percentile, with fewer than 1,000 inhabitants, the Mayor’s Office and the Treasury are present in all cases, and most municipalities also have units devoted to Public Works, Internal Oversight, and Public Security. In addition, Public

⁶The complete list of functions and keywords is presented in the appendix.

⁷These functions generally cover political leadership and coordination; fiscal and financial administration; internal oversight; public works and public space management; public security; and the provision of essential services (e.g., water supply, waste collection, and public lighting).

Services appears with high frequency, sometimes integrated into Public Works (e.g., Departments of Public Works and Public Services), or as a standalone unit. Building on this core, functional diversification with scale is observed in areas such as Social Development, Education, Urban Development, and Traffic Management, whose presence increases in medium-sized and large municipalities. By contrast, functions such as Human Rights and Information Technology display much more limited coverage, even in the upper population brackets (see Figure 4). In summary, the pattern suggests that, alongside leadership and administrative functions (the Mayor's Office and the Treasury), the first substantive functions prioritized by municipalities are Public Works and Public Security. Other areas—such as Public Services, Social Development, Education, Urban Development, or Traffic Management—are incorporated and gain prevalence as municipal scale and administrative capacity expand.

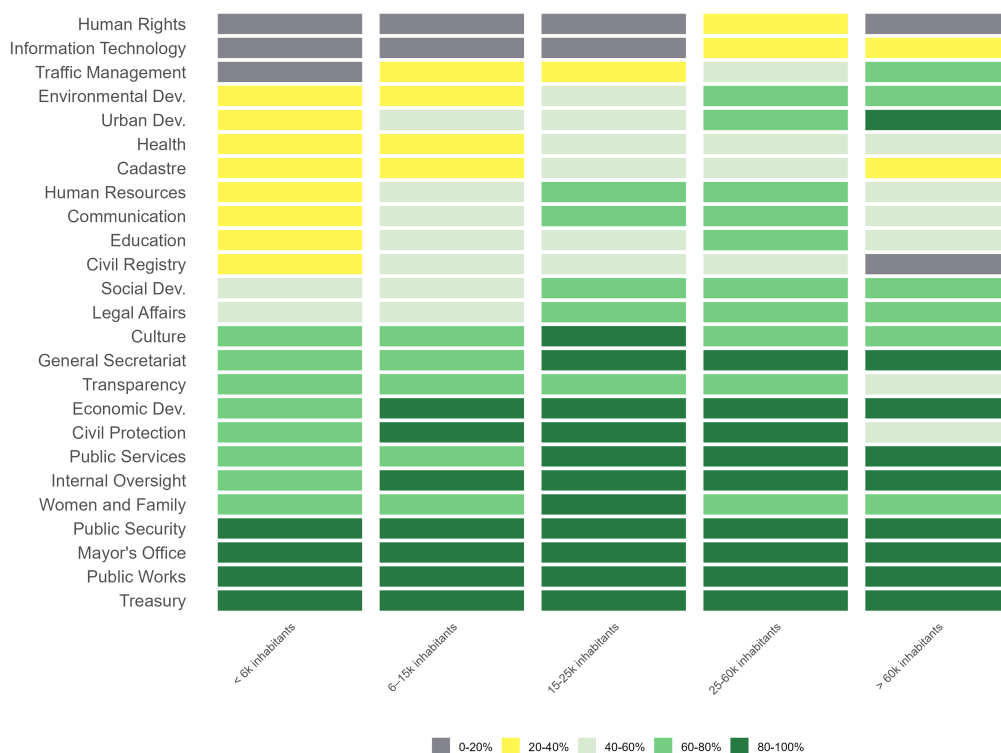


FIGURE 4 Coverage of functions by municipal size. *Notes:* Each cell shows the percentage of municipalities (within each population bracket) that have at least one unit in the indicated category. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

In addition, as municipalities move into larger population brackets, not only do more functions appear in the local portfolio, but the number of units devoted to each function also increases, which can be interpreted as a sign of specialization. In the area of Productive Development, for example, small municipalities tend to concentrate their agenda in units devoted to Rural Development or Agricultural Promotion, whereas at intermediate and larger scales separate directorates or secretariats devoted to Economic Development, Commerce, and Tourism emerge, reflecting a higher degree of functional specificity. Eventually, municipalities reach a scale at which the creation of new units tapers off.

After characterizing functional coverage, the next step is to examine how the average

number of personnel per unit evolves with population size. Figure 5 presents this indicator (note that the vertical scale varies across panels, so comparisons should be made within each function). For most functions, staffing per unit remains low and relatively stable across the first four population brackets and increases sharply in the bracket of municipalities with more than 60,000 inhabitants. This pattern is particularly pronounced in functions such as Public Security, Public Services, Public Works, and Traffic Management. In other words, the pattern of “vertical” expansion observed among the largest municipalities holds at the functional level as well, and is not confined to aggregate municipal employment.

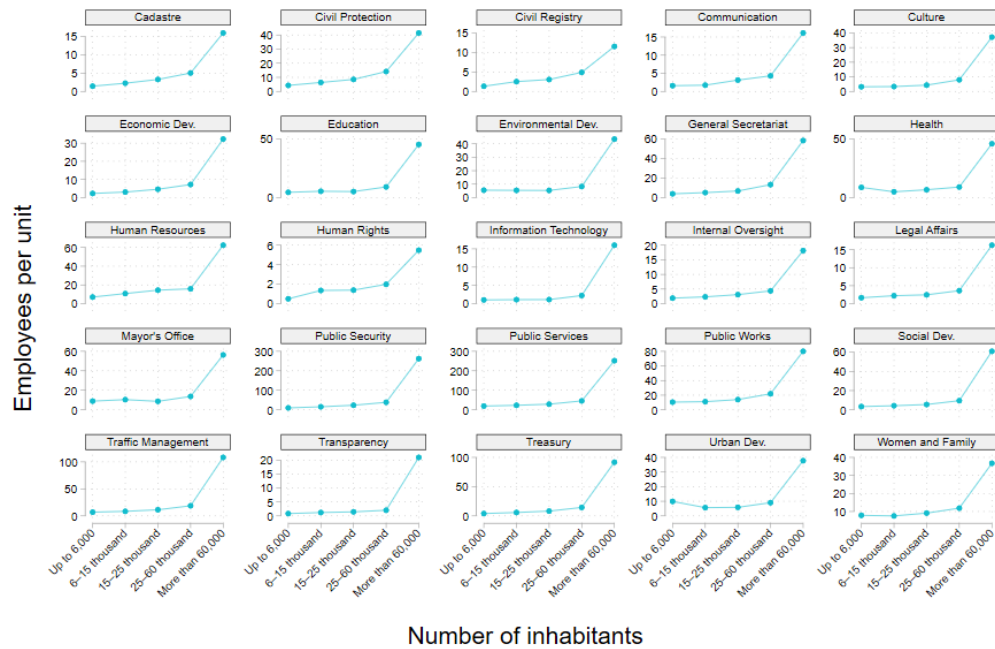


FIGURE 5 Number of employees per unit, by category. *Notes:* Each panel shows the average number of employees per unit, according to population size. The scales on the vertical axis differ between categories to improve readability. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

In sum, the sectoral analysis confirms and refines the patterns described in the previous section. As municipalities grow, they expand their portfolio of functions and, in several areas, increase the number of organizational units. Among the largest municipalities, however, expansion occurs primarily within existing units, through higher staffing levels per unit—a pattern that is observed across most functions.

5 | ALLOCATION OF RESOURCES BETWEEN FUNCTIONS

This section examines how resources are allocated across functions. To do so, we compute, for each municipality, the share of total employment and budget assigned to each functional category. When an organizational unit is classified under more than one function, its resources are allocated proportionally across the corresponding categories. In analyses that

rely on budget data, the sample is restricted to municipalities that report this information.⁸

Employment is concentrated in a stable set of functions: Public Services, Public Security, the Mayor's Office, and Public Works. This concentration is observed across all population brackets, albeit with some variation. In the smallest municipalities, employment is relatively more concentrated in the Mayor's Office and Public Works, whereas as population increases, the relative importance of employment in Public Security and Public Services rises. Functions with more limited presence (e.g., Human Rights, Cadastre, Information Technology) account for a very small share of employment across all groups, consistent with their low coverage (see Figure 6).

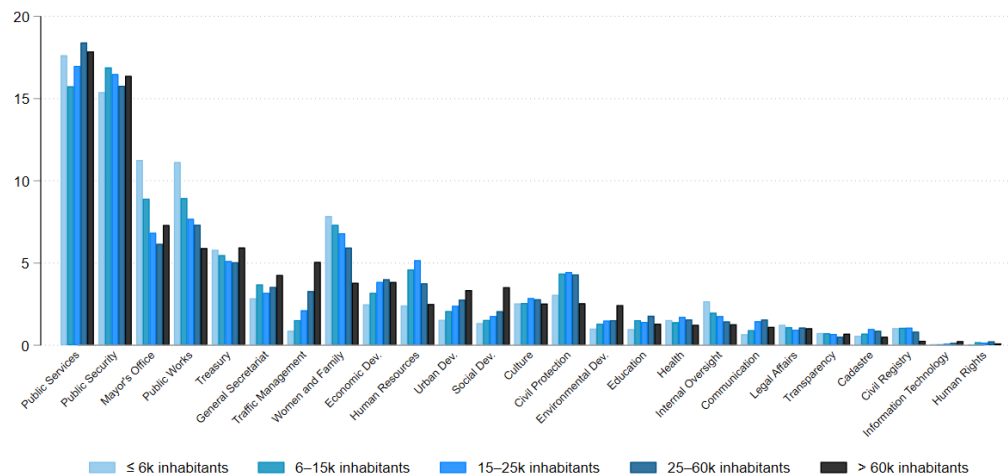


FIGURE 6 Proportion of employees by category, according to size. *Notes:* Each bar shows the average percentage of employees assigned to each functional category within each population segment. When a unit was classified in more than one category, its staff was apportioned proportionally among the corresponding categories. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

Concentration is even more pronounced in budget allocations. Public Works accounts for the largest share of spending among municipalities of all sizes, followed by Public Services, the Treasury, the Mayor's Office, and Public Security. The predominance of Public Works units appears to reflect the fact that municipal capital expenditure (e.g., the construction of schools or hospitals) is centralized within these units rather than being distributed across sectoral departments. As a result, the distribution of budget shares by functional category reflects where expenditures are accounted for, rather than the intrinsic capital intensity of each sector (see Figure 7). Along these lines, budget execution data indicate that capital expenditure represented, on average, 26 percent of total municipal spending in 2022, a figure very close to the share of the budget allocated to Public Works units (Alves et al., 2025). This average, however, masks substantial variation across municipalities and across population sizes.

⁸The database with budgetary information covers 1,036 of the 1,882 municipalities (55%) in the sample. Coverage losses are fairly evenly distributed across population brackets, with a slight underrepresentation of the largest municipalities. In the full sample, the distribution of municipalities across brackets 1 through 5 is 18.5%; 23.4%; 17.7%; 21.4%; and 19.0%, while in the subsample with budget information it is 19.4%; 23.7%; 17.9%; 22.5%; and 16.5%, respectively. In no bracket does the difference exceed 2.5 percentage points, indicating that the size composition of the subsample remains very similar to that of the full sample.

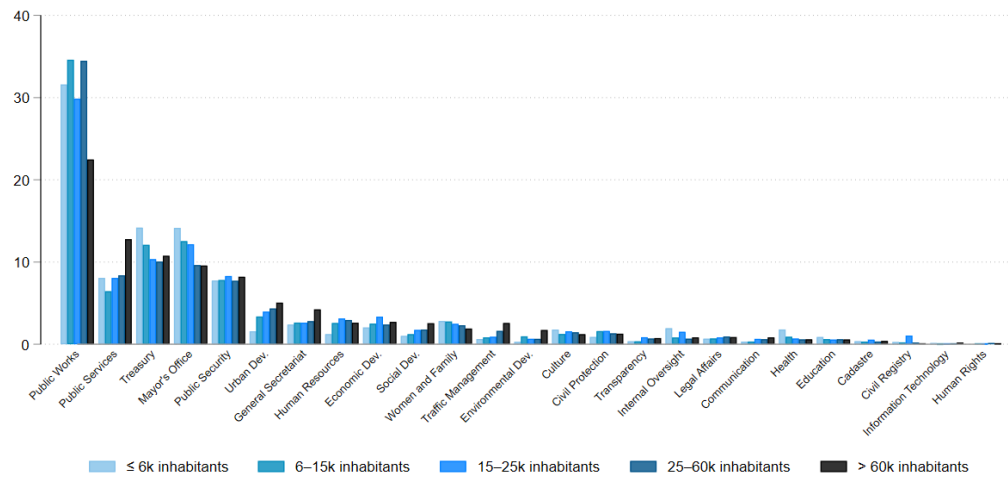


FIGURE 7 Budget allocation by category, according to size. *Notes:* Each bar shows the average percentage of the municipal budget allocated to each functional category within each population bracket. When a unit was classified in more than one category, the budget was apportioned proportionally among the corresponding categories. The sample includes 1,036 municipalities that provide budget data. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

6 | STABILITY OF ORGANIZATIONAL STRUCTURES

Having analyzed patterns of expansion and sectoral organization by municipal size, a natural question concerns their persistence over time. To address this issue, we compare the 2023 wave of the census with the 2017 wave, the earliest edition in which information on budget execution at the unit level is available.

In the average municipality, the number of organizational units increased between 2017 and 2023 (see Table A.1). This pattern is heterogeneous across municipalities of different sizes: those with populations above 60,000 inhabitants appear to have more mature and largely stable structures, whereas smaller municipalities added between two and three units over the period.

This increase translated into greater functional coverage. For most sectoral categories, the share of municipalities with at least one unit rose between 2017 and 2023. For example, in 2017, 42 percent of municipalities had at least one unit in the Transparency category, compared to 65 percent in 2023 (see Figure 8).

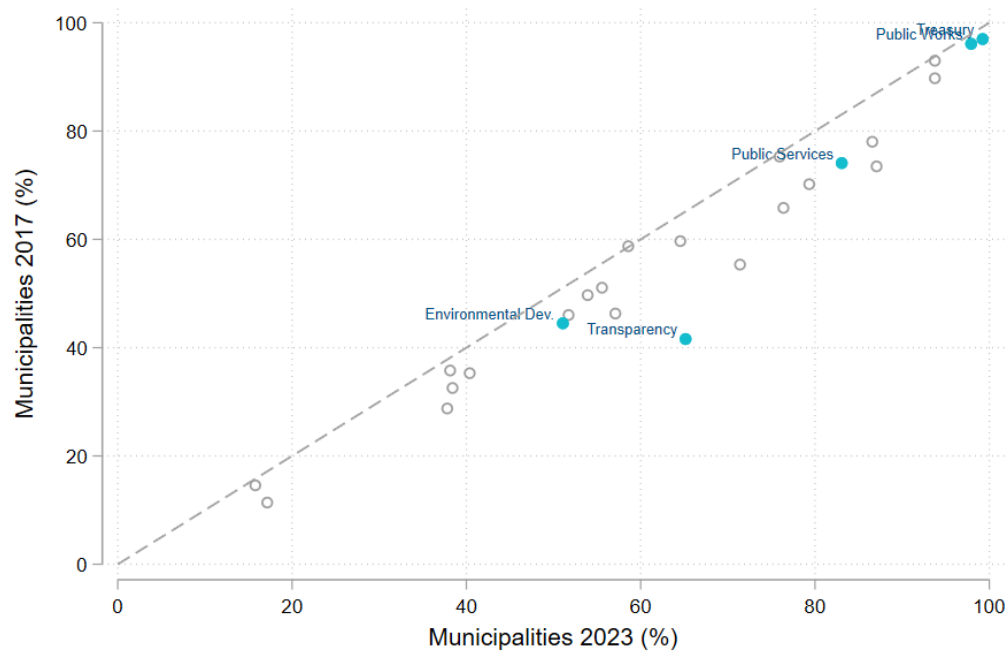


FIGURE 8 Percentage of municipalities with at least one unit in each category in 2017 and 2023. *Notes:* Each point represents a category. The vertical and horizontal axes indicate the percentage of municipalities that have at least one unit in each category in 2017 and 2023, respectively. The sample includes 1,825 municipalities that have data in both waves of the census. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

The resources allocated to these structures, measured both as a proportion of employees and of budget, remained generally stable (see Figures A.1 and A.2).

7 | CHARACTERISTICS OF UNIT HEADS

The National Census of Municipal Governments also contains information on the directors heading each organizational unit⁹. A first pattern that emerges from these variables (see Table 2) is the short tenure in leadership positions, with an average of approximately one and a half years in office as of December 2022. This tenure closely matches the time elapsed since the previous municipal elections, suggesting that it may reflect the turnover in these positions associated with the arrival of new political authorities.¹⁰

In addition, larger municipalities tend to exhibit more highly qualified profiles in senior positions. In municipalities with more than 60,000 inhabitants, unit heads are on average five years older than their counterparts in jurisdictions with fewer than 6,000 inhabitants, and 79 percent have completed tertiary or postgraduate education, compared to 45 percent among unit heads in the smallest municipalities.

Another notable pattern in Table 2 is that smaller municipalities display a higher share

⁹Information on employees is more limited, as individual-level data are not available. At the organizational-unit level, the census reports the number of employees by sex. At the municipal level, it also provides information on the number of employees by contract type, salary bracket, and educational attainment

¹⁰This is consistent with Brassiolo et al. (2024), who find that in Brazil turnover among public employees is higher in managerial positions than in other roles.

TABLE 2 Characteristics of unit heads

	Number of inhabitants in the municipality					
	All	<6k	6–15k	15–25k	25–60k	>60k
Years of service in the position	1.5	1.6	1.6	1.5	1.5	1.6
Years of service in public administration	4.3	4.0	4.0	3.9	4.1	5.2
Age	42	40	40	41	42	45
<i>Educational attainment (%)</i>						
Incomplete secondary education	5	8	7	5	4	1
Completed secondary / incomplete tertiary education	24	39	30	26	21	12
Completed tertiary education / postgraduate degree	64	45	57	63	69	79
Unit heads belonging to an Indigenous group (%)	16	29	19	21	10	7
Female unit heads (%)	32	37	34	31	31	30
<i>Monthly income (Mexican pesos, %)</i>						
<5k	6	16	8	4	3	1
5–10 k	25	38	36	31	21	5
10–15k	21	20	23	26	26	10
15–20k	14	10	14	16	17	13
20–25k	8	4	6	8	10	12
25–30k	5	2	4	4	6	9
>30k	15	2	4	5	12	45

Notes: The characteristics correspond to the heads of the 38,280 units of the central public administration. The values in the first three rows indicate the average of each variable among the heads of units in municipalities in the corresponding group. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2023).

of unit heads who identify as belonging to an indigenous group. A similar, though more moderate, gradient is observed in the participation of women in these leadership positions.

A disaggregated analysis by functional category reveals a strong concentration of female unit heads in social areas such as Women and Family Affairs, Health, and Education. By contrast, female leadership is very rare in categories such as Public Security, Public Works, and Public Services, which—as discussed in previous sections—account for the largest shares of municipal budgets. Gender segregation is also reflected in the participation of female employees within units across different functional categories (see Figure 9).

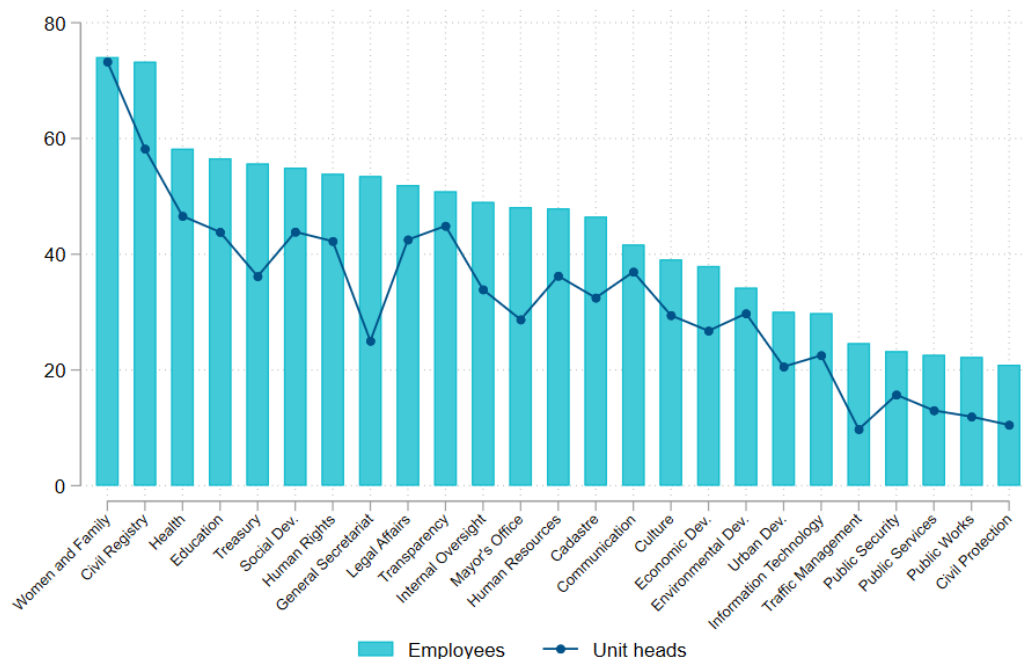


FIGURE 9 Percentage of women by category of units. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

Women who lead organizational units earn, on average, 4 percent less than their male counterparts, even after controlling for factors such as age, educational attainment, tenure in office, unit size (measured by number of employees), and municipal population. When functional-category fixed effects are included—thus comparing individuals within the same function—the gap narrows to 2.5 percent, although it remains statistically significant.

Marked wage differences are also observed across functions (see Figure 10). Using the Mayor's Office as the reference category, the head of a Human Rights unit earns, on average, 29 percent less, even after controlling for gender, education, and experience. At the other end of the distribution, functions such as the Treasury and the General Secretariat exhibit significantly higher salaries than the baseline category. These patterns suggest the presence of function-specific pay structures that go beyond observable characteristics of unit heads.

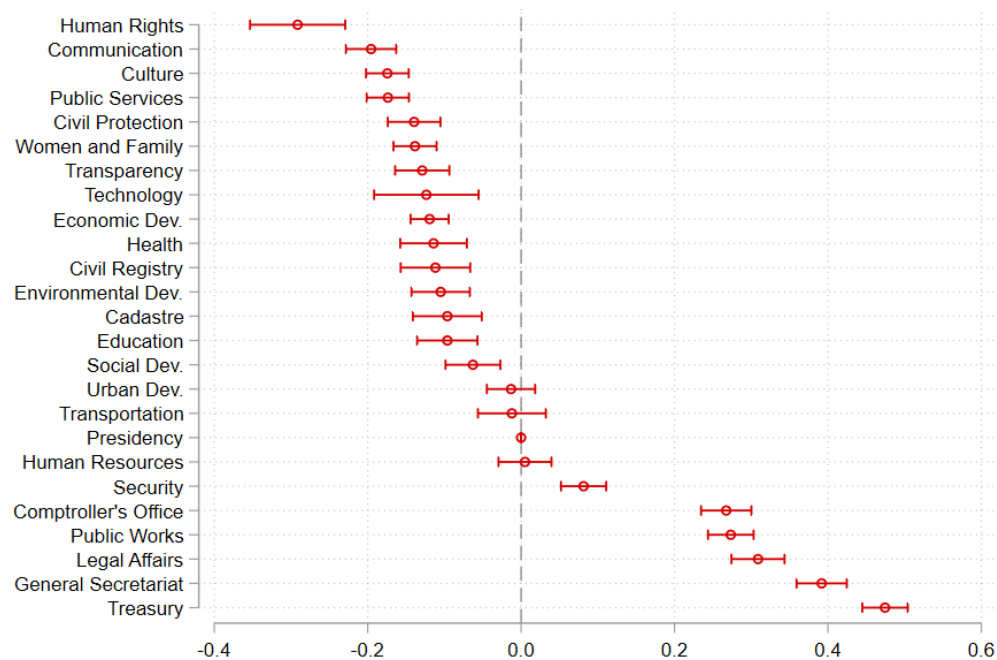


FIGURE 10 Salary differences between incumbents according to unit category. *Notes:* The dependent variable is the logarithm of monthly salary in Mexican pesos. It is controlled for gender, age, educational level, years of service in public administration, total number of employees under their charge, and municipality population category. The base category for comparison is the presidency. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

8 | CONCLUDING REMARKS

This paper has provided a systematic characterization of the organizational architecture of municipal governments in Mexico, using detailed information from the National Census of Municipal Governments. The results allow for a clear mapping of how local bureaucracies are structured and how their organizational arrangements vary, particularly as a function of population size. The analysis shows, first, that municipal size is the primary determinant of the size of the administrative apparatus, and that local governments initially expand “horizontally,” by creating new organizational units, and only at later stages grow “vertically,” by increasing staffing within existing units. Second, beyond the Mayor’s Office and the Treasury, the organizational structure of the smallest municipalities is completed by units devoted to Public Works, Public Services, and Public Security, indicating that these areas are local priorities; as municipalities grow, specialized units in other sectors begin to emerge. The functions that appear first are also those that manage the largest shares of resources: Public Security, Public Services, and Public Works account for the bulk of municipal employment and budgets. Third, the organizational structures of municipal executives are stable over time, although they exhibit a gradual tendency to expand and to incorporate new units.

With respect to the leaders of these units, two patterns stand out: short tenure in office and pronounced gender segregation. Women represent a small share of unit heads and are disproportionately concentrated in socially oriented units. Large salary differentials across unit heads by sectoral area are also evident.

These findings are primarily descriptive, but they open a broad set of questions for future research. An important issue is to understand which factors account for organizational heterogeneity. Even among municipalities of similar size, markedly different organizational arrangements are observed. A preliminary list of potential explanations includes fiscal constraints, administrative capacity, and differences in management styles. It is also of interest to explore why functional specialization begins in the particular sectors observed—such as public works, security, and public services—and to what extent this pattern reflects local preferences and needs. The relevance of these questions would be further heightened by establishing a link between organizational structure and state performance: for example, whether greater functional diversification improves service delivery, whether deeper organizational structures facilitate coordination and implementation, or whether certain patterns of resource allocation lead to more efficient outcomes.

A further line of inquiry concerns organizational change over time. In particular, understanding how political factors and administrative regulations interact with changes in organizational structures remains an open question. Finally, the composition and characteristics of workers and unit heads display patterns that merit closer attention, including gender segregation and the substantial salary differentials observed across sectoral areas within local bureaucracies.

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TABLE A.1 Average number of categories and administrative units by population group

Population group	2017	2023
<i>All municipalities</i>		
Categories	15	16
Units	18	20
<i>Less than 6,000 inhabitants</i>		
Categories	11	13
Units	12	15
<i>6,000–15,000 inhabitants</i>		
Categories	14	16
Units	16	18
<i>15,000–25,000 inhabitants</i>		
Categories	16	17
Units	19	22
<i>25,000–60,000 inhabitants</i>		
Categories	17	18
Units	22	24
<i>More than 60,000 inhabitants</i>		
Categories	17	17
Units	22	23

Source: Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

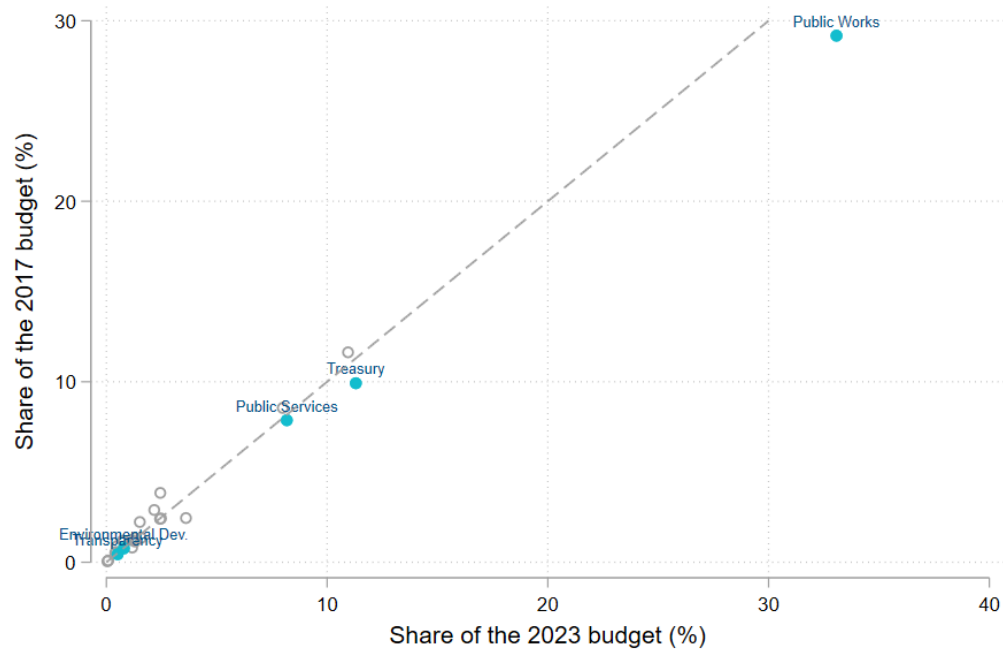


FIGURE A.1 Share of the municipal budget, 2017 vs 2023. *Notes:* Each point represents a category. The vertical and horizontal axes indicate each category's share of the municipal budget in 2017 and 2023, respectively. The sample includes 658 municipalities that submitted budget data in both waves of the census. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

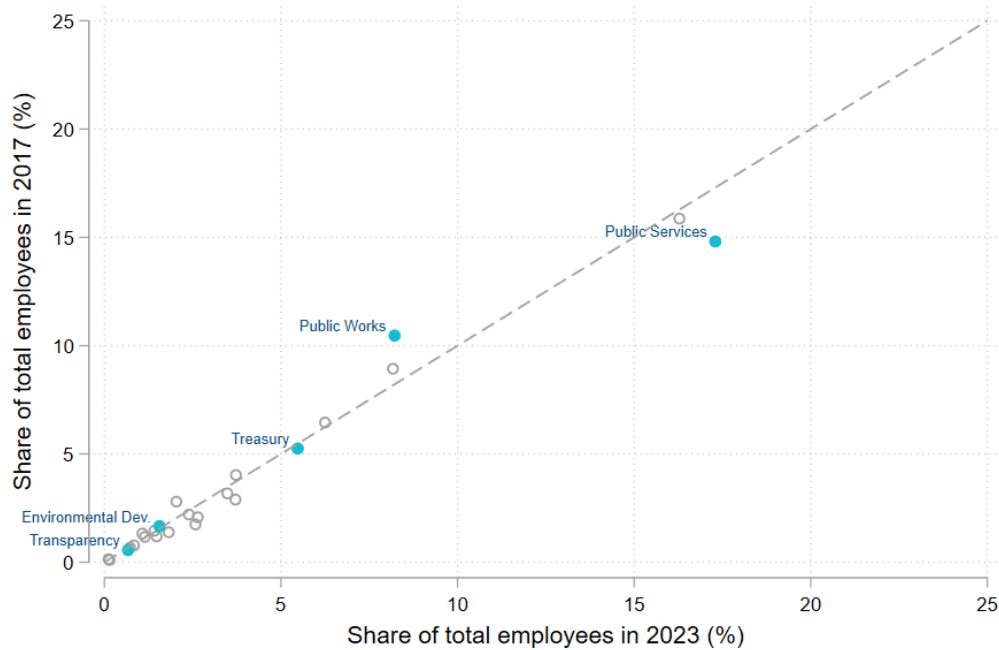


FIGURE A.2 Share of the municipal total employees, 2017 vs 2023. *Notes:* Each point represents a category. The vertical and horizontal axes indicate the participation of municipal employees in each category in 2017 and 2023, respectively. The sample includes 1,025 municipalities that submitted data in both waves of the census. *Source:* Own elaboration based on data from the National Census of Municipal Governments and Territorial Demarcations (INEGI, 2017, 2023).

A.1 | KEYWORDS

- **Presidency:** presidencia, presidente, presidenta, despacho, alcalde, alcaldia, alcaldesa, vicealcalde, vicealcaldia, gobernanza, gobierno, gobernacion, gobernador, gobernadora, gobernadores, gobernadoras, gobernante, ayuntamiento, gabinete, cabildo, regiduria, regidor, regidores, regidurias, concejo, consejo, concejal, concejal, concejales
- **Secretariat:** secretaria ejecutiva, secretaria administrativa, secretaria administracion, secretaria particular, secretaria presidencia, secretaria oficina presidencia, secretaria ayuntamiento, secretaria municipal, secretaria general
- **Treasury:** tesoreria, tesorero, hacienda, finanzas, financiera, financiero, financieros, financieras, presupuesto, presupuestos, presupuestario, presupuestal, presupuestaria, presupuestarios, presupuestarias, recaudacion, recaudaciones, cuentas, contabilidad, contable, contador, contaduria, ingresos, egresos, activos, bienes, bodega, rentas, compras, contratacion, contrataciones, proveeduria, proveedores, proveedor, adquisiciones, adquisicion, cobro, costos, cobranza
- **Comptroller's Office:** contraloria, auditoria, fiscalizacion, supervision, contralor, control interno, organo interno control, organo control
- **Cadastre:** catastro, catastros, catastral, avaluo, avaluos, impuesto, impuestos, impositivo, impositiva, impositivos, impositivas, tributario, tributaria, tributarios, tributarias, tributacion, predial, prediales, control patrimonial, fiscal, regularizacion
- **Civil Registry:** registro, registro civil, registro propiedad, registro mercantil, registral, documentacion, documental, registraduria, registrador
- **Communication:** comunicacion, prensa, difusion, comunicaciones, radio, television,

periodico, periodismo, periodista, medios comunicacion, multimedia, comunicador, comunicadora, archivo, archivos, historico, biblioteca, bibliotecas, bibliotecaria, atencion ciudadana, relaciones publicas, atencion ciudadano, cronica, cronista, eventos, imagen

- **Transparency:** transparencia, rendicion cuentas, acceso informacion, informacion publica, honestidad, corrupcion, anticorrupcion, participacion ciudadana, trasparencia, desarrollo institucional, innovacion, modernizacion
- **Public Works:** oopp, op, oo pp, obras publicas, obra publica, obras, mantenimiento, construccion, infraestructura, autopista, caminos, calles, puentes, aceras, vias, asfalto, edificacion, edificaciones, infraestructuras, infraestructural
- **Public Services:** servicios publicos, sspp, servicio publico, servicios municipales, espacios publicos, espacio publico, agua, alcantarillado, alumbrado, drenaje, aguas, limpieza, saneamiento, recoleccion, residuos, desechos, basura, aseo, cementerio, cementerios, funeraria, funerarias, funebres, funebre, panteon, panteones, sepelio, sepelios, entierro, entierros, electricidad, electrico, electrica, electricos, electricas, energia, energetico, energetica, energeticos, energeticas, energias, correo, correos, limpia, maquinaria, maquinarias, maquina, maquinas, servicios basicos, servicios primarios, servicios generales
- **Transportation:** transito, transporte, transportes, movilidad, vial, vialidad, viales, trafico, vehicular, vehiculo, vehiculos, vehiculares, senalizacion, matriculacion, automotor, automovilistico, conductor, conductores, conducir, terminal, terminales
- **Civil Protection:** proteccion civil, bomberos, bombero, riesgo, riesgos, emergencias, emergencia, desastre, desastres, rescate, rescates, accidente, accidentes, incendio, incendios
- **Security:** seguridad publica, policia, policial, policiales, orden social, orden ciudadano, orden civico, orden publico, vigilancia, comisaria, comisarias, comisario, comisarios, patrullaje, seguridad ciudadana, policias, control social, control ciudadano, proteccion ciudadana, delito, delitos, direccion seguridad, seguridad municipal, justicia, judicial, judiciales, juzgado, juzgados, juez, jueces, jueza, juezas
- **Economic Development:** desarrollo economico, fomento economico, promocion economica, turismo, comercio, comercializacion, mercados, mercado, emprendimiento, emprendimientos, emprendedurismo, emprendedor, emprendedora, emprendedores, emprendedoras, empresas, produccion, desarrollo empresarial, productivo, productiva, turistico, turistica, industria, industrial, industrias, mercantil, mercantiles, comercial, comerciales, rural, rurales, campo, agricultura, agricola, agricolas, agrario, agraria, agrarios, agrarias, ganaderia, ganadero, ganadera, ganaderos, ganaderas, agropecuario, agropecuaria, agropecuarios, agropecuarias, camal, ganado, rastro, rastros, fomento agropecuario, licencias, licencia, permisos, permiso, pesca, pecuario, tenencia tierra, tenencia tierras, mejora regulatoria
- **Urban Development:** desarrollo urbano, planeacion, planificacion, parques, jardines, territorial, parque, jardin, jardineria, espacios verdes, áreas verdes, urbano, urbanos, urbanismo, urbanizacion, urbanizaciones, urbanistica, urbanisticos, urbanisticas, urbana, territorio, disenio urbano, mejoramiento urbano, gestion ciudad, gestión integral ciudad, pavimentacion, bacheo
- **Environmental Development:** ecologia, ambiente, ambiental, ambientales, sostenibilidad, sostenible, sostenibles, cambio climatico, reciclaje, ecologico, ecologicos, ecologica, ecologicas, parques naturales, biodiversidad, fauna, flora, recursos naturales, proteccion animal, animal, animales, naturaleza, forestal, forestales, forestacion, reforestacion, arborizacion, reservas naturales, reserva natural, reserva ecologica, reservas ecologicas, sustentable, sustentabilidad, sustentables
- **Social Development:** desarrollo social, accion social, gestion social, bienestar social, desarrollo comunitario, desarrollo humano, desarrollo local, servicios sociales, asistencia

social, solidario, solidaria, solidarias, solidarios, apoyo social, accion civica, programas sociales, programa social, proteccion social, trabajo social, civico social, civico y social, bienestar municipal, bienestar social, vivienda, adulto mayor, adultas mayores, adultos mayores, jubilados, jubilado, pensionados, pensionado, pension, pensiones, gerontologia, gerontologico, gerontologica, gerontologicos, gerontologicas, anciano, ancianos, anciana, ancianas, discapacidad, discapacidades, discapacitado, discapacitados, discapacitada, discapacitadas

- **Health:** salud, sanidad, sanitario, salubridad, sanitaria, sanitarias, sanitarios, hospital, clinica, rehabilitacion, laboratorio, medico, medica, medicos, medicas, medicina, enfermeria, saludable
- **Legal Affairs:** juridica, juridico, juridicas, juridicos, procuraduria, sindica, sindicatura, sindico, legal, legales, defensoria
- **Human Resources:** recursos humanos, talento humano, reclutamiento, empleo, capacitacion, formacion, personal, laboral, laborales, oficialia, oficial, oficialias
- **Technology:** informatica, informatico, informaticos, informaticas, tecnologia, tecnologias, tecnologico, tecnologicos, tecnologica, tecnologicas, sistemas informacion, tic, tics, tic's, procesos, redes, soporte tecnico, telecomunicaciones, comunicaciones, computo, programacion
- **Education:** educacion, educativo, educativos, educativa, educativas, educ, formacion, capacitacion, centros educativos, alfabetizacion, escuela, colegio, universidad, escolar, academica, academico, academias, educadora, aprendizaje
- **Women and Family:** igualdad genero, mujer, mujeres, genero, familia, familias, familiar, intrafamiliar, juventud, juventudes, joven, jovenes, juvenil, juveniles, menor, menores, ninos, ninez, infancia, infantil, adolescente, adolescentes, adolescencia, dif, igualdad, equidad, inclusion, minorias, minoritario, diversidad, atencion prioritaria, grupos prioritarios, grupos vulnerables, centros comunitarios, victimas, asilo
- **Human Rights:** indigenas, indigena, originario, originarios, originaria, originarias, migrante, migracion, inmigrante, inmigracion, migrantes, inmigrantes, migratorio, migratoria, migratorios, migratorias, derechos humanos
- **Culture:** cultura, cultural, culturas, culturales, patrimonio, arte, recreacion, festival, artistico, museo, museos, espectaculo, espectaculos, teatro, cine, musica, danza, literatura, deportes, deportivo, polideportivo, deporte, deportiva, deportivas, deportivos, recreativo, recreativa, recreativos, recreativas, religiosos, religiosa, religiosas, religioso, religion, culto, cultos, costumbres