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Articles

Municipal Fiscal Performance: Mayors' Gender and Organizational Human Resources

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Local governments strive to improve fiscal performance to effectively implement policy agendas and reduce dependence on central governments. Explaining fiscal performance has relied on intergovernmental relations and politically driven strategies and has given less attention to organizational human capital attributes. Mayors and municipal personnel with different attributes interact differently, thus affecting their contributions to fiscal performance. This study assesses the fiscal performance effects of mayors' gender and municipal personnel attributes and their interactions. We assess fiscal performance as fiscal capacity, autonomy, and solvency. Using 2003-2015 data from 822 Brazilian municipalities, we find results contingent on the assessed fiscal performance dimension. Female mayors are positively associated with fiscal capacity and autonomy but not with solvency. Personnel availability and salary are positively correlated with fiscal capacity and autonomy but negatively correlated with solvency. Under a female mayor, the fiscal performance contribution of available personnel increases, while average salary's fiscal performance contribution declines.

Introduction

Worldwide local governments strive to attain a healthy fiscal condition, including fiscal independence and sustainability, to effectively implement their policy agendas. Fiscal performance is even more critical to subnational governments due to their reliance on transfers from central governments (Brollo & Nannicini, 2012). Recessions and unexpected domestic and external crises affect national governments' coffers and, in some cases, their ability to comply with scheduled fund transfers to subnational governments. Unmet transfers, in turn, disrupt local governments' fulfillment of responsibilities and lead to fiscal failures and bankruptcy. That is the case, particularly in developing countries where localities rely more heavily on intergovernmental transfers (de Mello, 2000). However, examples of local governmental bankruptcy also exist in high-income countries (Davidson, 2019; Yang, 2019), triggering local administration distress, reduced services, employee discharge, and maintenance discontinuation (Davidson, 2019).

In explaining fiscal performance, existing literature has focused on politicians' motivations highlighting their purely opportunistic (Alesina et al., 1992; Rogoff & Sibert, 1988) or benevolent behavior (Barro, 1979), their ideological inclinations (Buchanan & Wagner, 1977; Hibbs, 1977), or parties' bargaining power (Roubini et al., 1989; Roubini & Sachs, 1989). While these explanations focus on politicians' strategic responses to political motives, less attention has been given to personal attributes at the executive and organizational levels. For instance, one might expect mayors' gender to influence their budgetary decision-making and, in turn, local fiscal performance. In addition, employees' human resources also may influence fiscal performance, given that municipal employees implement mayors' decisions. Moreover, existing studies suggest women managers tend "to be both task and people oriented while men appeared image engrossed and autonomy invested" (Statham, 1987, p. 409). This differential style suggests female mayorimps may interact differently with their personnel, which, in turn, should affect personnel contributions to fiscal performance. Therefore, after controlling for polit-

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ical and ideological factors, this study jointly assesses the direct and indirect effects of mayors' gender and municipal personnel characteristics on fiscal performance.

Fiscal capacity, autonomy, and solvency capture different facets of fiscal performance. A jurisdiction may possess a great capacity for collecting its own revenues either through taxes and/or competitive grant money; however, that jurisdiction may still enjoy less fiscal autonomy because of its dependency on intergovernmental transfers. Regardless of its fiscal capacity and autonomy levels, the same jurisdiction may report good solvency to cover its total expenditures. For these reasons, we assess fiscal performance through these three dimensions.

To test the linear and interactive effects of mayors' gender on the three dimensions of fiscal performance, the study relies on data from the municipalities of the Brazilian state of Minas Gerais during the period 2003-2015, which partially covers four municipal administrations (2003-2004, 2005-2008, 2009-2012, and 2013-2015). Brazilian municipalities constitute an interesting case. They enjoy a substantial degree of decentralization, make decisions over local taxes, and mayors exercise both political and executive leadership in local government. Results indicate that fiscal performance drivers are contingent on the dimension of fiscal performance. Female mayors are positively associated with fiscal capacity and autonomy but not with solvency, and this positive effect is increased by municipal workforce availability and salary. Workforce availability and salary are positively correlated with fiscal capacity and autonomy, but workforce salary is negatively correlated with fiscal solvency.

Our study aims to make three contributions to research on fiscal performance. First, previous studies on fiscal performance have mainly relied on political and ideological factors (Alesina et al., 1992; Barro, 1979; Buchanan & Wagner, 1977; Hibbs, 1977; Rogoff & Sibert, 1988; Roubini et al., 1989; Roubini & Sachs, 1989). We control for the influence of key political and ideological factors – mayoral ideology, mayor's margin of victory, and party alignment between governors, president, councilors and the mayor – and apply insights from human resource theory to examine how mayors' and municipal employees' attributes influence fiscal performance. That is, fiscal performance is also explained with personal attributes of leaders and employees.

Second, as leaders and employees interact constantly to implement decisions and mandates, it becomes relevant to assess the fiscal performance effects of their interactions. The attributes of the workplace are dynamic, as employees come and go. Consequently, the average number of employees, their salaries, and educational achievements should vary. So, the interaction between a leader's gender and these workforce attributes should be accounted for to explain fiscal performance. In this sense, our study contributes by applying an interactive model to predict fiscal performance, while controlling for political, ideological, and contextual factors.

Third, as women political representation at the local level increases, it becomes relevant to understand the linear and interactive gender effects. Evidence exists on the differential effects of women on policy preferences (Funk & Philips, 2019; Meier & Funk, 2017) and managerial styles (Chernesky & Bombyk, 1988; Psychogios, 2007; Statham, 1987). We know little, however, about gender effects on fiscal or financial decisions. Our analysis helps fill this gap by advancing the study of fiscal performance through the test of gender linear and interactive effects.

The remainder of this paper is structured as follows. In the next section, we briefly review the research area of fiscal performance at the local level. Next, we address the role of politicians, gender, and personnel attributes on fiscal performance to derive three sets of propositions to predict fiscal performance. This is followed by the study's research design, methodology and statistical results. Then, we discuss the implications of our study for research on fiscal performance, list the study's limitations and conclude.

Assessing Municipal Fiscal Performance

Municipal fiscal performance is multifaceted, given that not only does the amount of revenue but its sources and uses affect the possibilities of local governments' actions. For instance, expanding revenue matters for financial independence (Benton, 2005). Jacob and Hendrick (2012, p. 11) state that "a local government's financial condition represents its ability to meet financial and service obligations," that is, the ability to gather revenues to meet expenditures. Meanwhile, local governments' expansion of responsibilities depends on financial sustainability (Warner, 1999), for it "reflects the adequacy of available revenues to ensure the continued provision of the service and capital levels that the public demands" (Chapman, 2008, p. S115). Spending beyond available money will create unnecessary debts (Martell, 2008), undermining future investments and public policies. Considering these varied dimensions, we propose that municipal fiscal performance, or the ability of local governments to maintain a healthy fiscal condition, can be assessed through fiscal capacity, autonomy, and solvency, which are complementary measures of the amount, source, and use of municipal revenues.

Fiscal capacity implies the ability to generate revenues (Zafra-Gómez et al., 2009) and deliver services (Rauh, 2015). Therefore, larger income availability paves the way for more service provision. Although a jurisdiction may have great fiscal capacity, that same jurisdiction may heavily rely on intergovernmental transfers to cover its operations. Consequently, in this context, fiscal autonomy becomes important. *Fiscal autonomy* refers to the independence a jurisdiction has from intergovernmental transfers to cover its spending.[1] Along these lines, fiscal

1 Some are more specific and use several categories to capture "tax autonomy" to differentiate variations in sub-central governments' (SCGs) freedom over their taxes (Blöchliger, H., & Rabesona, J. (2009). The fiscal autonomy of sub-central governments: An update. For

solvency and sustainability also gain relevance. According to Andrews (2015, p. 1520), "the financial sustainability of local governments is typically regarded as being a question of finding the optimum scale and structure for the cost-efficient delivery of vital local public services…". *Fiscal solvency* contributes to a jurisdiction's fiscal sustainability, for solvency refers to the financial power a jurisdiction has to cover expenditures with its revenue (Spreen & Cheek, 2016).

We argue that assessing fiscal performance requires integrating fiscal capacity, autonomy, and solvency because these three indicators provide a broader picture of a jurisdiction's fiscal condition. Hence, it is possible to have a fiscally capable municipality but with low fiscal autonomy and solvency. Also, a particularly low level of fiscal solvency may be acceptable in one jurisdiction but not in another because of different fiscal capacity and autonomy. Therefore, we assess fiscal performance in terms of fiscal capacity, autonomy, and solvency.

Politicians and Public Finance

Existing literature assumes that several motivations drive politicians' financial decision-making. For instance, some view politicians' behavior in a purely opportunistic manner. Political budget cycle theorists, for example, argue that public spending and debt financing are correlated with the legislation cycle, as politicians tend to raise spending in election years to enhance their re-election prospects (Alesina et al., 1992; Alesina & Perotti, 1994; Eslava, 2006; Rogoff & Sibert, 1988). Others view politicians as purely benevolent and assume they design fiscal policies to enhance social welfare (Barro, 1979). Illustrating this view is Barro's (1979) tax-smoothing hypothesis, which expects governments to opt for tax rates that reduce the burden of taxation.

The third set of literature led by political economists links politicians' fiscal performance to partisan ideology (see, e.g., Buchanan & Wagner, 1977; Hibbs, 1977). The notion is left-wing governments are associated with higher levels of public spending and debt financing than are right-wing governments (Blais et al., 1993; Cusack, 1997). Yet, evidence on this hypothesis is mixed (Cusack, 1997; De Haan & Sturm, 1994, 1997). A fourth explanation points to the theory of 'weak' or minority governments. The main assumption here is parties exploit their strong bargaining power by demanding expensive compromises from weak minority governments to get needed laws passed. This may result in higher budget deficits and greater public expenditures under minority than majority governments. Some studies confirm the weak government hypothesis (Roubini et al., 1989; Roubini & Sachs, 1989), while others find no difference between minority and majority governments (Perotti & Kontopoulos, 2002; Potrafke, 2009). A fifth approach sees public finances as a common pool problem (Buchanan & Tullock, 1962) because many spending departments demand resources from the same pool.

More recent research has switched attention toward the key decision-makers of fiscal policy by focusing on their qualifications, attributes, and socioeconomic status (Hayo & Neumeier, 2014; Von Hagen & Harden, 1995). For instance, Von Hagen and Harden (1995) and Jochimsen and Nuscheler (2011) highlight the pivotal role of the finance minister, stressing the importance of a strong finance executive to deal with the common pool problem by disciplining executives of spending departments (Von Hagen & Harden, 1995). Likewise, Hayo and Neumeier (2014) show the administrations of prime ministers from poorer socioeconomic backgrounds are associated with higher levels of public spending and debt financing. That is, and as Galasso and Nannicini (2011, p. 79) put it, "[i]n politics, personal identity matters."

Recent studies have documented the critical importance of politicians' identity in explaining policy decisions, public management, and shaping the development of their party or the entire nation (e.g., see Besley et al., 2011; Dewan & Myatt, 2008; Galasso & Nannicini, 2011). The crucial role of leading individuals also applies to the business sector (e.g., see Bertrand & Schoar, 2003; Kaplan et al., 2012). In summary, selecting qualified politicians becomes essential. Consequently, without denying the potential explanatory power of the approaches described above, this research focuses on the qualifications of leading politicians to explain municipal fiscal performance.

Human Capital Attributes and Municipal Fiscal Performance

Mayors' Gender and Fiscal Performance

Scholarship in private financial economics has examined how gender affects firm performance and financial decision-making (Berger et al., 2014; Charness & Gneezy, 2012; Post & Byron, 2015). For instance, business management studies suggest women are less willing to take financial risks (Charness & Gneezy, 2012; Croson & Gneezy, 2009). However, these studies have produced mixed results. While Palvia et al. (2015), report that U.S. banks with female CEOs are more financially conservative and tend to have higher levels of equity capital, Pletzer et al. (2015) conclude the financial performance of firms is not significantly related to female representation on corporate boards. Moreover, a meta-analysis of 140 studies reports a small correlation between gender diversity on firms' boards and financial performance (Post & Byron, 2015). Does this inconclusiveness apply to the public sector?

Examining gender effects on public finance is important for representative bureaucratic theory (Meier & Melton, 2014; Mosher, 1968). Studies suggest gender representation affects organizational outcomes, such as promotion of co-

instance, some SCGs may enjoy the right to introduce or to abolish a tax, to set tax rates, to define the tax base, or to grant tax allowances or relief to individuals and firms, while others may enjoy only one or several of these rights.

production (Riccucci et al., 2016), social justice (D'Agostino, 2015), active female representation (Wilkins, 2007), and law enforcement (Meier & Nicholson-Crotty, 2006), as well as employee attitudes and behaviors (Grissom et al., 2012) and citizens' judgments (Riccucci et al., 2014). This line of research has focused on the state (e.g., Saidel & Loscocco, 2005) and national levels (e.g., Marvel, 2018), as well as the local level (e.g., Meier & Funk, 2017). Despite the low but growing number of women in local politics, studies are needed on the effects of women's political representation on local finances.

Among studies focused on how the gender of politicians affects institutional fiscal performance, results seem inconclusive (Balaguer-Coll & Ivanova-Toneva, 2021; Cabaleiro-Casal & Buch-Gómez, 2020; Suzuki & Avellaneda, 2018). For instance, Slegten et al. (2019) note gender differences in strategies to reduce the public deficit among politicians in Flemish municipalities. Specifically, while female politicians tended to tackle budget deficits by raising public revenues, their male counterparts opted for reducing expenditures.

In the Japanese local context, Suzuki and Avellaneda (2018) showed that female representation in the legislature is negatively associated with issuing municipal bonds and local investment in public corporations. Moreover, female representation in executive (mayor and vice-mayor) and mid-level administrative, managerial positions has no apparent effects on local financial decisions. In the Spanish local context, findings are contradictory. Cabaleiro-Casal and Buch-Gómez (2020) showed that both a female mayor and a greater share of female councilors worsen fiscal performance. More recently, Balaguer-Coll and Ivanova-Toneva (2021) found that female mayors governing with a higher proportion of female councilors increase the probability of budgetary stability, financial sustainability, and legal debt limit. Their results also show female mayors are less likely to employ strategies to enhance their re-election chances in pre-electoral periods. On the contrary, the mayor's gender does not affect the public debt of Italian (Brusca et al., 2015) or Spanish municipalities (Guillamón et al., 2011).

While some studies portray women leaders as risk-averse in public finance, others report a more positive picture, empirically demonstrating that female mayors increase tax collection in Colombian municipalities (Avellaneda, 2009, 2016; Freier & Thomasius, 2016; Park et al., 2020), reduce budgetary deficits (Cabaleiro-Casal & Buch-Gómez, 2020), and increase debt repayment in Spanish municipalities (Hernández-Nicolás et al., 2018). Along the same lines, Alvarez and McCaffery (2003) also found that women are less likely to use surpluses to implement tzx cuts, thus increasing the governmental coffers. Consequently, gender differences in using budget surpluses (Alvarez & McCaffery, 2003), tax collection (Freier & Thomasius, 2016), spending priorities, and managerial styles (Bowles et al., 2005; Holman, 2017; Meier et al., 2006; Weikart et al., 2007) should influence their fiscal decision-making in significant ways by exhibiting either a more conservative and less risky behavior that results in less overspending and collecting more revenues to meet the needs of others. Therefore,

> *H1a: Municipalities led by female mayors report greater fiscal capacity, autonomy, and solvency.*

Organizational Human Resources

Research in public management has extensively explored the role of human resources (HR) characteristics on organizational performance (Guajardo, 2015; Hoang & Goodman, 2018; Opstrup & Villadsen, 2015). For instance, theoretical models of public organizational performance consider workforce availability and quality as internal capabilities necessary to perform (Boyne, 2003; Glickman & Servon, 1998; Ingraham et al., 2003). Workforce availability is likely to impact performance to the extent that by having more employees, a public organization should serve more people with better services. More employees can represent a burden on municipal costs by increasing the public payroll and leading to hierarchical redundancy and poorly defined work processes (Goold & Campbell, 2002). However, workforce availability also may allow for better labor division (Schneider, 2004).

By having more employees available, municipalities can increase specialization and reconfigure their organizational structure, which is likely to improve efficiency (Marks et al., 2001). For instance, workforce availability (Goodman et al., 2013) can lead to more personnel assigned to tax collection activities (Goodman et al., 2013), thus potentially reducing evasion and increasing overall revenue. Moreover, more officials may seek grant opportunities, thus developing the necessary skills to become successful at securing external funds from upper levels of government or non-governmental organizations. More personnel availability and division of labor also can lead to reinforcing the organization's technostructure (Mintzberg, 1993) to improve processes' cost-effectiveness. Thus, we propose[2]:

> *H2a: The higher the workforce's availability, the higher the municipal fiscal performance.*

Municipal fiscal performance may be influenced not only by the workforce's availability but also its quality. Human capital theory, as cited previously, is a broadly used approach to explore workforce quality, given that it encompasses the exploration of people's skills and knowledge and their contribution to organizational work (Becker, 1964; Mincer, 1958). Since human capital is multidimensional, scholars have measured workforce quality in different ways.

2 It is possible that HR availability and fiscal performance present a non-linear concave relationship. The main findings hold when modeling a quadratic relationship between these variables.

For instance, some have used educational attainment (Avellaneda & Suzuki, 2015), task-related experience (Carley et al., 2015), and managers' self-reported assessments (Meier et al., 2016; O'Toole & Meier, 2009), among others, as measures of human capital. Nevertheless, studies are scarce on workforce quality as a determinant of local government performance (see for instance, Zambrano-Gutiérrez & Avellaneda, 2021).

While no single measure can capture all aspects of workforce quality, this study uses educational attainment to assess a salient component of this construct. Attainment of formal education captures codified knowledge associated with technical skills, innovation, and better communication abilities (Avellaneda et al., 2020). Technical skills might be particularly relevant to achieve municipal fiscal performance because public employees who are more cognizant of budgetary processes, cost-effective analyses, and similar tools may be more likely to make sound financial decisions on behalf of municipal government. Thus,

> *H2b: The higher the workforce's educational attainment, the higher the municipal fiscal performance.*

Workforce salary is the third element of organizational HR attributes to be considered a driver of fiscal performance. Organizations compensate higher levels of training and expertise, benefiting them from some human capital components (Romer, 1989). Thus, workforce salary may capture an organization's capacity to attract and retain competent professionals (Atkinson et al., 2014). In this sense, salary also might act as an alternative measure of human capital quality. Moreover, payment is likely to explain employees' retention in public organizations, although no definite link exists between workforce compensation and motivation (Al-Emadi et al., 2015). Studies have identified that employee retention and development positively affect organizational performance (O'Toole & Meier, 2009). For the above reasons, we expect:

> *H2c: The higher the workforce's salary, the higher the municipal fiscal performance.*

The multiplicative effect of mayoral characterstics

O'Toole and Meier (1999, p. 517) propose that "one crucial task of management is to maintain the structure: to frame the goals, to set the incentives and to negotiate the contributions from members." As such, executive leaders can enhance their personnel's contribution to performance. Besides the proposed additive explanatory effect of HR on fiscal performance, recent literature also has explored the multiplicative performance effect of executive characteristics. For instance, Melton and Meier (2017) show that managerial skills and capacity boost HR management practices in Texas schools' performance. Similarly, Vermeeren et al. (2014) identified a positive moderating role of leadership style on the relationship between HR practices and employees' perceived performance in Dutch municipalities. Thus, more qualified managers can build upon a properly maintained workforce to achieve higher organizational performance.

Besides being leaders, women mayors also are expected to have different managerial styles wich can boost organizational performance. While men opt for image engrossed and autonomy invested, women tend to be "both task and people oriented" (Statham, 1987, p. 409), caring (Chernesky & Bombyk, 1988) by centering on relationships, communication, and social sensitivity (Psychogios, 2007). In fact, studies highlight that local female leaders use more inclusive approaches to policymaking (Holman, 2017; Weikart et al., 2007), less confrontational managerial styles (Meier et al., 2006); and they tend to advocate for others, as opposed to negotiating for themselves (Bowles et al., 2005). Women's sensitivity and focus on relationships and communication should allow them to capitalize on their organizational human resources, thus increasing personnel's direct effect on performance. In the context of municipal finances, female mayors may align their government's human resources more effectively to protect their municipalities' fiscal position. For instance, women mayors may adjust organizational structures, incentivize cost-effectiveness and efficiency, improve spending monitoring, allocate the right employees in the right positions, request employees' feedback, and offer incentives among other strategies. These strategies, in turn, would multiply the expected positive effect that employees's qualifications and remuneration have on organizational performance. Consequently, we expect:

> *H3: The relationship between organizational HR features and municipal fiscal performance will be moderated by mayor's gender.*

Brazilian Municipalities: The Case of Minas Gerais

As a federation, Brazil is structured into three independent and autonomous government levels: federal government, state governments, and municipalities. The three levels have executive, legislative, and judiciary branches, except for municipalities, where the judiciary is shared with state governments. Brazil has 26 states, a federal district, and 5,570 municipalities. A multi-party system pushes political parties to form coalitions to promote a candidacy regardless of ideology (Cheibub et al., 2004). Data from the Superior Electoral Tribunal (TSE)[3] report 33 political parties registered in the elections across the three levels of government.

3 https://www.tse.jus.br/partidos/partidos-politicos

Municipal finances in Brazil

According to the 1988 Federal Constitution, municipalities are entitled to legislate over local taxes, namely property, services, and property sale taxes. Municipalities also provide elementary education and kindergarten services, and health services are provided in technical and financial cooperation with states and the federal government. Given that some very small municipalities have no power to leverage revenues, they rely heavily on federal and state governments (De Mello, 2002). Some portions of these transfers are earmarked (Hoene et al., 2008). About 70% of Brazilian municipalities rely on transfers from federal and state governments, which is a practice at the core of the financial sustainability concept. Some argue this fiscal dependency makes municipal administrations hostages of other administrations, a situation unhealthy for the democratic process (Brollo & Nannicini, 2012; Weingast, 2009) and/or public performance (de Mello, 2000; Valle & Gomes, 2014). In this context, when assessing fiscal capacity, autonomy and solvency becomes relevant.

A strong-mayor system (Mouritzen & Svara, 2002) makes mayors the political leaders and city managers. Municipal elections are carried out every four years, two years apart from federal and state elections (TSE, 2021). Mayors can run for re-election for one consecutive period or after stepping out one administration. Municipalities with more than 200,000 inhabitants may hold a run-off election if no candidate wins an outright majority. In any case, mayors must be elected before December, as they take office on January 1 of the next year.

Municipal revenue derives from grants, fees, intergovernmental transfers, property tax collection, and other operational sources (Brasil, 1992). According to the National Tax Code (Brasil, 2013), constitutional transfers derive from taxes collected by the federal and state governments at the municipal level, which must be returned according to population size (Brasil, 1992). Municipalities receive 50% of Rural Property Tax (ITR), 24.5% of Income Tax (IR), and 24.5% of the tax on manufactured products (IPI). Another local revenue source comes from royalties derived from the extraction of natural resources, such as minerals, oil, and gas. Municipalities also are entitled to receive money from selling assets. A city can sell through competitive tendering processes facilities, furniture, cars, and equipment not used any longer and already depreciated on the balance sheet. Municipalities also receive fees from services, such as cemetery space, public transportation, and public spaces for commercial ends. Cities can impose fines on residents and businesses in case of harmful uses of public spaces or other violations. Municipalities also may receive block grants and matching grants from upper government levels (Mattos et al., 2018). Local property tax is unpopular, particularly in small cities perhaps due to low enforcement, tax avoidance, and economic conditions. According to the last figures, Brazil has 4,897 (88% of the total) cities with less than 50,000 inhabitants (Brasil, 2013).

The State of Minas Gerais

The state of Minas Gerais (MG), in the southeast region of Brazil, has an estimated population of 21.3 million people living in 586,528 km² of territory, which suggests a population density of 33.41 inhabitants per km^2. In 2020, Minas Gerais reported a nominal household monthly income per capita of R$ 1,314,00 (about 240 USD), ranking 10th in the nation (Brasil, 2013). Since the 1988 Federal Constitution, states have the power to create more municipalities. Hence, Minas Gerais (MG) increased the number of municipalities from 723 in 1991 to 756 in 1993 and 853 in 1997. The most populated municipality is Belo Horizonte with 2.5 million inhabitants, and the least populated one is Serra da Saudade with only 776 people.

Data and Methods

We built a panel data set for 852 municipalities in Minas Gerais (Brazil) for the period 2003-2015. This period accounts for the second part of the 2001-2004 administration, the entire 2005-2008 and 2009-2012 terms, and the first half of the 2013-2017 administration. We obtained municipal financial information and human resources' characteristics from the Ministry of Economy database[4] and mayoral attributes and electoral results from the Superior Electoral Court database.[5] We calculated leverage and influence indicators based on the residuals for the models estimated for each of the three dependent variables. We dropped from our sample those municipalities with at least four observations reported a Cook's distance above 0.001 and leverage above 0.01. This leads to the removal of 29 municipalities and a total of 353 observations. Thus, the models end up including 822 municipalities and 9,511 observations.[6]

Dependent variables

We measure fiscal capacity, or the ability to collect revenue at the local level, as the total local revenue divided by population. This measure includes taxes and fees but not grants. Fiscal autonomy is operationalized as the share of total revenue represented by locally collected sources. That is, higher values denote greater independence from intergovernmental transfers.[7] Finally, fiscal solvency measures the ratio of total revenue from all sources to total expenditure. While the correlation between measures of capacity and autonomy is 0.69 in our sample, fiscal solvency does not strongly correlate with either of the other fiscal performance measures (0.01 with capacity, and 0.02 with auton-

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4 https://siconfi.tesouro.gov.br/siconfi/index.jsf;jsessionid=E0gJExG49Z-F+5FplkNX2i1Z.node2

5 https://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-1

6 The main findings hold when including all the removed variables in the models.

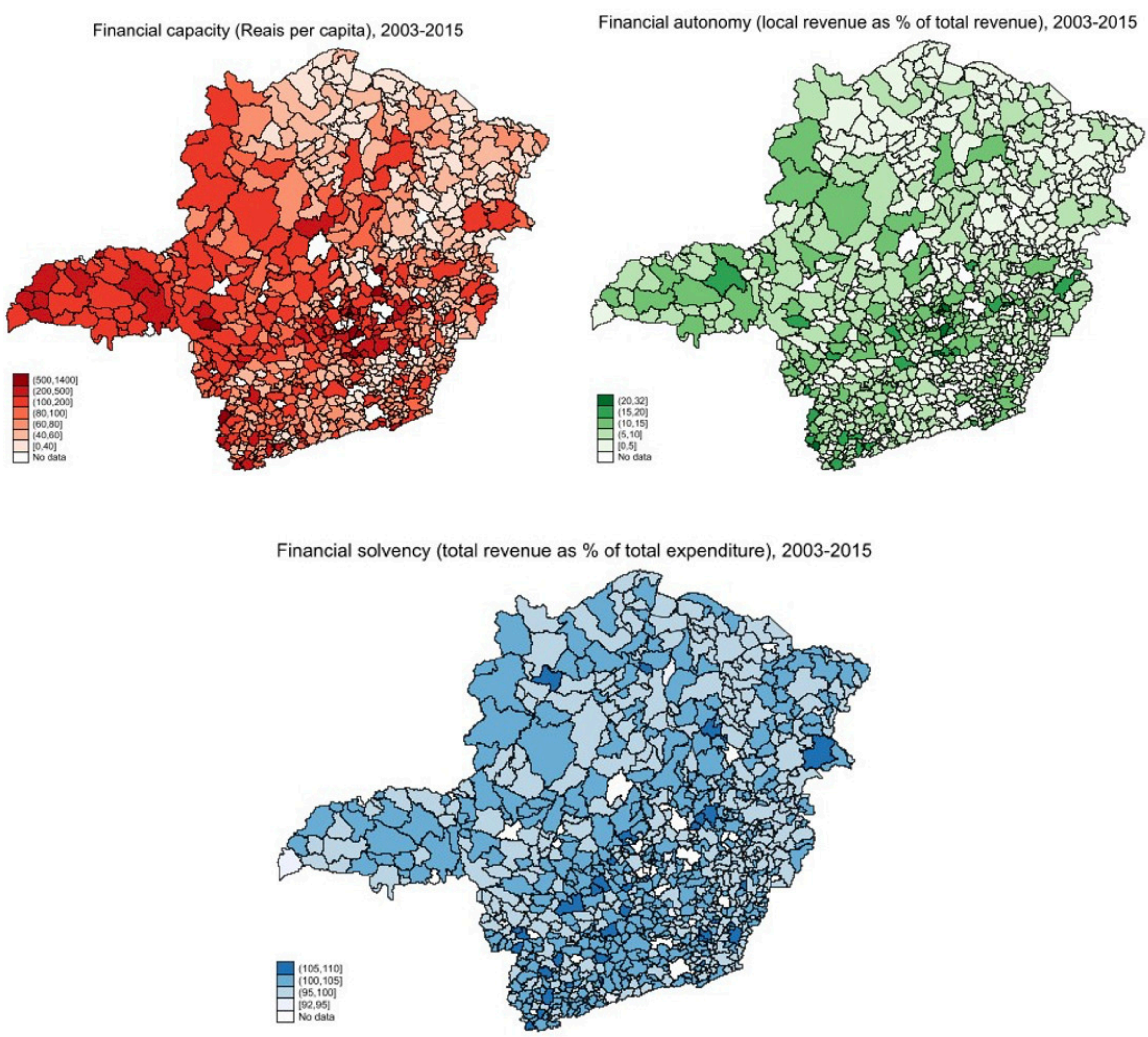

Figure 1. Geographic distribution of fiscal performance indicators in Minas Gerais

omy). Our dependent variables vary significantly across Minas Gerais. Figure 1a presents the geographic distribution of fiscal capacity as the average over the analyzed period. Meanwhile, figure 1b presents fiscal autonomy, and figure 1c shows fiscal solvency across Minas Gerais’ municipalities. All the measurements are reported in Reais – singular, Real –, the Brazilian currency, whose exchange rate has fluctuated between 5 and 6 Reais per U.S. dollar over the last year.

Mayoral Gender

To assess mayors’ gender influence on financial performance, a dichotomous variable indicates whether the mayor is a woman. Personal information about mayors was obtained from the Electoral Superior Tribunal website (www.tse.gov.br). 449 out of the 822 municipalities in our sample were governed by a female mayor at least for one year during the period of analysis; this allows us for enough variation within municipalities to assess the effect of mayor’s gender.

Municipal HR characteristics

Municipalities must recruit personnel by a competitive hiring process to guarantee every citizen the right to apply. Municipalities also can temporarily hire personnel in some specific cases, such as cleaning services, security, and transport, as previewed in the legal framework. A third way of hiring is through mayoral appointments, called “posi-

7 Given that some grants may be allocated competitively, we ran our models using alternative measures of capacity and autonomy that include grants. The findings, in table A1 in the Appendix, remain consistent.

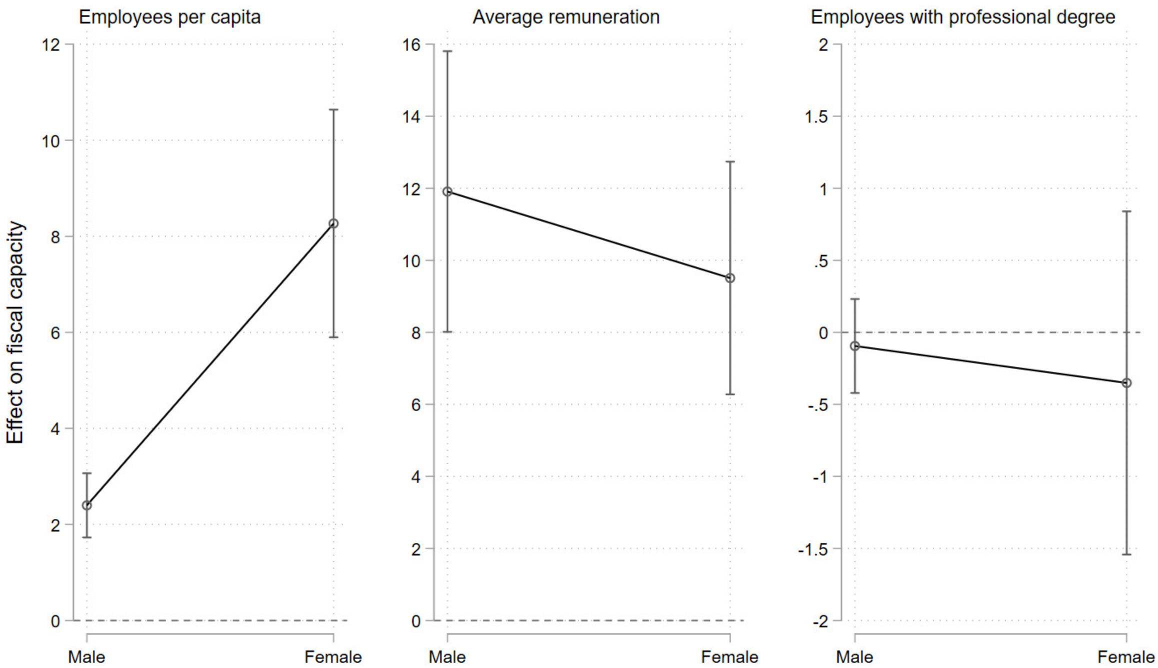

Figure 2. Marginal effects of HR variables on fiscal capacity by mayor's gender

tions of trust." The number of municipal employees per thousand people assesses workforce availability. Meanwhile, educational attainment is measured as the percentage of employees with a professional degree. Finally, we include the average salary of municipal employees in thousands of Reais.

Controls

Since politicians' attributes are expected to influence their electoral success, it becomes relevant to assess whether the individual characteristics of leading politicians affect their policy choices, financial decisions, and fiscal performance. Human capital theory (Mincer, 1958) postulated that investments in higher formal education go along with higher productivity on the job, while Bowman and Myers (1967) suggested that schooling and work experience are determinant factors of human capital. Indeed, human capital theory also has been applied to understand mayoral ability to increase fiscal capacity Avellaneda, 2008, 2009. Moreover, several studies have documented the correlation of leaders' education and professional background with governmental performance (Besley et al., 2011; Congleton & Zhang, 2013) and with fiscal performance in particular (Avellaneda & Gomes, 2015; Dreher et al., 2009; Farvaque et al., 2009; Freier & Thomasius, 2016; Göhlmann & Vaubel, 2007).

Consequently, the analysis controls for other mayoral characteristics, such as education, job-related-experience, and professional background. Specifically, we include the number of years of formal education.[8] Another dichotomous variable is used for mayors with previous mayoral experience. Moreover, we create five variables to capture mayors' professional backgrounds. They are based on the information submitted by mayors when running for office.

The models also incorporate a series of measures assessing political context that may influence municipal financial performance, such as mayors' margin of victory and the percentage of council members aligned with the mayor's party. Moreover, we coded dichotomous variables to assess whether the mayor's party aligns with the governor's and president's parties. We also coded the leaning of the mayor's political party – leftist and centrist; the right-wing parties are the omitted category – following the categories established by Carreirão (2006). Finally, considering that grant acquisition may affect financial performance, we control for grants' value per capita. Table 1 presents the descriptive statistics for all variables of interest. Data for these variables were obtained from the National Treasury Secretariat website (https://siconfi.tesouro.gov.br/siconfi/index.jsf).

8 The original variable is an ordered categorical variable. We transformed it into a continuous variable by assigning the corresponding number of years of education to each variable. The results remain the same with either variable.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Fin. capacity (Reais per capita)	9710	91.77	159.36	0.27	6238.49
Fin. autonomy (% of total revenue)	9710	5.59	4.69	0.04	100.00
Fin. solvency (total revenue as % of total expenditure)	9710	100.26	5.72	84.01	115.97
Previous experience as mayor (=1)	9710	0.19	0.39	0.00	1.00
Education years	9520	10.44	4.10	0.00	15.00
Female mayor (=1)	9710	0.07	0.25	0.00	1.00
Background in politics	9710	0.16	0.37	0.00	1.00
Background in business and management	9710	0.37	0.48	0.00	1.00
Background in public service	9710	0.08	0.26	0.00	1.00
Background in law	9710	0.04	0.19	0.00	1.00
Background in other professions	9710	0.18	0.38	0.00	1.00
Employees per 1000 people	9710	47.19	21.42	3.71	350.71
Avg. employee remuneration (thousands of Reais)	9710	15.89	7.45	1.72	65.48
% of employees with a professional degree	9710	20.35	10.41	0.00	58.95
Margin of victory (%)	9707	0.55	1.53	0.00	61.69
Mayor allied with the President	9710	0.13	0.33	0.00	1.00
Mayor allied with the Governor	9710	0.16	0.37	0.00	1.00
% of council from the mayor's party	9707	23.03	11.97	0.00	100.00
Leftist party	9707	0.20	0.40	0.00	1.00
Centrist party	9707	0.08	0.27	0.00	1.00
Grants value per capita (Reais)	9710	41.26	101.96	0.00	2115.47

Method

To estimate the models in our panel data set, we use OLS regression with fixed effects by municipality and year. Thus, we control for unobserved time-invariant variables between municipalities and state-level changes over time. To avoid multicollinearity issues due to the calculation of the interacted terms' coefficients, we enter the HR variables as deviations from the mean for each municipality. Variance inflation factors are below ten for all variables, suggesting no apparent multicollinearity issues. All standard errors are clustered at the municipal level to account for the likely codependence in the variance-covariance matrix between observations from the same municipality. Tables A2 and A3 in the appendix present the results of using a one-step Arellano-Bond estimation for dynamic panels, and a random-effects regression with time fixed-effects. The main findings are robust to these alternative estimations.

Results

Table 2 reports the results of the regression estimation for fiscal capacity as the dependent variable. Model 1 assesses fiscal capacity as the dependent variable and includes all variables of interest, but it excludes interaction terms. Mayoral gender reports a significant coefficient; municipalities with female mayors present a fiscal capacity of 11.77 Reais per capita higher than municipalities led by male mayors. Among HR variables, workforce availability and average salary report a positive and significant association with fiscal capacity. Thus, one more municipal employee per thousand people is associated with an increase in fiscal capacity of about 3 Reais per capita., while a thousand more Reais in average salary is associated with 12 more Reais per capita in fiscal capacity. HR quality measured as the share of employees with a professional degree does not influence fiscal capacity. Moreover, no control variable reports significant results.

We incorporate interactive terms between mayor's gender and HR measures in model 2. Figure 2 presents the marginal effects of HR variables on fiscal capacity, moderated by mayor's gender. In municipalities with a female mayor, the positive effect of workforce availability is significantly larger than in municipalities with a male mayor – approximately 8.2 versus 2.4 more Reais per capita for one additional employee per thousand people. Meanwhile, the relationship between average employee salary and fiscal capacity diminishes from 12 Reais per capita, given an increase of a thousand Reais in average salary when a mayor is a man, to 9.5 when the mayor is a woman. There is no significant interaction between mayoral gender and the percentage of employees with a professional degree.

Models 3 and 4 present the results for fiscal autonomy as the dependent variable. The mayor's gender does not present a positive association with fiscal autonomy. Meanwhile, like the case of fiscal capacity, workforce availability and salary, but not education (e.g., quality), present a positive and significant relationship with fiscal autonomy. One

Table 2. Two-way fixed-effects OLS regression results

	Capacity		Autonomy		Solvency	
	(1)	(2)	(3)	(4)	(5)	(6)
Female mayor (=1)	11.77*	12.37**	0.0464	0.0360	0.0297	0.0254
	(7.070)	(6.235)	(0.128)	(0.127)	(0.229)	(0.227)
Employees per 1000 people	3.222***	2.397***	0.00916**	0.00977**	-0.00718	-0.00795
	(0.628)	(0.342)	(0.00456)	(0.00485)	(0.00464)	(0.00486)
Avg. employee remuneration (thousands of Reais)	12.41***	11.91***	0.112***	0.116***	-0.0979***	-0.101***
	(1.985)	(1.988)	(0.0258)	(0.0267)	(0.0224)	(0.0225)
% of employees with a professional degree	-0.0595	-0.0948	0.000901	-0.000874	0.00741	0.00553
	(0.158)	(0.166)	(0.00505)	(0.00528)	(0.00844)	(0.00877)
Female mayor # Employees per 1000 people		5.870***		-0.00395		0.00426
		(1.217)		(0.00692)		(0.0138)
Female mayor # Avg. employee remuneration (Reais)		-2.402*		-0.0401**		0.0351
		(1.311)		(0.0199)		(0.0390)
Female mayor # % of employees with a professional degree		-0.257		0.0264*		0.0296
		(0.648)		(0.0143)		(0.0301)
Margin of victory (%)	-0.197	-0.229	-0.0234	-0.0235	-0.0977**	-0.0982***
	(0.827)	(0.816)	(0.0206)	(0.0206)	(0.0383)	(0.0379)
Mayor allied with the President	-4.729	-3.387	0.0195	0.0170	-0.452*	-0.452*
	(6.884)	(6.730)	(0.195)	(0.195)	(0.262)	(0.262)
Mayor allied with the Governor	3.668	2.606	0.196	0.193	0.197	0.198
	(4.455)	(4.423)	(0.184)	(0.184)	(0.191)	(0.191)
Previous experience as mayor (=1)	1.432	1.059	0.0628	0.0626	-0.125	-0.122
	(3.005)	(2.992)	(0.0613)	(0.0611)	(0.146)	(0.146)
Education years	0.00976	-0.0463	-0.000516	-0.000833	-0.00691	-0.00706
	(0.216)	(0.198)	(0.00506)	(0.00505)	(0.0144)	(0.0144)
Background in politics	10.40	10.88	0.252	0.255	-0.183	-0.175
	(7.094)	(7.084)	(0.156)	(0.156)	(0.221)	(0.221)
Background in business and management	0.567	0.785	0.0844	0.0860	-0.0282	-0.0229
	(4.695)	(4.724)	(0.116)	(0.116)	(0.189)	(0.189)
Background in public service	6.673	7.209	0.189	0.190	-0.345	-0.341
	(5.309)	(5.255)	(0.146)	(0.147)	(0.279)	(0.279)
Background in other professions	3.995	3.775	-0.00153	-0.00236	0.0964	0.0953
	(4.680)	(4.619)	(0.120)	(0.120)	(0.224)	(0.223)
Background in law	6.821	5.147	0.0716	0.0687	-0.147	-0.152

	(7.657)	(7.784)	(0.157)	(0.157)	(0.347)	(0.347)
% of council from the mayor's party	0.161	0.157	0.00257	0.00253	-0.00947*	-0.00954*
	(0.111)	(0.106)	(0.00394)	(0.00394)	(0.00561)	(0.00561)
Leftist party	2.909	2.964	0.108	0.108	0.178	0.187
	(3.945)	(3.862)	(0.130)	(0.131)	(0.202)	(0.202)
Centrist party	2.796	0.405	0.147	0.148	-0.149	-0.147
	(5.449)	(4.879)	(0.133)	(0.133)	(0.252)	(0.252)
Grants value per capita (Reais)	-0.00478	-0.00620	-0.0000901	-0.0000886	0.00103	0.00102
	(0.0137)	(0.0135)	(0.000388)	(0.000389)	(0.000774)	(0.000771)
Constant	-200.0***	140.1***	4.439***	6.685***	99.04***	97.29***
	(41.29)	(13.56)	(0.464)	(0.230)	(0.449)	(0.382)
Observations	9511	9511	9511	9511	9511	9511
Adjusted R^2	0.247	0.281	0.047	0.047	0.098	0.098

Fixed effects by municipality-year. Clustered standard errors by municipality in parentheses
* p < 0.1, ** p < 0.05, *** p < 0.01

more employee per every thousand people is associated with about 0.01 percentage point increase in fiscal autonomy. In turn, a thousand Reais more in average employee salary is associated with a 0.11 percentage point increase in fiscal autonomy. None of the control variables presents a significant relationship with the dependent variable. Some interactive terms are significant in model 4, and the marginal effects due to these interactions are presented in figure 3. Thus, the effect of average employee remuneration on fiscal autonomy declines from 0.11 to 0.07 percentage points when the municipality is led by a woman. In turn, the percentage of employees with professional degrees report a positive and significant association with fiscal autonomy when a female mayor is present, but not otherwise.

Models 5 and 6 present the results for fiscal solvency. Mayoral gender is not significant in these models. Meanwhile, only workforce salary presents a significant relationship with fiscal solvency among organizational HR variables. A thousand more Reais in average salary are associated with a decrease of 0.1 percentage points in fiscal solvency. When we assessed the interaction between gender and HR variables for fiscal solvency, we found no significant relationships. Interestingly, unlike fiscal capacity and autonomy, fiscal solvency seems to report significant associations with several political control variables. The margin of victory, the percentage of council members from the mayor's party, and party alignment with the Brazilian president all report a negative and significant relationship with fiscal solvency. In the next section, we discuss these results considering our theoretical framework.

Discussion

Our findings suggest workforce availability and salary are positively associated with measures of fiscal capacity and autonomy. However, it is important to acknowledge the possibility of reverse causality regarding these organizational variables or that higher fiscal indicators could allow municipalities to hire more personnel and pay them better. This reversed relationship is unlikely, given the recruiting system municipalities must follow in Brazil. For instance, the city council must approve any additional increases in both the number of employees and in salaries. Moreover, according to the Fiscal Responsibility Law (Sacramento, 2003), localities cannot exceed 60% of their own local revenues in human resource costs. Moreover, Table A2 in the Appendix reports a more conservative Arellano-Bond estimation that considers the dynamic nature of our panel data structure and the possibility of autocorrelation. While some significant relationships disappear under this stringent specification, the relationship of workforce availability and salary with fiscal capacity remains.

The relationship between mayoral traits associated with managerial competence and municipal performance has been identified in varied settings (Avellaneda, 2009, 2016; Petrovsky & Avellaneda, 2014). However, we find weak empirical evidence in our sample for a significant relationship between mayoral human capital variables, capturing education and experience, and fiscal performance measures. Only the relationship between years of education and one of our measures of fiscal autonomy is statistically significant. This might indicate that the institutional and environmental context of Brazilian local governments heavily constrains mayoral choices, thus making it less likely to observe the influence of mayors' education and professional background on municipal performance.

Unlike mayoral qualifications, mayors' gender does report a significant relationship with fiscal performance measures. The gender effect is overall positive for fiscal capacity and autonomy, but it is insignificant for fiscal solvency. These findings become more relevant given the fact that women mayors tend to be elected in Brazilian municipalities with smaller populations and lower GDP per capita. In fact, in 2020, "only 8 women were elected mayors in the 96

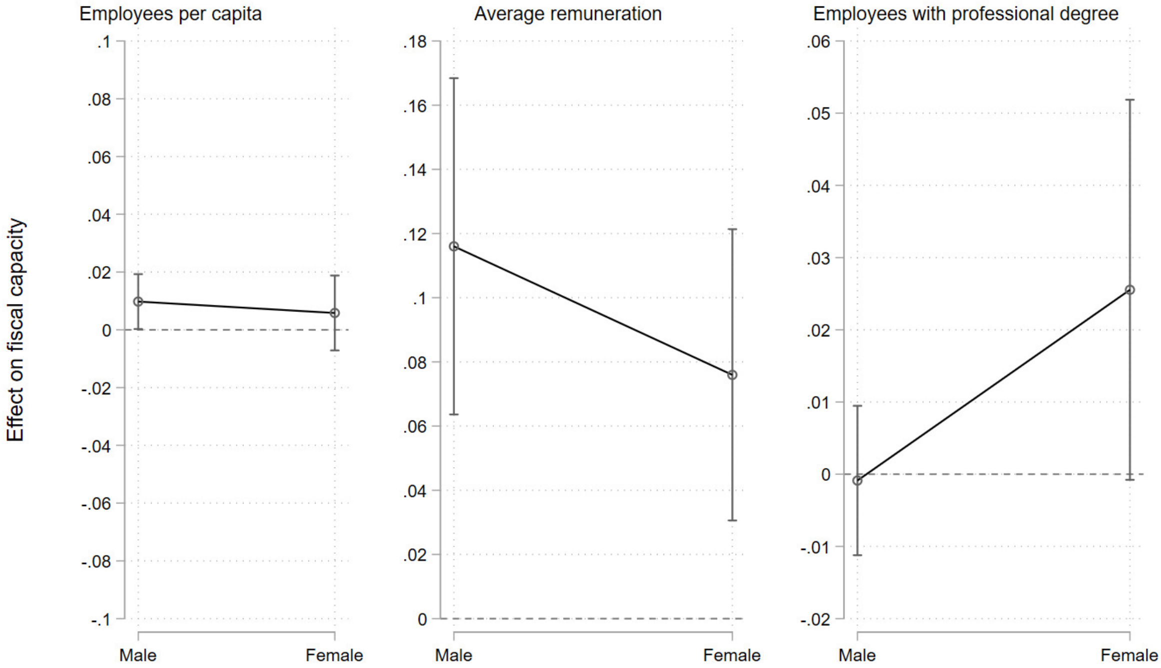

Figure 3. Marginal effects of HR variables on fiscal autonomy by mayor's gender

most important cities in the country - a group including the state capitals and the 70 municipalities with more than 200 thousand voters" (Barbosa & Rodrigues, 2020). Moreover, "only one woman was elected mayor in all the capitals of the country" (Cabral & Jucá, 2020.).

However, the interaction effects between female mayors and personnel vary across the indicators capturing personnel human capital (e.g., number, salary, and education). The positive and significant coefficient on the interactive term between mayoral gender and employee number on fiscal capacity may suggest that female mayors make better use of organizational skills. For instance, Johansen (2007) showed that female managers in public schools use differentiated strategies to boost organizational performance. In our case, female mayors might be using a different approach for specialization and division of labor.

Meanwhile, the interactive term between gender and salary on fiscal capacity presents a negative and significant coefficient. Therefore, while female mayors tend to exhibit higher performance in fiscal capacity indicators than male mayors, this gender difference narrows when the average employee's salary per municipality increases. This finding may suggest different working dynamics between female mayors and higher-earning employees. This falls in line with the gendered expectation that female public leaders are less confrontational and less likely to stand up for their interests (Bowles et al., 2005; Meier et al., 2006). In this context, higher-paid employees may feel more entitled and likely to challenge a female mayor than a male mayor. However, further research is needed to uncover the work relationship dynamics between female mayors and municipal employees.

Our findings also confirm the need to address municipal fiscal performance as a multidimensional phenomenon. Fiscal capacity, autonomy, and solvency represent different aspects of fiscal performance affected by mayoral, organizational, contextual, and political characteristics in different degrees. Indeed, fiscal solvency is substantially different from the other two measures. Conceptually, solvency incorporates the expenditure side of fiscal administration while capacity and autonomy do not. Empirically, fiscal autonomy is minimally correlated with the other two dimensions of fiscal performance. One might also expect the expenditure side of fiscal administration may more likely be affected by political determinants, given it addresses questions about levels and targets of public spending. Indeed, the regression analysis shows political determinants significantly affect fiscal solvency but do not affect capacity and autonomy.

Interestingly, municipalities where the mayors count on more legislative and citizens' support tend to show less fiscal solvency. This situation suggests these mayors may rely on more local support to incur debt, thus avoiding opposition's checks and political control on their decision-making. Moreover, to impose fiscal discipline, national governments need a credible threat to deter subnational governments from defaulting and/or declaring bankruptcy (Rodden, 2006). Mayors also may perceive upper political support at the state or federal level as a guarantee to be bailed out, if needed, which disincentivizes fiscal discipline.

Conclusions

This study contributes by applying a human capital approach to predict municipal fiscal performance. We test the direct and multiplicative effect of mayors' gender and personnel human resources – availability, salary, and education. In doing so, we expand existing literature by deviating from fiscal performance explanations based on politicians' motives and electoral cycle. The results also contribute to a better understanding of fiscal performance when captured through three different indicators: fiscal capacity, autonomy, and solvency. We conclude that leaders' attributes matter for the decision-making process. Given the emphasis on maximizing local governments' fiscal wealth (Zambrano-Gutiérrez & Avellaneda, 2022) and increase in leaders' diversity, we recommend further research on the effects of leaders' attributes on fiscal indicators. The dissimilar findings across the three indicators of fiscal performance highlight the importance of studying them collectively.

When testing the interaction between mayoral gender and personnel human resource attributes, we find divergent results. These suggest that female mayors may be more effective than male mayors at organizing a larger staff, but they may be less effective at dealing with better paid personnel. In other words, the characteristics of the municipal personnel may improve or impede the differentiated role of female mayors' inward management practices. Moreover, female mayors also may be relying on different outward management strategies to boost the municipal coffers, given the mayor's gender predicts fiscal performance but only when intergovernmental grants are included in the calculation of capacity and autonomy indicators.

This study also suggests avenues for further research. As mentioned previously, more attention should be dedicated to comparing internal management strategies between male and female mayors and changing work dynamics based on the municipal staff's characteristics. Also, variation of findings across the three different indicators of fiscal performance calls for including multiple indicators to assess government performance. The explanatory mechanisms vary across indicators because each measure captures different organizational skills, policy processes, political motives, and executive-employees dynamics. Finally, this study also highlights the need to incorporate diverse governance systems from developing and emerging economies to achieve a broader understanding of local governments' operations and performance worldwide.

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References

Al-Emadi, A. A. Q., Schwabenland, C., & Qi, W. (2015). The Vital Role of Employee Retention in Human Resource Management. *A Literature Review [Article]. IUP Journal of Organizational Behavior*, *15*(3), 7–32. http://proxyiub.uits.iu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=108710957&site=eds-live&scope=site

Alesina, A., Cohen, G. D., & Roubini, N. (1992). Macroeconomic policy and elections in OECD democracies. *Economics and Politics*, *4*(1), 1–30. https://doi.org/10.1111/j.1468-0343.1992.tb00052.x

Alesina, A., & Perotti, R. (1994). The political economy of growth: A critical survey of the recent literature. *The World Bank Economic Review*, *8*(3), 351–371. https://doi.org/10.1093/wber/8.3.351

Alvarez, R. M., & McCaffery, E. J. (2003). Are there sex differences in fiscal political preferences? *Political Research Quarterly*, *56*(1), 5–17. https://doi.org/10.1177/106591290305600101

Andrews, R. (2015). Vertical consolidation and financial sustainability: Evidence from English local government. *Environment and Planning C: Government and Policy*, *33*(6), 1518–1545. https://doi.org/10.1177/0263774x15614179

Atkinson, M. M., Fulton, M., & Kim, B. (2014). Why do governments use pay for performance? Contrasting theories and interview evidence. *Canadian Public Administration*, *57*(3), 436–458. https://doi.org/10.1111/capa.12079

Avellaneda, C. N. (2008). Municipal Performance: Does Mayoral Quality Matter? *Journal of Public Administration Research and Theory*, *19*(2), 285–312. https://doi.org/10.1093/jopart/mun001

Avellaneda, C. N. (2009). Mayoral Quality and Local Public Finance. *Public Administration Review*, *69*(3), 469–486. https://doi.org/10.1111/j.1540-6210.2009.01993.x

Avellaneda, C. N. (2016). Government performance and chief executives' intangible assets: Motives, networking, and/or capacity? *Public Management Review*, *18*(6), 918–947. https://doi.org/10.1080/14719037.2015.1051574

Avellaneda, C. N., Bello-Gómez, R. A., & Olvera, J. G. (2020). Explaining subnational governance: The role of governors' codified and uncodified knowledge. In *Knowledge for governance* (pp. 131–159). Springer International Publishing. https://doi.org/10.1007/978-3-030-47150-7_7

Avellaneda, C. N., & Gomes, R. C. (2015). Is Small Beautiful? Testing the Direct and Nonlinear Effects of Size on Municipal Performance. *Public Administration Review*, *75*(1), 137–149. https://doi.org/10.1111/puar.12307

Avellaneda, C. N., & Suzuki, K. (2015). The Conditioning Effect of Context on the Managerial Capacity-Performance Relationship. *Academy of Management Proceedings*, *1*, 18661. https://doi.org/10.5465/ambpp.2015.18661abstract

Balaguer-Coll, M. T., & Ivanova-Toneva, M. (2021). The impact of women's leadership in local governments: The case of Spain. *International Public Management Journal*, *24*(4), 1–30. https://doi.org/10.1080/10967494.2021.1897718

Barbosa, R., & Rodrigues, D. (2020). *Só 9 mulheres são eleitas prefeitas nas 96 maiores cidades do Brasil*. Poder 360. https://www.poder360.com.br/eleicoes/so-8-mulheres-sao-eleitas-prefeitas-nas-96-maiores-cidades-do-brasil/

Barro, R. J. (1979). On the Determination of the Public Debt. *Journal of Political Economy*, *87*(5, Part 1), 940–971. https://doi.org/10.1086/260807

Becker, G. S. (1964). *Human capital. A theoretical and empirical analysis, with special reference to education*. Columbia University Press.

Benton, J. E. (2005). An Assessment of Research on American Counties. *Public Administration Review*, *65*(4), 462–474. https://doi.org/10.1111/j.1540-6210.2005.00472.x

Berger, A. N., Kick, T., & Schaeck, K. (2014). Executive board composition and bank risk taking. *Journal of Corporate Finance*, *28*, 48–65. https://doi.org/10.1016/j.jcorpfin.2013.11.006

Bertrand, M., & Schoar, A. (2003). Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics*, *118*(4), 1169–1208. https://doi.org/10.1162/003355303322552775

Besley, T., Montalvo, J. G., & Reynal-Querol, M. (2011). Do educated leaders matter? *The Economic Journal*, *121*(554), F205-227. https://doi.org/10.1111/j.1468-0297.2011.02448.x

Blais, A., Blake, D., & Dion, S. (1993). Do parties make a difference? Parties and the size of government in liberal democracies. *American Journal of Political Science*, *37*(1), 40–62. https://doi.org/10.2307/2111523

Blöchliger, H., & Rabesona, J. (2009). *The fiscal autonomy of sub-central governments: An update*.

Bowles, H. R., Babcock, L., & McGinn, K. L. (2005). Constraints and triggers: Situational mechanics of gender in negotiation. *Journal of Personality and Social Psychology*, *89*(6), 951–965. https://doi.org/10.1037/0022-3514.89.6.951

Bowman, M. J., & Myers, R. G. (1967). Schooling, experience, and gains and losses in human capital through migration. *Journal of the American Statistical Association*, *62*(319), 875–898. https://doi.org/10.1080/01621459.1967.10500900

Boyne, G. A. (2003). Sources of public service improvement: A critical review and research agenda. *Journal of Public Administration Research and Theory*, *13*(3), 367–394. https://doi.org/10.1093/jopart/mug027

Brasil. (1992). *Constituição da Republica Federativa do Brasil: Promulgada em 5 de outubro de 1988*. Saraiva.

Brasil. (2013). *IBGE Cidade@*. IBGE. http://www.ibge.gov.br/cidadesat/index.php?lang=_EN

Brollo, F., & Nannicini, T. (2012). Tying your enemy's hands in close races: The politics of federal transfers in Brazil. *American Political Science Review*, *106*(4), 742–761. https://doi.org/10.1017/s0003055412000433

Brusca, I., Rossi, F. M., & Aversano, N. (2015). Drivers for the financial condition of local government: A comparative study between Italy and Spain. *Lex Localis*, *13*(2), 161–184. https://doi.org/10.4335/13.2.161-184(2015)

Buchanan, J. M., & Tullock, G. (1962). *The calculus of consent: Vol. 3)*. University of Michigan Press.

Buchanan, J. M., & Wagner, R. E. (1977). *Democracy in deficit: The political legacy of Lord Keynes*.

Cabaleiro-Casal, R., & Buch-Gómez, E. J. (2020). Women in Spanish municipal councils and budgetary policies. *Urban Affairs Review*, *56*(6), 1715–1745. https://doi.org/10.1177/1078087419869844

Cabral, M., & Jucá, B. (2020). *Brasil tem apenas uma mulher entre os prefeitos eleitos em todas as capitais do país*. El País, Brasil. https://brasil.elpais.com/brasil/2020-11-30/brasil-tem-apenas-uma-mulher-entre-os-prefeitos-eleitos-em-todas-as-capitais-do-pais.html

Carley, S., Nicholson-Crotty, S., & Fisher, E. J. (2015). Capacity, guidance, and the implementation of the American Recovery and Reinvestment Act. *Public Administration Review*, *75*(1), 113–125. https://doi.org/10.1111/puar.12294

Carreirão, Y. de S. (2006). Ideologia e partidos políticos: Um estudo sobre coligações em Santa Catarina. *OPINIÃO PÚBLICA*, *12*(1), 136–163. https://doi.org/10.1590/s0104-62762006000100006

Chapman, J. I. (2008). State and Local Fiscal Sustainability: The Challenges. *Public Administration Review*, *68*(s1), S115–S131. https://doi.org/10.1111/j.1540-6210.2008.00983.x

Charness, G., & Gneezy, U. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization*, *83*(1), 50–58. https://doi.org/10.1016/j.jebo.2011.06.007

Cheibub, J. A., Przeworski, A., & Sebastian, M. S. (2004). Government Coalitions and Legislative Success under Presidentialism and Parliamentarism. *British Journal of Political Science*, *34*(4), 565–587. https://doi.org/10.1017/s0007123404000195

Chernesky, R. H., & Bombyk, M. J. (1988). Women's Ways and Effective Management. *Affilia*, *3*(1), 48–61. https://doi.org/10.1177/088610998800300105

Congleton, R. D., & Zhang, Y. (2013). Is it all about competence? The human capital of U.S. presidents and economic performance. *Constitutional Political Economy*, *24*(2), 108–124. https://doi.org/10.1007/s10602-013-9138-7

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, *47*(2), 448–474. https://doi.org/10.1257/jel.47.2.448

Cusack, T. R. (1997). Partisan politics and public finance: Changes in public spending in the industrialized democracies, 1955–1989. *Public Choice*, *91*(3/4), 375–395. https://doi.org/10.1023/a:1004995814758

D'Agostino, M. J. (2015). The difference that women make: Government performance and women-led agencies. *Administration & Society*, *47*(5), 532–548. https://doi.org/10.1177/0095399714548267

Davidson, M. (2019). Extreme municipal fiscal stress and austerity? A case study of fiscal reform after Chapter 9 bankruptcy. *Environment and Planning C: Politics and Space*, *38*(3), 522–538. https://doi.org/10.1177/2399654419872218

De Haan, J., & Sturm, J.-E. (1994). Political and institutional determinants of fiscal policy in the European Community. *Public Choice*, *80*(1–2), 157–172. https://doi.org/10.1007/bf01047953

De Haan, J., & Sturm, J.-E. (1997). Political and economic determinants of OECD budget deficits and government expenditures: A reinvestigation. *European Journal of Political Economy*, *13*(4), 739–750. https://doi.org/10.1016/s0176-2680(97)00033-5

de Mello, L. R., Jr. (2000). Fiscal Decentralization and Intergovernmental Fiscal Relations: A Cross-Country Analysis. *World Development*, *28*(2), 365–380. https://doi.org/10.1016/s0305-750x(99)00123-0

De Mello, L. R., Jr. (2002). Public finance, government spending and economic growth: The case of local governments in Brazil. *Applied Economics*, *34*(15), 1871–1883. https://doi.org/10.1080/00036840210128726

Dewan, T., & Myatt, D. P. (2008). The qualities of leadership: Direction, communication, and obfuscation. *American Political Science Review*, *102*(3), 351–368. https://doi.org/10.1017/s0003055408080234

Dreher, A., Sturm, J.-E., & Vreeland, J. R. (2009). Development aid and international politics: Does membership on the UN Security Council influence World Bank decisions? *Journal of Development Economics*, *88*(1), 1–18. https://doi.org/10.1016/j.jdeveco.2008.02.003

Eslava, M. (2006). The Political Economy of Fiscal Policy: Survey. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1820060

Farvaque, E., Matsueda, N., & Méon, P.-G. (2009). How monetary policy committees impact the volatility of policy rates. *Journal of Macroeconomics*, *31*(4), 534–546. https://doi.org/10.1016/j.jmacro.2009.01.002

Freier, R., & Thomasius, S. (2016). Voters prefer more qualified mayors, but does it matter for public finances? Evidence for Germany. *International Tax and Public Finance*, *23*(5), 875–910. https://doi.org/10.1007/s10797-015-9382-z

Funk, K. D., & Philips, A. Q. (2019). Representative Budgeting: Women Mayors and the Composition of Spending in Local Governments. *Political Research Quarterly*, *72*(1), 19–33. https://doi.org/10.1177/1065912918775237

Galasso, V., & Nannicini, T. (2011). Competing on good politicians. *American Political Science Review*, *105*(1), 79–99. https://doi.org/10.1017/s0003055410000535

Glickman, N. J., & Servon, L. J. (1998). More than bricks and sticks: Five components of community development corporation capacity. *Housing Policy Debate*, *9*(3), 497–539. https://doi.org/10.1080/10511482.1998.9521306

Göhlmann, S., & Vaubel, R. (2007). The educational and occupational background of central bankers and its effect on inflation: An empirical analysis. *European Economic Review*, *51*(4), 925–941. https://doi.org/10.1016/j.euroecorev.2006.05.001

Goodman, D., French, P. E., & Battaglio, R. P., Jr. (2013). Determinants of Local Government Workforce Planning. *The American Review of Public Administration*, *45*(2), 135–152. https://doi.org/10.1177/0275074013486179

Goold, M., & Campbell, A. (2002). Do You Have a Well-Designed Organization? *Harvard Business Review*, *30*(3), 38–38. https://doi.org/10.1109/emr.2002.1032395

Grissom, J. A., Nicholson-Crotty, J., & Keiser, L. (2012). Does my boss's gender matter? Explaining job satisfaction and employee turnover in the public sector. *Journal of Public Administration Research and Theory*, *22*(4), 649–673. https://doi.org/10.1093/jopart/mus004

Guajardo, S. A. (2015). Assessing Organizational Efficiency and Workforce Diversity: An Application of Data Envelopment Analysis to New York City Agencies. *Public Personnel Management*, *44*(2), 239–265. https://doi.org/10.1177/0091026015575179

Guillamón, M.-D., Bastida, F., & Benito, B. (2011). The determinants of local government's financial transparency. *Local Government Studies*, *37*(4), 391–406. https://doi.org/10.1080/03003930.2011.588704

Hayo, B., & Neumeier, F. (2014). Political leaders' socioeconomic background and fiscal performance in Germany. *European Journal of Political Economy*, *34*, 184–205. https://doi.org/10.1016/j.ejpoleco.2014.01.009

Hernández-Nicolás, C. M., Martín-Ugedo, J. F., & Mínguez-Vera, A. (2018). Women mayors and management of Spanish councils: An empirical analysis. *Feminist Economics*, *24*(1), 168–191. https://doi.org/10.1080/13545701.2017.1347695

Hibbs, D. A., Jr. (1977). Political parties and macroeconomic policy. *American Political Science Review*, *71*(4), 1467–1487. https://doi.org/10.2307/1961490

Hoang, T., & Goodman, D. (2018). Public Pensions and Collective Bargaining Rights: Evidence from State and Local Governments. *Public Administration Review*, *78*(5), 772–784. https://doi.org/10.1111/puar.12936

Hoene, C. W., Pagano, M. A., & Cities, N. L. o. (2008). Cities and State Fiscal Structure. *National League of Cities*. http://books.google.com/books?id=Eu3KtwAACAAJ

Holman, M. R. (2017). Women in local government: What we know and where we go from here. *State and Local Government Review*, *49*(4), 285–296. https://doi.org/10.1177/0160323x17732608

Ingraham, P. W., Joyce, P. G., & Donahue, A. K. (2003). *Government performance: Why management matters*. Taylor & Francis.

Jacob, B., & Hendrick, R. (2012). Assessing the Financial Condition of Local Governments: What is Financial Conditions and How is It Measured. In H. Levine, J. B. Justice, & E. A. Scorsone (Eds.), *Handbook of Local Government Fiscal Health* (Vol. 11, pp. 11–40). Jones & Barnlett Learning Books.

Jochimsen, B., & Nuscheler, R. (2011). The political economy of the German Länder deficits: Weak governments meet strong finance ministers. *Applied Economics*, *43*(19), 2399–2415. https://doi.org/10.1080/00036840903194246

Johansen, M. S. (2007). The effect of female strategic managers on organizational performance. *Public Organization Review*, *7*(3), 269–279. https://doi.org/10.1007/s11115-007-0036-1

Kaplan, S. N., Klebanov, M. M., & Sorensen, M. (2012). Which CEO characteristics and abilities matter? *The Journal of Finance*, *67*(3), 973–1007. https://doi.org/10.1111/j.1540-6261.2012.01739.x

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A Temporally Based Framework and Taxonomy of Team Processes. *Academy of Management Review*, *26*(3), 356–376. https://doi.org/10.5465/amr.2001.4845785

Martell, C. R. (2008). Fiscal institutions of Brazilian municipal borrowing. *Public Administration and Development*, *28*(1), 30–41. https://doi.org/10.1002/pad.474

Marvel, J. D. (2018). Change agents or cogs in the machine? Female managers and unofficial gender equality in federal agencies. *Public Performance & Management Review*, *41*(2), 328–364. https://doi.org/10.1080/15309576.2017.1400990

Mattos, E., Politi, R., & Yamaguchi, A. (2018). Grants and dispersion of local education spending in Brazil. *Regional Studies*, *52*(2), 239–249. https://doi.org/10.1080/00343404.2017.1287891

Meier, K. J., Favero, N., & Compton, M. (2016). Social Context, Management, and Organizational Performance: When human capital and social capital serve as substitutes. *Public Management Review*, *18*(2), 258–277. https://doi.org/10.1080/14719037.2014.984621

Meier, K. J., & Funk, K. D. (2017). Women and public administration in a comparative perspective: The case of representation in Brazilian local governments. *Administration & Society*, *49*(1), 121–142. https://doi.org/10.1177/0095399715626201

Meier, K. J., & Melton, E. K. (2014). Bureaucratic representation and responsiveness. In *The Oxford handbook of racial and ethnic politics in the United States*.

Meier, K. J., & Nicholson-Crotty, J. (2006). Gender, representative bureaucracy, and law enforcement: The case of sexual assault. *Public Administration Review*, *66*(6), 850–860. https://doi.org/10.1111/j.1540-6210.2006.00653.x

Meier, K. J., O'Toole, L. J., & Goerdel, H. T. (2006). Management Activity and Program Performance: Gender as Management Capital. *Public Administration Review*, *66*(1), 24–36. https://doi.org/10.1111/j.1540-6210.2006.00553.x

Melton, E. K., & Meier, K. J. (2017). For the want of a nail: The interaction of managerial capacity and human resource management on organizational performance. *Public Administration Review*, *77*(1), 118–130. https://doi.org/10.1111/puar.12611

Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of Political Economy*, *66*(4), 281–302. https://doi.org/10.1086/258055

Mintzberg, H. (1993). The pitfalls of strategic planning. *California Management Review*, *36*(1), 32–47. https://doi.org/10.2307/41165733

Mosher, F. C. (1968). *Democracy and the Public Service*. Oxford University Press.

Mouritzen, P. E., & Svara, J. H. (2002). *Leadership at the Apex: Politicians and administrators in western local governments*. University of Pittsburgh Press.

Opstrup, N., & Villadsen, A. R. (2015). The Right Mix? Gender Diversity in Top Management Teams and Financial Performance. *Public Administration Review*, *75*(2), 291–301. https://doi.org/10.1111/puar.12310

O'Toole, L. J., & Meier, K. J. (1999). Modeling the Impact of Public Management: Implications of Structural Context. *Journal of Public Administration Research and Theory*, *9*(4), 505–526. https://doi.org/10.1093/oxfordjournals.jpart.a024421

O'Toole, L. J., & Meier, K. J. (2009). The human side of public organizations contributions to organizational performance. *The American Review of Public Administration*, *39*(5), 499–518. https://doi.org/10.1177/0275074008323805

Palvia, A., Vähämaa, E., & Vähämaa, S. (2015). Are female CEOs and chairwomen more conservative and risk averse? Evidence from the banking industry during the financial crisis. *Journal of Business Ethics*, *131*(3), 577–594. https://doi.org/10.1007/s10551-014-2288-3

Park, Y. J., Kim, Y., & Chen, G. (2020). Financial capacity and organizational stability in U.S. local governments. *Public Management Review*, *24*(3), 418–441. https://doi.org/10.1080/14719037.2020.1834606

Perotti, R., & Kontopoulos, Y. (2002). Fragmented fiscal policy. *Journal of Public Economics*, *86*(2), 191–222. https://doi.org/10.1016/s0047-2727(01)00146-3

Petrovsky, N., & Avellaneda, C. N. (2014). Mayoral Public Sector Work Experience and Tax Collection Performance in Colombian Local Governments. *International Public Management Journal*, *17*(2), 145–173. https://doi.org/10.1080/10967494.2014.905406

Pletzer, J. L., Nikolova, R., Kedzior, K. K., & Voelpel, S. C. (2015). Does Gender Matter? Female Representation on Corporate Boards and Firm Financial Performance - A Meta-Analysis. *PLoS ONE*, *10*(6), e0130005. https://doi.org/10.1371/journal.pone.0130005

Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal*, *58*(5), 1546–1571. https://doi.org/10.5465/amj.2013.0319

Potrafke, N. (2009). Does government ideology influence political alignment with the U.S.? An empirical analysis of voting in the UN General Assembly. *The Review of International Organizations*, *4*(3), 245–268. https://doi.org/10.1007/s11558-009-9066-5

Psychogios, A. G. (2007). Towards the transformational leader: Addressing women's leadership style in modern business management. *Journal of Business and Society*, *20*(1/2), 169–180.

Rauh, J. (2015). Predicting Political Influence on State Ethics Commissions: Of Course *We* Are Ethical-Nudge Nudge, Wink Wink. *Public Administration Review*, *75*(1), 98–110. https://doi.org/10.1111/puar.12290

Riccucci, N. M., Van Ryzin, G. G., & Lavena, C. F. (2014). Representative bureaucracy in policing: Does it increase perceived legitimacy? *Journal of Public Administration Research and Theory*, *24*(3), 537–551. https://doi.org/10.1093/jopart/muu006

Riccucci, N. M., Van Ryzin, G. G., & Li, H. (2016). Representative bureaucracy and the willingness to coproduce: An experimental study. *Public Administration Review*, *76*(1), 121–130. https://doi.org/10.1111/puar.12401

Rodden, J. A. (2006). *Hamilton's paradox: The promise and peril of fiscal federalism*. Cambridge University Press. https://doi.org/10.1017/cbo9780511616075

Rogoff, K., & Sibert, A. (1988). Elections and macroeconomic policy cycles. *The Review of Economic Studies*, *55*(1), 1. https://doi.org/10.2307/2297526

Romer, P. M. (1989). *Human capital and growth: Theory and evidence*. National Bureau of Economic Research. https://doi.org/10.3386/w3173

Roubini, N., & Sachs, J. D. (1989). Political and economic determinants of budget deficits in the industrial democracies. *European Economic Review*, *33*(5), 903–933. https://doi.org/10.1016/0014-2921(89)90002-0

Roubini, N., Sachs, J., Honkapohja, S., & Cohen, D. (1989). Government spending and budget deficits in the industrial countries. *Economic Policy*, *4*(8), 99. https://doi.org/10.2307/1344465

Sacramento, A. R. S. (2003). *Contribuições da Lei de Responsabilidade Fiscal para o avanço da Accountability no Brasil EnANPAD, Atibaia*.

Saidel, J. R., & Loscocco, K. (2005). Agency leaders, gendered institutions, and representative bureaucracy. *Public Administration Review*, *65*(2), 158–170. https://doi.org/10.1111/j.1540-6210.2005.00441.x

Schneider, M. (2004). Performance Management by Culture in the National Labor Relations Board's Division of Judges and the German Labor Courts of Appeal. *Journal of Public Administration Research and Theory*, *14*(1), 19–32. https://doi.org/10.1093/jopart/muh002

Slegten, C., Geys, B., & Heyndels, B. (2019). Sex differences in budgetary preferences among Flemish local politicians. *Acta Politica*, *54*(4), 540–563. https://doi.org/10.1057/s41269-018-0090-4

Spreen, T. L., & Cheek, C. M. (2016). Does Monitoring Local Government Fiscal Conditions Affect Outcomes? Evidence from Michigan. *Public Finance Review*, *44*(6), 722–745. https://doi.org/10.1177/1091142115611743

Statham, A. (1987). The gender model revisited: Differences in the management styles of men and women. *Sex Roles*, *16*(7–8), 409–430. https://doi.org/10.1007/bf00289552

Suzuki, K., & Avellaneda, C. N. (2018). Women and risk-taking behaviour in local public finance. *Public Management Review*, *20*(12), 1741–1767. https://doi.org/10.1080/14719037.2017.1412118

TSE. (2021). *Calendário eleitoral - Eleições*. TSE. https://www.tse.jus.br/eleicoes/calendario-eleitoral/calendario-eleitoral

Valle, A. G. R. M., & Gomes, R. C. (2014). Analyzing the importance of financial resources for educational effectiveness: The case of Brazil. *International Journal of Productivity and Performance Management*, *63*(1), 4–21. https://doi.org/10.1108/ijppm-08-2012-0085

Vermeeren, B., Kuipers, B., & Steijn, B. (2014). Does Leadership Style Make a Difference? Linking HRM, Job Satisfaction, and Organizational Performance. *Review of Public Personnel Administration*, *34*(2), 174–195. https://doi.org/10.1177/0734371x13510853

Von Hagen, J., & Harden, I. J. (1995). Budget processes and commitment to fiscal discipline. *European Economic Review*, *39*(3–4), 771–779. https://doi.org/10.1016/0014-2921(94)00084-d

Warner, M. E. (1999). Local government financial capacity and the growing importance of state aid. *Rural Development Perspectives*, *13*, 27–36.

Weikart, L. A., Chen, G., Williams, D. W., & Hromic, H. (2007). The democratic sex: Gender differences and the exercise of power. *Journal of Women, Politics & Policy*, *28*(1), 119–140. https://doi.org/10.1300/j501v28n01_06

Weingast, B. R. (2009). Second generation fiscal federalism: The implications of fiscal incentives. *Journal of Urban Economics*, *65*(3), 279–293. https://doi.org/10.1016/j.jue.2008.12.005

Wilkins, V. M. (2007). Exploring the causal story: Gender, active representation, and bureaucratic priorities. *Journal of Public Administration Research and Theory*, *17*(1), 77–94. https://doi.org/10.1093/jopart/muj012

Yang, L. (2019). Negative Externality of Fiscal Problems: Dissecting the Contagion Effect of Municipal Bankruptcy. *Public Administration Review*, *79*(2), 156–167. https://doi.org/10.1111/puar.12986

Zafra-Gómez, J. L., López-Hernández, A. M., & Hernández-Bastida, A. (2009). Developing a Model to Measure Financial Condition in Local Government: Evaluating Service Quality and Minimizing the Effects of the Socioeconomic Environment: An Application to Spanish Municipalities. *The American Review of Public Administration*, *39*(4), 425–449. https://doi.org/10.1177/0275074008320710

Zambrano-Gutiérrez, J. C., & Avellaneda, C. N. (2021). Municipal Response to Fiscal and Governance Reforms: Effects of Stricter Debt Limits across Jurisdictions. *International Journal of Public Administration*, *45*(7), 1–14. https://doi.org/10.1080/01900692.2020.1868504

Zambrano-Gutiérrez, J. C., & Avellaneda, C. N. (2022). The (un)intended Effects of Regulatory Burden on Policy Effectiveness: The Case of Regulations Targeting NGOs. *Journal of Policy Studies*, *37*(1), 15–25. https://doi.org/10.52372/jps37102

Appendix

Table A1. Two-way fixed-effects OLS regression results for fiscal capacity and autonomy when including grants as local revenues

	Capacity		Autonomy	
	(1)	(2)	(3)	(4)
Female mayor (=1)	20.17**	20.77***	0.545**	0.541**
	(8.049)	(7.219)	(0.242)	(0.241)
Employees per 1000 people	3.520***	2.678***	0.0134**	0.0129**
	(0.616)	(0.345)	(0.00588)	(0.00623)
Avg. employee remuneration (Reais)	11.99***	11.47***	0.0946***	0.0973***
	(1.992)	(2.005)	(0.0306)	(0.0316)
% of employees with a professional degree	-0.198	-0.237	-0.00549	-0.00601
	(0.207)	(0.216)	(0.00940)	(0.00979)
Female mayor (=1)=1 # Employees per 1000 people		5.987***		0.00453
		(1.072)		(0.0149)
Female mayor (=1)=1 # Avg. employee remuneration (Reais)		-2.297		-0.0388
		(1.406)		(0.0320)
Female mayor (=1)=1 # % of employees with a professional degree		-0.204		0.00607
		(0.717)		(0.0254)
Margin of victory (%)	0.940	0.905	0.0499	0.0499
	(1.119)	(1.121)	(0.0590)	(0.0589)
Mayor allied with the President	-6.071	-4.705	-0.0260	-0.0254
	(8.632)	(8.497)	(0.369)	(0.369)
Mayor allied with the Governor	-1.441	-2.508	-0.130	-0.133
	(6.764)	(6.608)	(0.346)	(0.346)
Previous experience as mayor (=1)	2.372	1.998	0.0836	0.0821
	(3.634)	(3.621)	(0.129)	(0.130)
Education years	0.441	0.383	0.0346***	0.0344***
	(0.296)	(0.284)	(0.0129)	(0.0129)
Background in politics	10.74	11.25	0.217	0.217
	(9.974)	(9.973)	(0.361)	(0.363)
Background in business and management	2.453	2.685	0.173	0.173
	(6.802)	(6.829)	(0.272)	(0.273)
Background in public service	0.714	1.278	-0.0761	-0.0760
	(8.809)	(8.753)	(0.369)	(0.370)
Background in other professions	6.884	6.654	0.128	0.127
	(7.194)	(7.143)	(0.297)	(0.297)
Background in law	5.326	3.613	-0.0427	-0.0451
	(9.546)	(9.570)	(0.356)	(0.356)
% of council from the mayor's party	0.323**	0.318**	0.0117	0.0117
	(0.161)	(0.159)	(0.00763)	(0.00763)
Leftist party	-1.470	-1.384	-0.0478	-0.0506
	(6.380)	(6.327)	(0.285)	(0.285)
Centrist party	3.722	1.293	0.250	0.246

	(7.265)	(6.874)	(0.304)	(0.305)
Constant	-203.5***	141.1***	6.086***	8.109***
	(41.31)	(14.96)	(0.638)	(0.418)
Observations	9511	9511	9511	9511
Adjusted R^2	0.216	0.239	0.018	0.018

Fixed effects by municipality-year. Clustered standard errors by municipality in parentheses
* p < 0.1, ** p < 0.05, *** p < 0.01

Table A2. One-step Arellano-Bond estimations

	Capacity		Autonomy		Solvency	
	(1)	(2)	(3)	(4)	(5)	(6)
Lagged dependent variable	0.0762	0.0873	0.433***	0.432***	-0.0334*	-0.0327*
	(0.0582)	(0.0602)	(0.0573)	(0.0572)	(0.0179)	(0.0179)
Female mayor (=1)	9.542	1.456	-0.0489	-0.0491	-0.151	-0.294
	(6.089)	(4.541)	(0.0872)	(0.0850)	(0.300)	(0.302)
Employees per 1000 people	3.078***	2.096***	-0.00103	-0.00169	-0.000861	-0.00279
	(0.621)	(0.325)	(0.00141)	(0.00162)	(0.00599)	(0.00595)
Avg. employee remuneration (Reais)	8.864***	8.073***	0.0253	0.0289	-0.288***	-0.305***
	(1.815)	(1.598)	(0.0185)	(0.0193)	(0.0450)	(0.0446)
% of employees with a professional degree	-0.192	-0.149	-0.00655	-0.00752	0.00930	0.00962
	(0.142)	(0.133)	(0.00486)	(0.00501)	(0.0160)	(0.0159)
Female mayor (=1) # Employees per 1000 people		6.512***		0.00378		0.0117
		(1.179)		(0.00603)		(0.0186)
Female mayor (=1) # Avg. remuneration (Reais)		-0.626		-0.0413***		0.129***
		(0.683)		(0.0149)		(0.0495)
Female mayor (=1) # % employees with prof. degree		-0.458		0.0177		0.00245
		(0.601)		(0.0119)		(0.0540)
Previous experience as mayor (=1)	-0.810	-1.101	-0.0287	-0.0304	-0.0647	-0.0613
	(1.856)	(1.872)	(0.0645)	(0.0641)	(0.193)	(0.193)
Education years	-0.164	-0.178	-0.00286	-0.00328	-0.0238	-0.0230
	(0.158)	(0.145)	(0.00512)	(0.00511)	(0.0187)	(0.0186)
Background in politics	4.182	4.693	0.0379	0.0344	-0.354	-0.331
	(3.924)	(3.560)	(0.138)	(0.138)	(0.480)	(0.479)
Background in business and management	7.600*	8.997**	0.0856	0.0818	0.505	0.535
	(4.473)	(4.253)	(0.123)	(0.123)	(0.376)	(0.375)
Background in public service	7.490*	8.615**	-0.0599	-0.0618	-0.138	-0.114
	(4.161)	(4.116)	(0.148)	(0.147)	(0.558)	(0.559)
Background in other professions	4.848	5.790	-0.0357	-0.0400	0.525	0.531
	(3.611)	(3.647)	(0.129)	(0.128)	(0.454)	(0.454)
Background in law	4.956	4.483	0.0414	0.0260	1.193*	1.230*
	(5.409)	(4.393)	(0.182)	(0.181)	(0.673)	(0.673)
Margin of victory (%)	-0.704	-0.552	-0.00664	-0.00709	-0.207**	-0.205**
	(0.722)	(0.711)	(0.0271)	(0.0268)	(0.104)	(0.104)
Mayor allied with the President	-1.942	-1.545	0.0181	0.00728	-0.486	-0.482
	(4.930)	(4.568)	(0.132)	(0.132)	(0.533)	(0.533)
Mayor allied with the Governor	3.214	2.730	0.0389	0.0384	0.504	0.509
	(6.758)	(6.268)	(0.101)	(0.102)	(0.386)	(0.386)

% of council from the mayor's party	0.326**	0.254**	0.00302	0.00311	0.00328	0.00244
	(0.132)	(0.112)	(0.00291)	(0.00292)	(0.0125)	(0.0125)
Leftist party	-4.577	-2.093	0.0964	0.105	0.686	0.698
	(5.780)	(5.338)	(0.124)	(0.124)	(0.452)	(0.454)
Centrist party	8.007	2.745	-0.125	-0.132	0.0654	0.0626
	(6.915)	(5.520)	(0.191)	(0.190)	(0.563)	(0.561)
Grants value per capita (Reais)	-0.00151	0.00306	0.000111	0.000123	0.00126	0.00123
	(0.0184)	(0.0174)	(0.000575)	(0.000573)	(0.00109)	(0.00109)
Constant	-178.0***	-128.8***	2.289***	2.296***	107.6***	107.8***
	(38.23)	(26.32)	(0.374)	(0.388)	(1.891)	(1.869)
Observations	6639	6639	6639	6639	6639	6639

Robust standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A3. OLS regression with random effects for municipality and fixed effects by year

	Capacity		Autonomy		Solvency	
	(1)	(2)	(3)	(4)	(5)	(6)
Female mayor (=1)	11.39	12.20*	0.0267	0.0242	-0.0114	-0.0107
	(7.255)	(6.332)	(0.128)	(0.127)	(0.223)	(0.223)
Employees per 1000 people	2.879***	2.379***	0.00317	0.00960**	-0.00812**	-0.00763
	(0.549)	(0.339)	(0.00408)	(0.00484)	(0.00330)	(0.00483)
Avg. employee remuneration (Reais)	12.73***	11.85***	0.152***	0.116***	0.00755	-0.101***
	(1.871)	(1.982)	(0.0245)	(0.0267)	(0.0168)	(0.0224)
% of employees with a professional degree	-0.0479	-0.107	0.00636	-0.00110	0.0118	0.00566
	(0.183)	(0.168)	(0.00490)	(0.00529)	(0.00718)	(0.00876)
Female mayor (=1) # Employees per 1000 people		5.986***		-0.00187		0.00442
		(1.292)		(0.00653)		(0.0143)
Female mayor (=1) # Avg. employee remuneration (Reais)		-2.501*		-0.0410**		0.0316
		(1.332)		(0.0200)		(0.0394)
Female mayor (=1) # % of employees with a professional degree		-0.286		0.0261*		0.0308
		(0.655)		(0.0143)		(0.0292)
Margin of victory (%)	0.0333	-0.121	-0.0150	-0.0182	-0.0608	-0.0647*
	(0.840)	(0.844)	(0.0206)	(0.0206)	(0.0380)	(0.0380)
Mayor allied with the President	-1.901	-2.003	0.0374	0.0483	-0.189	-0.157
	(6.276)	(6.255)	(0.195)	(0.194)	(0.233)	(0.234)
Mayor allied with the Governor	1.215	1.107	0.159	0.162	0.0480	0.0431
	(4.177)	(4.212)	(0.178)	(0.180)	(0.169)	(0.169)
Previous experience as mayor (=1)	1.239	0.799	0.0486	0.0523	-0.0969	-0.0962
	(2.902)	(2.923)	(0.0615)	(0.0613)	(0.145)	(0.144)
Education years	0.00309	-0.0406	-0.000583	-0.000637	-0.00485	-0.00522
	(0.216)	(0.200)	(0.00514)	(0.00508)	(0.0138)	(0.0138)
Background in politics	13.33*	13.72*	0.330**	0.340**	-0.190	-0.133
	(7.245)	(7.178)	(0.155)	(0.155)	(0.208)	(0.207)
Background in business and management	3.910	2.433	0.151	0.141	-0.0385	-0.0126
	(4.346)	(4.364)	(0.113)	(0.113)	(0.174)	(0.174)
Background in public service	5.751	6.908	0.212	0.199	-0.127	-0.174
	(4.745)	(4.855)	(0.143)	(0.143)	(0.247)	(0.248)
Background in other professions	8.238*	6.107	0.131	0.115	0.0946	0.139
	(4.328)	(4.256)	(0.119)	(0.118)	(0.200)	(0.202)
Background in law	14.03*	9.348	0.308*	0.270*	-0.157	-0.0912
	(7.827)	(8.195)	(0.163)	(0.159)	(0.302)	(0.300)
% of council from the mayor's	-0.0155	0.0507	-0.00273	-0.00161	-0.00922*	-0.00987**

party						
	(0.107)	(0.101)	(0.00383)	(0.00384)	(0.00488)	(0.00488)
Leftist party	6.872	4.855	0.185	0.161	0.128	0.131
	(4.535)	(4.351)	(0.131)	(0.130)	(0.184)	(0.183)
Centrist party	5.522	0.442	0.210	0.181	-0.267	-0.270
	(6.072)	(5.113)	(0.133)	(0.132)	(0.228)	(0.229)
Grants value per capita (Reais)	-0.0183	-0.0123	-0.000400	-0.000403	0.000490	0.000293
	(0.0133)	(0.0132)	(0.000374)	(0.000378)	(0.000693)	(0.000692)
Constant	-186.5***	141.7***	4.390***	6.743***	98.13***	97.26***
	(35.50)	(15.74)	(0.421)	(0.281)	(0.375)	(0.373)
Observations	9511	9511	9511	9511	9511	9511

Municipal random effects, and fixed effects by year. Clustered standard errors by municipality in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$