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Reversing the Political Resource Curse: Accountability and Regional Favoritism under Capital Windfalls

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This paper examines how enhanced government accountability can mitigate the political resource curse during capital windfalls. We exploit two quasi-natural experiments in South Africa: the countrys 2012 inclusion in the Citigroup World Government Bond Index (WGBI) and the leak of a major corruption scandal twelve years earlier. Contrary to evidence linking resource booms to favoritism, we find that preferential grant allocations to municipalities connected to cabinet members declined following the sovereign inflow. Heightened salience of past corruption strengthened accountability, driving these results. Our findings underscore the critical role of accountability in promoting equitable resource distribution during financial inflows.

Keywords: Resource curse, Accountability, Favoritism, Elite capture, South Africa.

JEL Classification: D72, F32, H63, H72, H77, R11,

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1 Introduction

The literature has long explored the slow growth of African countries, highlighting the central role of political and economic institutions in shaping these outcomes (Acemoglu & Robinson, 2010). In developing countries, weak institutions not only hinder growth but also provoke adverse responses to economic booms, driving political redistribution and inefficient capital allocation (Tornell & Lane, 1999; Brollo et al., 2013; Caselli & Michaels, 2013). In democracies, however, voters can hold politicians accountable by withdrawing their support in the wake of corruption disclosures (Ferraz & Finan, 2008). Informing citizens to strengthen political accountability is therefore crucial, yet causal evidence on its effectiveness remains limited (Armand et al., 2020). To fill this gap, the paper leverages two quasi-natural experiments: one related to a major capital inflow into South Africa, and another examining the effects of a leaked government corruption case stemming from a deal 12 made years earlier.

South Africa provides an ideal setting to examine the role of accountability in public resource allocation during resource booms for at least two reasons. First, the country experienced a large sovereign capital inflow due to a quasi-natural experiment following its unexpected inclusion in the Citigroup World Government Bond Index (hereafter WGBI) in 2012. The announcement of the inclusion provides an ideal context to study the impact of large sovereign debt inflows on newly included countries. Although South Africa had met the inclusion criteria since 2009, the exact timing of the announcement was unpredictable. International investors responded by replicating the index composition, purchasing more South African bonds upon the inclusion.[1] This triggered a significant rise in demand for South African sovereign bonds. (Raddatz et al., 2017; Broner et al., 2021).

Second, the country experienced a major corruption revelation shortly before the capital inflow episode. South Africa is a consolidated democracy with a highly developed fiscal system. Since 1994, the African National Congress (ANC) has held power continuously. However, public dissatisfaction with the government has grown over time, fueled by income stagnation, high unemployment, and deteriorating public services (The Economist, 2024). The second quasi-natural experiment we exploit took place nine months prior to South Africas inclusion in the Citigroup WGBI and is characterized by a sharp increase in perceptions of government corruption during President Zuma's administration. This surge followed revelations by multinational firms admitting bribery during the 1999 South African Arms Deal, 12 years earlier (WSJ, 2011; BBC, 2011). The scandal attracted considerable international media scrutiny and political

[1] While investors may have anticipated a potential South Africa's inclusion, the precise timing of the announcement was unexpected and unrelated to the country's economic fundamentals.

pressure, leading President Zuma to set up the Seriti Commission at the close of 2011 to investigate corruption allegations related to the 1999 Arms Deal and the involvement of his cabinet. (BBC, 2011, 2012). The Arms Deal controversy, alongside growing domestic discontent, compelled the government to take more decisive action. At the same day the commission was established, the President dismissed two ministers and the police chief for unauthorized expenditures. In addition, the government introduced anti-corruption measures at the local level, which included enhanced transparency and, consequently, improved accountability. A notable example is the Municipal Finance Management Act (MFMA) Circular 56, issued in 2011, which made a publicly accessible list of "Restricted Suppliers" to the public sector. This list prominently included the name of a high-ranking cabinet member implicated in corruption since 2010 (News24, 2012). In summary, South Africa offers a compelling case for examining how accountability can mitigate the political resource curse.

Our analysis focuses on whether greater government accountability during periods of resource windfalls can mitigate regional favoritism in the central government's allocation of subnational grants. To measure regional favoritism, we focus on resources allocated to municipalities that are the birthplaces of cabinet members. While previous studies have explored regional favoritism by cabinet members in developing countries (Widmer & Zurlinden, 2022; Asatryan et al., 2023), this paper contributes to the literature by examining whether enhanced government accountability can counteract the so-called political resource curse (Brollo et al., 2013).[2] To conduct this analysis, we exploit a novel dataset that combines granular data on South African municipalities –including revenues, expenses, and corruption measures– sourced from the South African National Treasury with new data on cabinet members' birthplaces, building on previous work. (Widmer & Zurlinden, 2022; Asatryan et al., 2023).[3]

Our findings indicate that, prior to the shocks, the central government systematically favored the birthplaces of South African cabinet members. However, following the relaxation of budget constraints and improvements in both central and local government accountability, the disparity in resource allocation between birthplaces and non-birthplaces diminished. This disparity was primarily driven by birth municipalities with irregular expenditures prior to the inclusion, which contributed substantially to the subsequent closing of the gap. Our analysis further reveals that voters penalize the ANC in municipal elections in ministers' birthplaces subsequent to multinational disclosures regarding the 1999 Arms Deal.

[2]The resource curse, as defined for example by Auty (2002), refers to a decline in income following a resource boom. It becomes "political," as described by Brollo et al. (2013), when resource booms exacerbate political corruption.

[3]Several studies have also examined regional favoritism in advanced economies, focusing on parliamentarians (Carozzi & Repetto, 2016), regional council members (Fiva & Halse, 2016), and state-level cabinet members (Baskaran & Lopes da Fonseca, 2021).

Interestingly, voters punished the ANC only in municipalities also linked to irregular expenditures. This suggests that voters acted with heightened awareness, holding leaders accountable particularly in contexts of evident favoritism, thereby underscoring the role of enhanced accountability in narrowing the resource gap between birth and non-birth municipalities. Our results remain robust across alternative specifications, and we find no evidence of distortions stemming from other municipal revenue sources, including non-discretionary grants and tax collections. Furthermore, the effects remain robust when the analysis is restricted to municipalities exhibiting similar prior dynamics concerning cabinet members born in the municipality.

Next, we examine whether the reduction in political favoritism affects the provision of public goods and the misuse of public funds. Regarding local public goods provision, we find that, prior to the inclusion, regional favoritism resulted in a very modest increase in sanitation services in the birthplaces of South African cabinet members, with no significant effect on water or waste collection services. This modest benefit contrasts sharply with the disproportionately large national grants allocated to these regions during the same period, suggesting that a significant portion of the additional funding was diverted to irregular expenditures and hence misappropriated. Consistent with this interpretation, we find that birth municipalities incurred 51% more irregular expenditure than their non-birth counterparts prior to the shocks. Additionally, we show a notable decline in irregular expenditures in birth municipalities when compared to non-birth municipalities after the shocks. Importantly, the relative reduction in politically motivated grant allocations was not mirrored by a comparable decline in sanitation service provision; on the contrary, access to these services improved modestly. This suggests a more efficient allocation and use of resources, consistent with the observed decline in irregular expenditures. Overall, our findings underscore the critical role of accountability in mitigating the adverse effects of political favoritism, particularly during periods of public resource booms.

This paper contributes to three main streams of literature. The first examines the effects of resource windfalls on public goods provision and economic outcomes. Prior studies show that windfalls often result in less-than-expected increases in public goods and services despite rising revenues (Caselli & Michaels, 2013), or lead to rent-seeking (Tornell & Lane, 1999; Baland & Francois, 2000; Torvik, 2002), inefficient public spending (Robinson et al., 2006), corruption (Vicente, 2010; Brollo et al., 2013; Chen & Kung, 2016), and weakened institutional capacity, ultimately hindering economic growth (Sachs & Warner, 1999; Torvik, 2002; Hodler, 2006; Ploeg, 2011). Notably, much of this literature emphasizes that resource booms tend to amplify rent-seeking especially in contexts characterized by limited institutional capacity

(Mehlum et al., 2006; Bhattacharyya & Hodler, 2010).[4] In relation to this literature, our contribution is twofold. First, we document how a resource windfall, driven by a favorable external shock, propagates to local governments, with particular emphasis on the role of cabinet members. Second, we demonstrate that increased government accountability –driven by international media scrutiny and political pressure– mitigates the political resource curse. Closest to our work, Armand et al. (2020) investigate the role of information in shaping the political resource curse in Mozambique. To the best of our knowledge, our study is the first to use administrative data to examine how the revelation of a political scandal can reduce government favoritism during resource booms, as well as the effects of enhanced accountability on the allocation of public funds.

Our work also contributes to the literature that connects transparency with enhanced government accountability. Prior research shows that greater transparency and monitoring activities can improve government accountability (Armand et al., 2020), reduce corruption (Brunetti & Weder, 2003; Bobonis et al., 2016; Avis et al., 2018; Larreguy et al., 2020), promote pro-poor spending (Banerjee et al., 2024), and influence voter behavior (Ferraz & Finan, 2008; Chong et al., 2015; Cruz et al., 2024).[5] We add to this literature by showing that South African voters penalize the national ruling party for corruption in municipalities with irregular expenditures, particularly when these municipalities are connected to cabinet members and when corruption is more salient. Our main contribution is to show that an exogenous shock, unrelated to actual corruption, can heighten the salience of corruption, strengthen citizen monitoring, and ultimately increase government accountability, thereby contributing to a reduction in political favoritism and misuse of public resources.

The third strand of literature we contribute to investigates the role of political decision makers on the development of favored regions.[6] Scholars have documented how country leaders (Do et al., 2017) or cabinet members (Asatryan et al., 2023; Widmer & Zurlinden, 2022) favor their birth or ethnic regions (Burgess et al., 2015; De Luca et al., 2018; Dickens, 2018), leading to preferential treatment in public goods provision (Burgess et al., 2015; De Luca et al., 2018; Dickens, 2018), economic growth (Hodler & Raschky, 2014), and foreign aid allocation (Bommer et al., 2022; Dreher et al., 2019, 2022).[7] In the case of

[4] In advanced economies, fiscal windfalls have been shown to induce persistent imbalances in local public finances (Berset & Schelker, 2020), while increases in local government revenues are associated with inefficiencies in the provision of public goods (Borge et al., 2015).

[5] In South Africa, De Kadt and Lieberman (2020) find an unexpected negative relationship between improvements in service provision and support for the dominant party (ANC), potentially driven by corruption perception.

[6] This literature primarily focuses on developing countries, with limited research on hometown favoritism among policymakers in advanced economies (Fiva & Halse, 2016; Baskaran & Lopes da Fonseca, 2021; Carozzi & Repetto, 2016).

[7] More recently, Bomprezzi et al. (2024) investigate the informal influence of political leaders' spouses on subnational development and foreign aid allocation.

South Africa, while some papers focus on the role of ethnic favoritism (Amodio & Chiovelli, 2016; Walters et al., 2023), others consider the importance of elections and voter behavior (Kroth et al., 2016; De Kadt & Larreguy, 2018; Obikili, 2019). Our contribution to this literature is to provide evidence on favoritism by South African cabinet members and its influence on the allocation of subnational grants, as well as its contribution to the misuse of public resources. Furthermore, we show how improved accountability can mitigate this favoritism, leading to a more equitable distribution of resources. Overall, our paper offers new insights into the relationship between political favoritism and governance during resource booms, particularly when government accountability is enhanced.

The rest of the paper is organized as follows. Section 2 outlines the institutional framework, while Section 3 describes the data and provides some descriptive statistics. Section 4 explains the empirical strategy and Section 5 presents the main results. In the same section, we also provide evidence on the importance of accountability in addressing the political resource curse, and in Section 6 we discuss the potential consequences of reduced discretion. Section 7 covers robustness checks and the final Section 8 concludes.

2 Context and Institutional Background

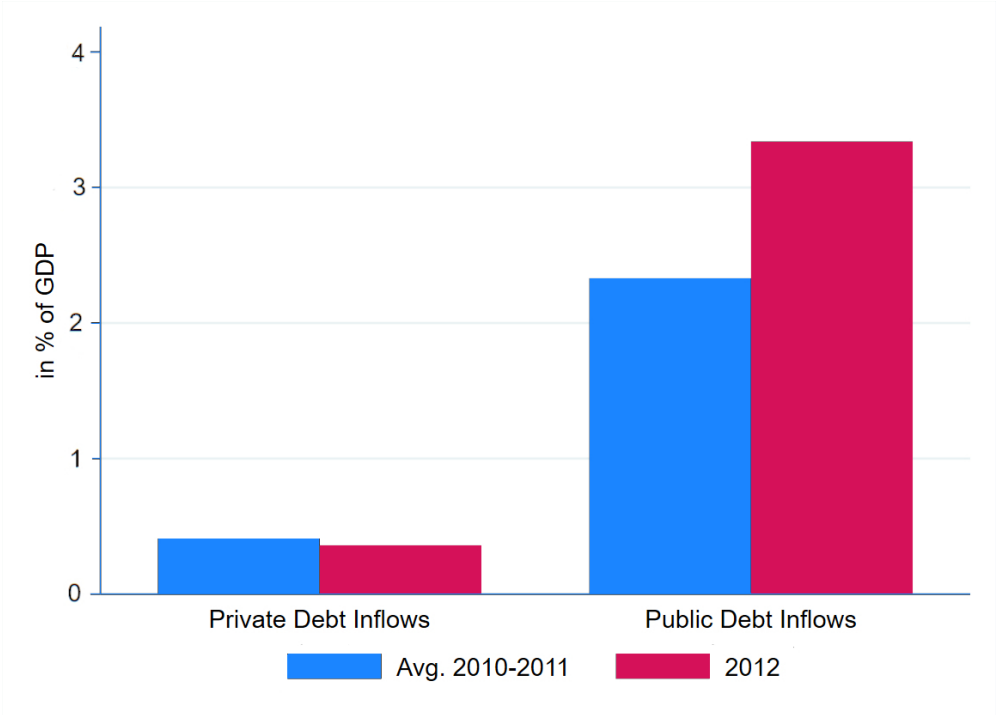
2.1 The WGBI inclusion and public inflows windfall

The first quasi-natural experiment we examine provides an ideal setting to study the effects of public resource booms, as it triggered a substantial inflow of capital from foreign investors into a specific asset-namely, government bonds. The event was both unexpected and undetermined by the country's economic fundamentals. On April 16^{th} 2012, Citigroup announced that 11 Southern African sovereign bonds would be eligible for inclusion in the WGBI.[8] Reflecting the surge in foreign demand for these assets, Sienaert (2012) estimates that sovereign inflows ranged from USD 5 to 9 billion in the days immediately following the announcement, equivalent to up to 10 percent of total market capitalization. Consistent with these findings, Figure 1 illustrates a sharp increase in foreign portfolio investment following the announcement, with this inflow concentrated exclusively in government debt. Specifically, in the year immediately following the inclusion, public inflows increased by one percent as a share of GDP. The inclusion therefore generated a significant capital windfall, driven by the change in bondholder composition, as foreign investors increased their holdings of South African sovereign bonds. The importance of this shock is

[8] See Broner et al. (2021) for the identification of the exact date.

amplified by the nature of the WGBI itself, which exclusively includes sovereign bonds denominated in local currency, thereby influencing domestic financial markets more directly.

Figure 1: Balance of payments inflows in South Africa



Notes: The blue bar represents the average of balance of payments inflows as a percentage of GDP in South Africa for the two years before the inclusion in the index. The red bar shows the balance of payments inflows as a percentage of GDP in the year of inclusion. Both bars are reported for private and public debt inflows. *Source:* Mariani and Marchesi (2023).

As discussed in Mariani and Marchesi (2023), South Africa's inclusion in the WGBI was part of a broader Citigroup strategy to diversify the index's coverage and was not driven by changes in the country's economic fundamentals. Furthermore, at the time of inclusion, at least six other emerging countries –Chile, China, Czech Republic, Hong Kong, Israel, and Qatar– also met the eligibility criteria for WGBI inclusion, but only China was subsequently included in 2021.[9] South Africa, in particular, had satisfied all entry requirements since 2009, yet was not selected until three years later. The entry criteria specified (i) a minimum market capitalization of USD 50 billion, (ii) a credit rating of at least A-/A3 by Standard and Poors and Moodys, respectively, and (iii) no barriers to entry. South Africa's sovereign debt market capitalization exceeded the threshold as early as the 1990s, there were no restrictions on capital inflows following the abolition of the Financial Rand System in 1995 (Molemoeng, 2014), and Moody's assigned

[9]For more details, see the IMF Global Debt Database, the IMF Capital Control Database (Fernández et al., 2016), and Fuchs and Gehring (2017).

a rating above the required threshold beginning in 2009. As established in prior literature, international investors tend to replicate index compositions, promptly adjusting their portfolios in response to index rebalancing events (Cremers et al., 2016; Raddatz et al., 2017; Pandolfi & Williams, 2019). Notably, the capital inflows triggered by South Africa's inclusion took the form of sovereign debt, which imposed no restrictions on how the government could allocate these funds.

2.2 Corruption and the 1999 Arms Deal

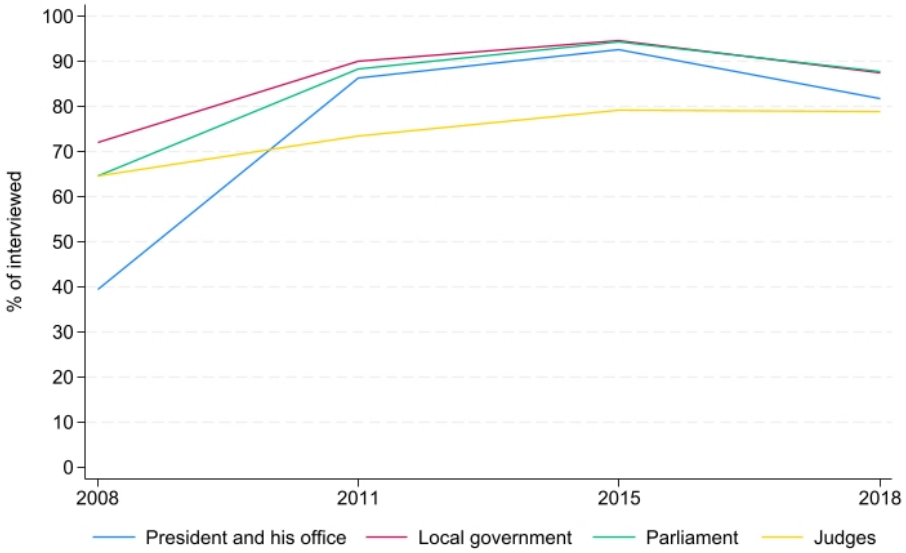
South Africa has served as a critical case in the study of governance, democracy, and economic development in the post-apartheid era. Since the end of apartheid in 1994, the ANC has maintained a dominant position in South African politics. However, public dissatisfaction with the government has grown steadily over time, driven by persistent economic challenges, such as income stagnation, high unemployment rates, and deteriorating public services. By 2024, public discontent had reached unprecedented levels, with many South Africans expressing frustration over the ANC's perceived failure to fulfill the promises of a better life made during the democratic transition. This culminated in the party losing its parliamentary majority for the first time in 30 years (The Economist, 2024).

A significant factor contributing to this discontent has been the perception of widespread government corruption, particularly during the presidency of Jacob Zuma (2009-2018). As shown in Figure 2, the percentage of Afrobarometer respondents who believed that at least some government officials –including the President– were involved in corruption surged from about 40 percent in 2008 to 86 percent in 2011. Figure 2 also illustrates that perceptions of corruption in local government (red line) and Parliament (green line) –both largely controlled by the ANC– also increased during this period, albeit at a slower pace. Conversely, perceptions of corruption among judges (yellow line) –an independent branch of government– increased steadily over the years.

The peak in corruption perception closely coincided with public bribery admissions in June 2011 by the multinational Saab (Sweden), which also implicated BAE Systems (UK), as well as the publication in August 2011 of an internal report by Ferrostaal (Germany) related to the 1999 South African Arms Deal. These firms had paid multi-million-dollar bribes to secure a lucrative arms contract with the South African government (BBC, 2011; WSJ, 2011). In response to growing pressure, on 24 October 2011, President Zuma established the Seriti Commission to investigate corruption allegations during the 1999 deal and the potential involvement of high-ranking officials in Zuma's cabinet (BBC, 2011). Additionally, on the same day, President Zuma dismissed the Cooperative Governance Minister Sicelo Shiceka (who committed

unauthorized spending) and the Public Works Minister Gwen Mahlangu-Nkabinde, and suspended the police chief Bheki Cele (implicated in alleged unlawful property deals) (BBC, 2012).[10]

Figure 2: Corruption perception of the powers of the state



Notes: The blue line represents the percentage of people who answered "At least some of them" to the question: "How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: The President and Officials in his Office?", over the years. The red line shows responses regarding "Local government," the green line for "Parliament," and the yellow line for "Judges." The data refer to the years 2008, 2011, and 2015. *Source:* Afrobarometer data.

During this period, the South African government implemented several anti-corruption measures aimed at enhancing transparency and accountability, particularly at the local government level. These measures included stricter budget reporting regulations and the publication of a "Restricted suppliers" list, which identified companies and individuals banned from doing business with the public sector due to corrupt practices.[11] Notably, the list controversially included high-ranking cabinet member Ayanda Dlodlo, who had been blacklisted since 2010 due to her involvement with a company found guilty of fraud (News24, 2012).

Overall, South Africa provides a compelling case to explore the intricate links between governance, corruption, and economic policy. The corruption revelation, along with the central governments response, suggests that there were meaningful accountability repercussions for Zuma's cabinet and the broader central government. Notably, the heightened accountability at the central level also influenced local

[10] Bheki Cele was officially fired few months later, in June 2012.

[11] This effort was supported by the introduction of MFMA Circular 56 of 2011, which aimed to strengthen financial oversight and promote greater transparency at the municipal level.

governments, prompting subsequent transparency measures. The unique nature of these revelations – whistleblowing by multinational enterprises (MNEs) about a deal that occurred 12 years earlier– makes this episode an ideal case for the quasi-natural experiments we exploit to examine how information disclosure and its effects on accountability can help mitigate the political resource curse.

2.3 Government in South Africa

South Africa has a parliamentary system, with 400 members of the National Assembly elected every five years through a closed party-list proportional representation system.[12] Seats are allocated across ten multi-member constituencies, consisting of one national constituency and nine regional constituencies, with each region corresponding to a province. Members are assigned to seats based on their parties' "national" and "regional" lists, in proportion to the votes each party receives.[13] The governing party is the one that wins the election obtaining more than 50 percent of the seats in the National Assembly.[14] Since the end of apartheid in 1994, the governing party in South Africa has always been the ANC.[15] Given that South Africa follows a parliamentary system, rather than a presidential one, parties choose their leader before the elections with citizens effectively voting for the party and, by extension, the leader chosen by that party. According to Section 86(1) of the Constitution of the Republic of South Africa (1996), it is the National Assembly that elects a President from among its members.[16] Once the President is chosen, as outlined in Section 91 of the Constitution, they are responsible for appointing the members of the cabinet, which includes the Deputy President and ministers. All cabinet members must be drawn from the National Assembly.[17] Since members of the National Assembly are elected through parties national and regional lists, ministers do not maintain a strong or direct link to a territorial constituency. This institutional setup suggests that birth-region favoritism may be more prominent. Moreover, ministers are primarily responsible for managing their respective departments (Walters et al., 2023).

South Africa has two other levels of government: provincial and municipal. The municipal government is

[12] The national elections relevant to our sample were held in 2004, 2009, and 2014.

[13] Details about the seat allocation process in the National Assembly are provided by the Independent Electoral Commission of South Africa.

[14] It is important to note that the South African Parliament consists of two chambers: the National Assembly and the National Council of Provinces (NCOP). The National Assembly is elected to represent the people, while the NCOP represents the provinces and ensures their interests. However, the NCOP's role in the legislative process is much more limited.

[15] The national election of April 1994 was the first in which all adult South Africans had the right to vote. Under apartheid, only white people were allowed to participate in meaningful political representation, while non-white populations were systematically excluded from political decision-making (Kroth et al., 2016).

[16] The President serves as both the Head of State and head of the national executive, as outlined in Section 83(1) of the Constitution.

[17] The President may select no more than two ministers from outside the National Assembly.

further divided into three types of municipalities: (i) metropolitan municipalities, which mainly consist of large cities (such as Johannesburg); (ii) district municipalities, which cover larger areas that include multiple local municipalities; and (iii) local municipalities, which are smaller areas that fall within district municipalities. Citizens elect both provincial and municipal councillors. Provincial elections are held every five years, simultaneously with the national elections, where voters elect members of provincial parliaments. Two years later, citizens participate in local government elections to elect members of municipal councils.[18] For local and metropolitan municipalities, voters elect all municipal council members, whereas, in district municipalities, citizens elect only 40 percent of the councillors, with the remaining 60 percent is selected from local councillors designated to represent their areas at the district level.

Administratively, South Africa is divided into 9 provinces, which are further divided into 52 districts –8 metropolitan municipalities and 44 district municipalities. At a lower level, there are 205 local municipalities, with both local and metropolitan municipalities subdivided into wards. Since local and metropolitan municipalities do not share resources with lower administrative levels and have similar local electoral rules, we treat them as a homogeneous entity. Therefore, we exclude district municipalities from the analysis.

2.4 Municipal finance

The Constitution establishes the division of responsibilities across different levels of government. The national government is responsible for setting policy initiatives and strategic development goals for both provinces and municipalities. In contrast, the primary role of municipalities is to deliver local services. Section 152 of the Constitution emphasizes that municipalities must ensure the sustainable provision of services to communities while promoting social and economic development. In addition, the "Local Government: Municipal Systems Act" (32 of 2000) outlines the general duties of municipalities, emphasizing that they should prioritize meeting the basic needs of their communities. However, not all services are directly managed by municipalities. For example, water, sanitation, and refuse collection are handled locally, while education, policing, and electrification are managed at the national level. To finance service delivery and their activities more broadly, municipalities can rely on property taxes, service charges, shares of national taxes, grants, and loans.[19] These resources are managed over a financial year that

[18] Relevant local elections for our analysis occurred in 2006, 2011 and 2016.

[19] As noted by Oosthuizen and Thornhill (2017), Section 229 of the Constitution allows municipalities to generate their own revenue by imposing property rates and surcharges on service fees. However, municipalities do not have the authority to collect income tax, value-added tax, general sales tax, or customs duties. The "Division of Revenue Act" (DoRA) governs the distribution of grants to municipalities. This document is introduced in the National Assembly by the Minister of

starts on the 1^{st} of July of year n and ends the 30^{th} of June of year $n+1$.[20] To align with the way municipalities operate, we conduct our analysis using the financial year as the reference period. Since property tax and service charges are collected directly by municipalities, our focus is on grants, which are managed by national departments under the direction of the respective cabinet ministers.

Grants can be classified into operating and capital. Operating grants are intended to finance the daily activities of the municipality, such as providing electricity or paying salaries, while capital grants are used for larger projects, such as infrastructure development. Grants can also be conditional or unconditional. Conditional grants are earmarked for specific types of expenditure, such as the Municipal Infrastructure Grant, which is intended for infrastructure projects. In contrast, unconditional grants are direct financial transfers from the national government with no strings attached. While both capital and operating grants can be conditional or unconditional, capital grants are typically conditional and align with the government's strategic development priorities (Walters et al., 2023).

On the one hand, the most important component of operating grants is the *equitable share*, which is allocated according to a specific formula that is periodically reviewed. This grant typically accounts for nearly 50 percent of the total transfers received by a municipality from the government (Hobdari et al., 2018). The formula takes into account various socioeconomic and demographic factors of each municipality, including the number of households, the proportion of poor households, the unemployment rate, reported property values, total household income, the percentage of households living in tribal areas, and the number of seats in the municipal council. On the other hand, capital grants are only partially determined by a specific allocation rule. On average, about half of total capital grants, primarily consisting of the Municipal Infrastructure Grant, are allocated using a formula that considers poverty levels and the specific functions of the municipality.[21] As a result, capital grants are often described as particularly "political" due to the limited transparency in the process of identifying their recipients (De Kadt & Lieberman, 2020).

For this reason, the paper focuses on the allocation of capital grants, as this is the context in which a given minister –the head of the department responsible for distributing the funds– may exercise some discretion over how grants are allocated. Ministers' discretion is reflected in their ability to influence departmental decisions on the allocation of funds to specific municipalities, as there are no binding constraints limiting

Finance as the "Division of Revenue Bill," which, once adopted, becomes the DoRA.

[20] The explanatory summary of the "Division of Revenue Bill" is published in the Government Gazette in January or February of financial year $n-1$, indicating that the grants budget is established during the previous financial year.

[21] Specifically, the formula takes into account factors such as the total number of households, the number of poor households, and the number of poor households lacking access to essential services like water, sanitation, and waste collection.

the departments discretion in this process. In Section 7, we provide evidence that operating grants are not subject to political favoritism exerted by cabinet members. The next section describes the data.

3 Data and descriptive evidence

3.1 Municipal finance data

To conduct the analysis, we combine data on municipal finance from the South African National Treasury (Municipal Finance Data, 2023), information on the birth regions of cabinet members (Asatryan et al., 2023; Widmer & Zurlinden, 2022), and socioeconomic variables at the municipal level (Census 2011 data provided by Statistics South Africa (2015)), covering the period from July 2008 to June 2017. Due to the structure of the municipal finance dataset, we focus on the financial year, which runs from July of year n to June of year $n+1$. For consistency, throughout the paper, we refer to each financial year by the ending year; for example, the financial year 2009 refers to the period from July 2008 to June 2009. Since the inclusion in the WGBI occurred in April 2012 –near the end of the 2012 financial year– financial year 2013 represents the first full year affected by the inclusion.

The municipal finance data are provided by the South African National Treasury, which collects budgetary and financial documents from municipalities across the country.[22] Information about grants can be retrieved from three different datasets: (i) the "Conditional Grants," (ii) the "Capital Acquisition," (iii) the "Income and Expenditure." The first dataset contains detailed information on both operating and capital grants but is only available from 2013 onward, excluding the years prior to inclusion. The "Capital acquisition" dataset reports data exclusively on capital grants, but it does not provide sufficient information on the criteria used to collect these data. Finally, the "Income and Expenditure dataset reports both capital and operating grants, details other operating revenues and expenditures, and, most importantly, outlines the criteria used to collect the data. For these reasons, we rely on the "Income and Expenditure dataset for our main analysis, while we use the "Capital Acquisition" dataset in the robustness analysis.

The "Income and Expenditure" dataset explicitly distinguishes between unconditional and conditional grants. According to the financial statements of each municipality, "unconditional grants are classified as revenue when the grant is receivable," whereas "conditional grants are classified as revenue to the extent that the municipality has complied with the criteria specified in the agreement." In addition, it

[22] The database is accessible at https://municipal data.treasury.gov.za/.

is specified that "if conditions are not met, the received funds are repayable."[23] Since capital grants are typically conditional, whereas operating grants are mainly unconditional, capital grants can only be classified as actual disbursements once the municipality has met the required conditions.

All the datasets provided by the South African National Treasury allow for the classification of grants by sector. The 16 available sectors are: budget and treasury office, community and social services, corporate services, electricity, environmental protection, executive and council, health, housing, planning and development, public safety, road transport, sport and recreation, waste management, waste water management, water, and other. Finally, we use data defined as "Audited actual" to ensure the accuracy and reliability of the financial figures used in the analysis.

3.2 Birth municipalities

As a measure of regional favoritism, we consider the place of birth of each South African cabinet member. Since the analysis focuses on a single country, some variation in the change of status of the municipality is needed in order to identify the effect of the inclusion on the allocation of subnational grants. For this reason, we focus on the birthplace of cabinet ministers, rather than, for example, that of the country's leader, as the latter would not provide sufficient variation in regional favoritism across municipalities.

Asatryan et al. (2023) provide a comprehensive analysis of a large set of the governing elite, not just focusing on the primary leader. They manually collect the birthplaces of these elites on a global scale. Specifically, Asatryan et al. (2023) report the name, the date of birth (and death), the period in which ministers were in power, their official position, the party, and various other pieces of information.[24] Using their data, we are able to identify the place of birth and the birth province of each South African cabinet members over the financial years 1967-2017. This information is reported as of July of each year, meaning the data on cabinet members correspond to the beginning of each financial year. Since the original coverage of the dataset for South Africa includes about 80 percent of all cabinet members from 2009 to 2017, we complement their data with information available in Widmer and Zurlinden (2022). These authors report the names, positions, and the months during which South African cabinet members were in power up until the end of 2015, allowing us to slightly expand the coverage of our

[23] An example of financial statement which clearly identifies the criteria is reported in the Knysna Financial statements for the financial year 2017 and available at: https://www.knysna.gov.za/government/important-documents/financial-statements/.

[24] The dataset also includes information on the President, the Deputy President, the Governor of the central bank, the Ambassador to the US, and the permanent representative to the UN. However, we exclude the latter three since they are not members of the cabinet and are not relevant to the focus of the analysis.

dataset. Additionally, we manually retrieved information on the birthplaces of three ministers who were not included in the two datasets.[25] In summary, we are able to rely on data covering approximately 93 percent of all South African cabinet members from the financial years 2009 to 2017, resulting in a total of 298 minister-year pairs out of 322.

Finally, we construct a dummy variable that equals one if a municipality is the birthplace of at least one cabinet member in power at the beginning of each financial year. To account for the fact that the same municipality may be the birthplace of multiple ministers, we compute a measure of favoritism intensity. This measure reflects the number of ministers born in the same municipality who are still in power at the beginning of each financial year.

3.3 Descriptive Evidence

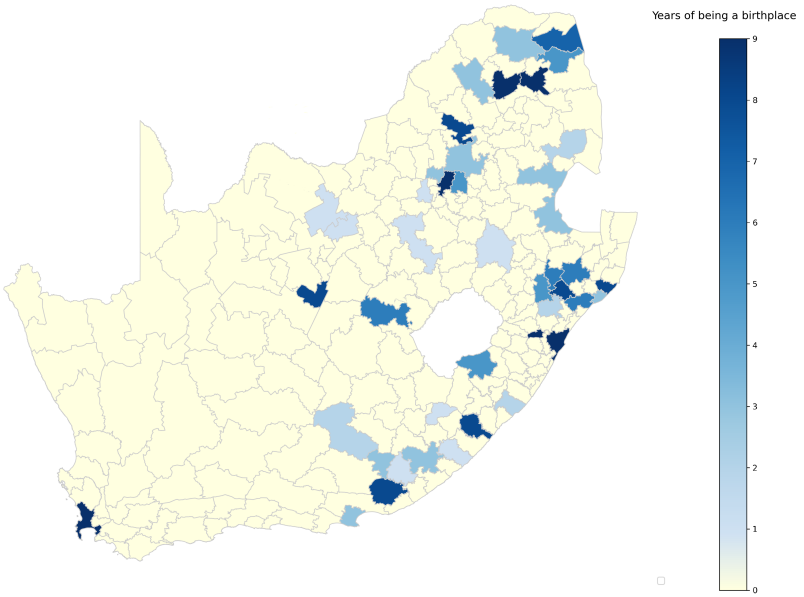
In this section, we provide descriptive evidence on how the of sovereign debt inflows interact with political favoritism on the provision and allocation of grants. First, Figure 3 shows the number of years each municipality served as the birthplace of at least one cabinet member in power during the period from July 2008 to June 2017. Blue areas represent municipalities that have been the birthplace of a cabinet member, with the shade of blue indicating the number of years –ranging from one year (light blue) to nine years (dark blue). Yellow areas indicate municipalities that are not the birthplace of any cabinet member. As can be seen, there is significant variation across space, with lower population density municipalities being less represented, as shown by Figure A1 in Appendix A. In our sample, 43 municipalities have been the birthplace of at least one cabinet member: 36 are local municipalities, and 7 are metropolitan municipalities.

Notably, the local municipalities of Greater Tzaneen, Msunduzi, and Polokwane, as well as the metropolitan municipalities of Cape Town, Ethekwini, and Johannesburg, can consistently be classified as birthplaces throughout the sample period.[26] The number of cabinet members in power at the beginning of each financial year and born in a given municipality is displayed in Figure A2 in Appendix A, highlighting

[25] We also identified two errors in the recorded birthplaces of ministers, which were incorrectly coded in the original dataset. Specifically, we replaced Minister Sibusiso Bengu with Sibusiso Joel Ndebele for the financial years 2011-2014, and we replaced Minister Ayanda Dlodlo with Richard Baloyi for the financial year 2012.

[26] Cabinet members were born in 20 out of the 44 district municipalities as well. Among them, Capricorn, Mopani, and Umgungundlovu can consistently be classified as birth districts throughout the sample period. Regarding provinces, KwaZulu-Natal has the highest number of birth municipalities, while Northern Cape and Western Cape are the provinces with only one birth municipality—Sol Plaatje and Cape Town, respectively. However, according to the 2011 Census, the Northern Cape province accounts for only about 2 percent of South Africa's total population, while the Western Cape accounts for 4 percent, excluding the municipality of Cape Town.

Figure 3: Birth municipalities of cabinet members in South Africa, July 2008 - June 2017



Notes: The map shows the number of years each municipality spends being the birthplace of at least one cabinet member in power during the period July 2008 - June 2017. Blue areas represent municipalities that are the birthplace of at least one cabinet member, while yellow areas indicate municipalities that are not the birthplace of any cabinet member during this period. The boundaries reflect the demarcation changes that occurred in May 2011.

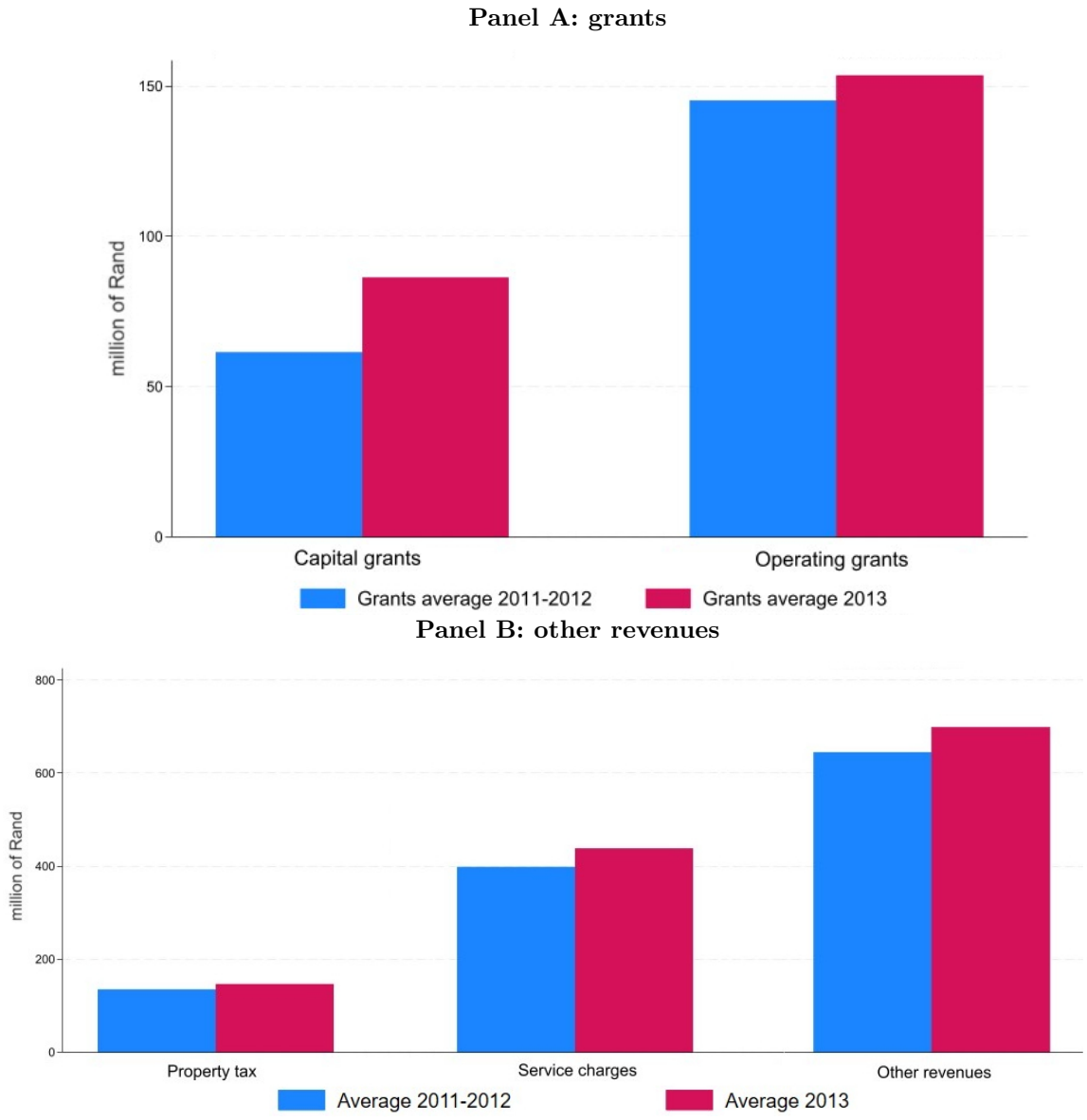
variation across time. While Table A1 reports the number of municipalities that are the birthplace of cabinet members over the sample period for which financial data are available, Table A2 reports the total number of ministers and the number of new ministers for each financial year.[27]

As the next step, we conduct a descriptive analysis of the impact of the inclusion event on municipal revenues, focusing on both capital and operating grants. Panel A in Figure 4 shows the average real amount of capital and operating grants, expressed in millions of Rand, across all municipalities for the financial years 2011-12 and 2013, representing the periods before and after the inclusion. Both types of grants have been adjusted for inflation using the consumer price index at the end of each year. The data reveal a significant increase in the provision of capital grants following the WGBI inclusion. Interestingly, the amounts of capital grants increased more sharply compared to operating grants after the inclusion. Notably, average capital grants saw a substantial increase of approximately 41% (rising from 61 million Rand to 86 million Rand). In contrast, average operating grants grew by only about 6% (from 145 million Rand to 154 million Rand).

[27] Ulundi is the only birth municipality that does not report financial data for the year 2017.

This suggests that the additional resources post-inclusion were primarily allocated towards long-term financing needs. Panel B shows the average real amounts of property tax, service charges, and other revenues in millions of Rand across all municipalities. These sources of revenue grew at a rate approximately four times lower than that of capital grants, consistent with the expectation that they are not directly influenced by the increase in central government resources.

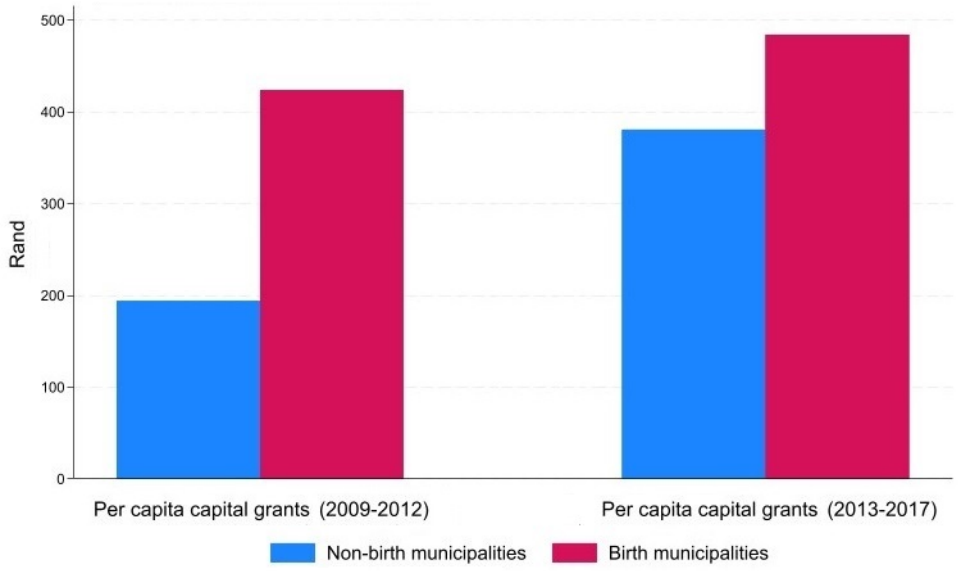
Figure 4: Municipal revenues in period 2011-12 and 2013



Notes: The blue bar represents the average revenue over the period 2011-12, while the red bar represents the average revenue in 2013. All values are deflated using the consumer price index at the end of the year and expressed in millions of Rand.

Lastly, we examine whether municipalities associated with cabinet members receive a higher amount of capital grants and whether the gap between birth and non-birth municipalities changed following the inclusion event. Figure 5 displays the total real amount of per capita capital grants measured in Rand, allocated to both non-birth and birthplaces of cabinet members.

Figure 5: Per capita capital grants before and after the inclusion in birth and non-birth municipalities



Notes: The figure displays the total per capita capital grants. The blue bar represents the grants allocated to non-birth municipalities, while the red bar represents grants allocated to birth municipalities. The left panel shows the grants allocated before the inclusion, while the right one shows the ones allocated after the inclusion. All grants are deflated using the consumer price index at the end of the year, divided by the respective population as of 2011, and expressed in Rand.

The left panel represents the period before the inclusion, while the right panel reflects the post-inclusion period. Although capital grants allocated to birth municipalities were consistently higher than those given to non-birth municipalities, the gap between the two reduced sharply over time. More specifically, before the inclusion, birth municipalities received approximately 400 Rand per capita in capital grants, compared to about 200 Rand allocated to non-birth municipalities. This indicates that birth municipalities received nearly two times more per capita capital grants than non-birth municipalities during this period. After the inclusion, per capita capital grants for birth municipalities increased to nearly 500 Rand, while those for non-birth municipalities rose to almost 400 Rand. This indicates that, post-inclusion, birth municipalities received 1.3 times more per capita capital grants compared to non-birth municipalities. Overall, both regions experienced an increase in capital grants after the inclusion, the growth rate was notably higher for non-birth municipalities (96 percent) compared to birth municipalities (14 percent).

In summary, birth municipalities consistently received higher per capita capital grants both before and after the inclusion. Nevertheless, the additional funds generated by the inclusion were disproportionately allocated to non-birth municipalities.

In summary, the descriptive evidence indicates that subnational grants increased following the inclusion, primarily driven by a rise in capital grants. Additionally, it shows that cabinet members' birthplaces consistently received more capital grants, which are more politically discretionary, than non-birthplaces. However, our here evidence suggests that non-birth municipalities began to catch up in terms of resources after the inclusion and the increase in capital grants provision, providing descriptive evidence that political favoritism might have reduced. The next section outlines the empirical strategy.

4 Empirical strategy

In this section, we describe how we examine the effects of the resource boom, along with the improvement in accountability, on the allocation of subnational grants by the national government during the period from 2009 to 2017. The dependent variable is the amount of real capital grants allocated to municipality m in sector s in year t.[28] Grants are deflated using the consumer price index calculated at the end of the period (World Development Indicators, 2023).

We estimate the effects of regional favoritism on the allocation of subnational grants and investigate whether these effects evolve over time in response to the two key events in our study. Our identification strategy exploits the variation in ministers' birth regions over time. By analyzing the heterogeneous effects over time, we explore how favoritism evolves in response to the improvement in government accountability and the resource boom. The regional favoritism variable is measured by the number of ministers born in the same municipality. Distinguishing grants by sector enables us to include municipality-grants sector fixed effects and an interaction between sector specific dummies and non-linear time trends. The municipality-grant-sector fixed effects account for time-invariant factors specific to municipality-grant pairs, while the sector-specific dummies with non-linear time trends control for the time-varying supply of capital grants at the ministerial level. Given that the dependent variable contains a large number of zeros, we estimate the following equation using a Poisson Pseudo-Maximum Likelihood (PPML) estimator:

[28] Since we focus on sector-level grants, their values are not expressed in per capita terms. As a robustness check, we also consider both the inverse hyperbolic sine and logarithmic transformations of the real per capita grants received by municipality m in year t, without distinguishing by sector.

$$Grant_{s,m,t} = exp\{\beta_0 + \delta_1 Cabinet\_members_{m,t} + \delta_2 Cabinet\_members_{m,t} \times Post\_WGBI + \\ + \lambda_t \times X_{m,2011} + \alpha_{m,s} + \tau_{s,t} + \epsilon_{s,m,t}\} \quad (1)$$

where $Grant_{s,m,t}$ denotes the amount of real capital grants allocated to sector s in municipality m in year t. $Post\_WGBI$ is a dummy variable equal to one if $t > 2012$, and 0 otherwise.[29] $Cabinet\_members_{m,t}$ denotes the number of ministers born in municipality m and in power at the beginning of year t.[30] $X_{m,2011}$ is a vector of control variables measured in 2011 and interacted with a non-linear time trend λ_t, to avoid endogeneity issues. $\alpha_{m,s}$ represents municipality-grant sector fixed effects, and $\tau_{s,t}$ represents grant sector-year fixed effects. Standard errors $\epsilon_{s,m,t}$ are clustered at the municipality level. Finally, δ_1 and δ_2 are the coefficients of interest, capturing the role of favoritism in the allocation of grants both before and after the two key shocks.[31]

Following Carozzi and Repetto (2016), the control variables are selected based on the main components of the formula that are expected to explain the allocation of grants. As described in Section 2.4, part of the formula for capital grant allocation (such as the Municipal Infrastructure Grant) includes factors such as the total number of households, the total number of poor households, and the number of poor households facing difficulties in accessing basic services, particularly water and sanitation.[32] Since these are the most important components of the formula, we include the quartile of the household distribution in which the municipality falls, along with the number of poor households as controls (as available from Census data in 2011) in the baseline specification.[33] We also include a dummy variable that equals one if the national governing party (the ANC) holds the majority in the municipal council of municipality m as a result of the local election in 2011.[34] This variable is included to control for the possibility that the national governing party may allocate more grants to municipalities that are politically aligned, based on the results of the election immediately preceding the inclusion. As a robustness test, in Section 7 we

[29] We define $t > 2012$ because the improvement in accountability began at the start of the 2012 financial year, while the capital inflow windfall occurred at the end of the year.

[30] As a robustness check, we modify the measure of favoritism by considering only the number of ministers with spending authority who were born in municipality mm and held office at the start of year t.

[31] We also implement an alternative identification strategy, inspired by the framework proposed by Imai et al. (2023), which explicitly accounts for treatment history.

[32] The component of the formula are outlined in the "Division of Revenue Bill" of each financial year. Although there have been some changes over time, the components mentioned above have consistently remained among the most important factors in the allocation formula.

[33] The decision to use Census data, which are collected every ten years, is based on the formula. Data about Census 2011 are available on the Statistics South Africa website (https://www.statssa.gov.za).

[34] The data on the election results can be found at https://www.elections.org.za/pw/, by looking up the results for each election. The municipal election took place on 18^{th} May 2011, near the end of the 2011 financial year. The dummy variable for the winning party is equal to one if the ANC holds more than 50 percent of the seats in the municipal council in 2011.

also consider a richer specification, which includes: the percentage of households with access to piped water, adequate refuse removal, and adequate sanitation in 2011, as outlined in the "Division of Revenue Bill."[35] The results are robust across the different specifications. Although all of these variables are components of the Municipal Infrastructure Grant formula, we choose a more parsimonious specification for the baseline model. The definitions and sources of the variables used in all specifications are provided in Table A3 in Appendix A.

As discussed in the Introduction, both political leader (Hodler & Raschky, 2014; Burgess et al., 2015; Dreher et al., 2019) and ministers (Widmer & Zurlinden, 2022; Asatryan et al., 2023) are often involved in regional favoritism. Thus, we expect a positive sign of the coefficient δ_1. Furthermore, resource windfalls are often followed by an increase in rent-seeking and corruption (Tornell & Lane, 1999; Brollo et al., 2013), which suggests that δ_2 should also be positive. However, a positive shock in accountability may reduce corruption (Ferraz & Finan, 2008, 2011; Bobonis et al., 2016), leading to a negative sign of the coefficient δ_2. As a result, the effects of the two shocks on favoritism are difficult to predict. Still, if the information shock triggered by whistleblowing from MNEs prevails and leads to increased accountability, we anticipate a reduction in favoritism following the two shocks, implying a negative sign for δ_2.

From a broader perspective, the allocation of resources to the birthplaces of ministers could be justified by their superior local knowledge, which may enable more effective use of public funds in those areas. If this interpretation holds, the role of accountability in improving the efficiency of grant allocation would be limited. To investigate this possibility, we assess whether more corrupt municipalities received preferential treatment both before and after the two shocks. If regions that received more resources are also those with higher levels of corruption, this would challenge the hypothesis that ministers' local knowledge drives the allocation process. Furthermore, if more corrupt municipalities received greater resources prior to the improvement in government accountability –but relatively fewer afterward– this would provide support for the role of improved accountability in addressing the resource curse. In particular, enhanced accountability should disproportionately benefit areas that have historically exhibited weaker governance.

To identify the effect of enhanced accountability on corruption, we define a "corrupted municipality" as one that reported irregular expenditure in 2011. Irregular expenditure serves as a proxy for local-level

[35]The share of households with access to piped water is calculated for households with water inside their dwellings, in the yard, or within 200 meters of their home. The share with access to adequate sanitation includes households with flush toilets, chemical toilets, pit toilets with ventilation, or ecological toilets. The share with access to adequate refuse removal accounts for households with weekly refuse removal services, regardless of their location, as well as those with access to less frequent refuse removal, communal refuse dumps, or central collection points in tribal or farm areas. Additionally, households with their own refuse dumps are included only if they reside in farm areas.

corruption, as it captures spending by municipal officials that violates applicable laws or regulations.[36] Based on this definition, we estimate the following equation using the PPML estimator:

$$\begin{aligned} Grant_{s,m,t} = exp\{&\beta_0 + \delta_1 Pre\_WGBI \times Cabinet\_members_{m,t} \times IrregularExpenditure2011 + \\ &+ \delta_2 Pre\_WGBI \times Cabinet\_members_{m,t} \times NoIrregularExpenditure2011 + \\ &+ \delta_3 Post\_WGBI \times Cabinet\_members_{m,t} \times IrregularExpenditure2011 + \\ &+ \delta_4 Post\_WGBI \times Cabinet\_members_{m,t} \times NoIrregularExpenditure2011 + \\ &+ \lambda_t \times X_{m,2011} + \alpha_{m,s} + \tau_{s,t} + \epsilon_{s,m,t}\} \end{aligned} \tag{2}$$

where $IrregularExpenditure2011$ ($NoIrregularExpenditure2011$) is a dummy variable indicating whether the municipality had irregular (no irregular) expenditure in 2011. The coefficient δ_1 (δ_2) captures the difference in capital grant allocations between birth and non-birth municipalities with higher (lower) levels of resource misuse prior to the inflow episode. Similarly, the coefficient δ_3 (δ_4) captures the corresponding gap in capital grant allocations after the inclusion. The control variables are the same as in Equation 1, and standard errors are clustered at municipality level.[37] If cabinet members favor their birth regions primarily for illicit appropriation of resources –rather than relying on their superior local knowledge to allocate resources more effectively– we would expect a positive coefficient on δ_1, while δ_2 would show no significant effect. Conversely, if improved accountability plays a role in mitigating the resource curse, we should not observe positive signs for the δ_3 and δ_4 coefficients. The next section presents the results.

5 Results

5.1 Main results

We begin by investigating whether political favoritism by cabinet members influenced the allocation of capital grants before and after the corruption scandal and the resource windfall shocks, using the specification presented in Equation 1. The results are presented in Table 1.[38] Column 1 includes municipality-grants sector fixed effects and non-linear time trends interacted with sector specific dummies, while

[36] Data on irregular expenditure for the period 2012-2017 are provided by the South African National Treasury (Municipal Finance Data, 2023), while data for 2010 and 2011 were manually collected from the "Audited Financial Statements" of each municipality. Due to limited availability, however, data for the 2009 financial year could not be retrieved.

[37] Since the specification involves a triple interaction term, we also control for the interaction between the *Post_WGBI* dummy and the *No Irregular Expenditure* 2011 dummy.

[38] Table A4 in Appendix A provides summary statistics for the variables used in this specification.

column 2 adds the baseline controls described in Section 4. Column 3, which represents our preferred specification, augments the model by interacting the political alignment dummy with non-linear time trends. Finally, column 4 restricts the sample to municipalities that were the birthplace of at least one cabinet member during the sample period. The inclusion of column 4 addresses the concern that municipalities that have never been the birthplace of a cabinet minister may differ significantly from those that have been a minister's birthplace at least once during the sample period. Across all specifications (columns 1-4), the results show that being the birthplace of a cabinet member during normal times is associated with a larger amount of capital grants received by the municipality, consistent with the presence of regional favoritism in the allocation of public resources (Asatryan et al., 2023). However, following the two shocks, the gap between birth and non-birth municipalities closes. Specifically, in the preferred specification (column 3), being the birthplace of an additional minister is associated with a 25 percent increase in capital grants prior to the shocks, ceteris paribus. After the shocks, this advantage effectively disappears, suggesting a reduction in regional favoritism.

Table 1: Favoritism and external shocks in South African municipalities by sector

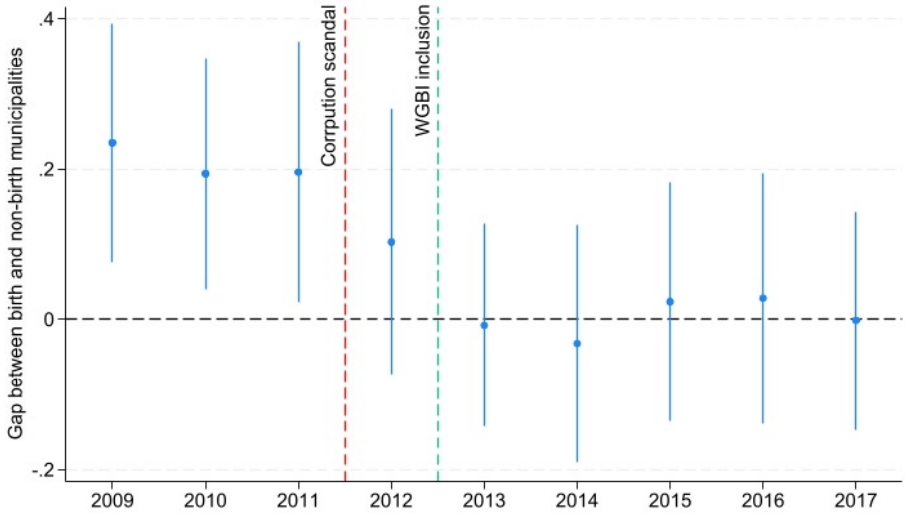
	Capital grants by sector			
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	0.193**	0.182**	0.226***	0.243***
	(0.082)	(0.080)	(0.077)	(0.090)
Post_WGBI ×	-0.194***	-0.196***	-0.182***	-0.157***
Municipality Cabinet Members	(0.021)	(0.032)	(0.030)	(0.030)
Observations	11,913	11,897	11,897	2,451
Municipalities x grants sector FE	Yes	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes	Yes
ANC 2011 winner x year			Yes	Yes
At least one cabinet member during our sample				Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Municipality Cabinet Members," an interaction term between the number of cabinet members and the post inclusion dummy which equals 1 for years $t > 2012$. All regressions control for municipality-grants sector fixed effects and grants sector times a non-linear time trend. Column 2 adds controls for the municipality dimension, captured by the quartile of the distribution of total households and the percentage of poor households in 2011, both interacted with non-linear time trends. Column 3 introduces a dummy variable equal to one if the ANC held the majority of seats in the municipal council in 2011, interacted with a non-linear time trend. Column 4 restricts the analysis to municipalities that had at least one cabinet member during the sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Figure 6 presents the dynamic effects of political favoritism over time. In the three years preceding the

inclusion event (marked by the vertical dashed green line), a consistent and positive gap in favor of birth municipalities is evident. Starting in 2011, by contrast, there is a marked decline in the disparity in capital grants allocated to birth versus non-birth municipalities. These findings stand in contrast to the political resource curse emphasized in prior literature (Tornell & Lane, 1999; Brollo et al., 2013), which suggests that political favoritism typically intensifies during periods of resource windfalls, thereby widening the gap. The reduction in favoritism observed here may instead be attributed to improved government accountability, potentially driven by greater information disclosure, as documented by Armand et al. (2020). Interestingly, the figure also shows no evidence of statistically significant political favoritism in the financial year immediately following the corruption scandal (indicated by the red dashed line), providing suggestive evidence for the accounting mechanism we propose.

Figure 6: Cabinet members dynamics effect on capital grants in South African municipalities



Notes: The figure presents the dynamic specification of Table 1's column 3. Reported 95 percent confidence intervals are based on standard errors clustered at the municipality level. The red dashed line marks the shock in accountability, while the green dashed line indicates the shock in resources.

In summary, the findings reveal a marked reduction in political favoritism following the corruption scandal and funding windfall shock. While cabinet members birth municipalities received more capital grants during normal times, this advantage disappeared after the shocks. The dynamic analysis provides suggestive evidence that the closing of this resource gap may be attributed to the leakage of corruption information, which likely enhanced political accountability.

5.2 Funding Windfall, Accountability and Political Favouritsm

In this section, we provide further evidence that improvements in government accountability explain the reduction in favoritism related to capital grant allocation observed in the previous section. Table 2 reports the results of the estimation of Equation 2. If the results presented in Table 1 are explained by an increase in government accountability following the capital windfall, we would expect a reduction in regional favoritism in municipalities characterized by irregular expenses before the shocks, as these areas would likely be more affected by the increased accountability.

The results presented in Table 2, column 1, support this hypothesis. Favoritism was observed only in birth municipalities that reported irregular expenditure in 2011, with these municipalities receiving preferential treatment relative to non-birth municipalities before the inclusion. Nevertheless, this disparity diminishes after the inclusion event. In contrast, no evidence of favoritism is found for birth municipalities without irregular expenditure, either before or after the inclusion. These findings remain robust when excluding the financial year 2011 (column 2) and when restricting the sample to municipalities with at least one cabinet member during the study period (column 3).[39]

To further support the hypothesis that government accountability drives our results, we differentiate between localities that are likely to respond more to the corruption information scandal based on factors such as information acquisition and better cognitive processing. As suggested by previous literature, not all individuals process information sufficiently to hold politicians accountable. Highly educated individuals, for example, are more likely to effectively process information, making them better equipped to assess government behavior. Consequently, the government may be incentivized to curb favoritism only in municipalities where citizens are capable of holding it accountable –those with higher levels of education (Persson et al. (2003), Glaeser and Saks (2006),Weitz-Shapiro and Winters (2017)). In line with this hypothesis, Table 3 provides evidence that municipalities with higher levels of education appear to drive the gap closure observed in our baseline results.[40] Specifically, while distortions in grant allocation persist in areas with lower education levels, these distortions diminish in municipalities where the population exhibits higher educational attainment.

Figure A3 in Appendix A provides further evidence that our baseline results are primarily driven by municipalities with irregular expenses in 2011 and those with higher levels of education. As shown in

[39]The financial year 2011 is excluded to address potential biases arising from the use of irregular expenditure heterogeneity during that year.

[40]Since we are examining heterogeneous effects based on education levels, we include as control the interaction term between the education dummy and a non-linear time trend.

Table 2: Political favoritism, external shocks and accountability in South African municipalities

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.235***	0.228***	0.252**
	(0.080)	(0.085)	(0.102)
× No Irregular Expenditures in 2011	0.272	0.301	0.423*
	(0.197)	(0.204)	(0.232)
Post_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.050	0.049	0.095
	(0.078)	(0.079)	(0.110)
× No Irregular Expenditures in 2011	-0.032	0.003	0.115
	(0.160)	(0.154)	(0.147)
Observations	11,280	9,777	2,118
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Includes 2011 financial year	Yes		Yes
At least one cabinet member during our sample			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion in municipality exhibiting local-level corruption in 2011; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism before the inclusion in non-corrupted municipalities; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion in municipalities exhibiting local-level corruption in 2011; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," that represents birth region favoritism after the inclusion in non-corrupted municipalities. All regressions control for municipality-grants sector fixed effects, a non-linear time trend interacted with grants sector dummies, the municipality dimension captured by the quartile of the distribution of households in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy variable equal to one if the ANC held the majority of seats in the municipal council in 2011. We also control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. In column 2, the financial year 2011 is excluded, while column 3 restricts the sample to municipalities with at least one cabinet member during the study period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Panel A and Panel B, the gap in capital grant allocations between birth and non-birth municipalities is positive and significant prior to the inclusion only if the birth municipality reported irregular expenditures and had higher education levels. Notably, this gap completely closes after the inclusion. These findings support the notion that government accountability is the main driver of our results, as populations in these areas are more likely to process information about the irregular use of resources and hold politicians accountable for corruption (Glaeser & Saks, 2006; Ferraz & Finan, 2008; Weitz-Shapiro & Winters, 2017).

Table 3: Political favoritism, external shock, accountability and information consumption

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Below Median High Education	0.381**	0.422**	0.381**
	(0.187)	(0.177)	(0.169)
× Above Median High Education	0.164**	0.173**	0.214***
	(0.082)	(0.079)	(0.080)
Post_WGBI× Mun. Cabinet Members			
× Below Median High Education	0.742***	0.75***	0.762***
	(0.179)	(0.172)	(0.173)
× Above Median High Education	-0.024	-0.033	0.023
	(0.089)	(0.086)	(0.078)
Observations	11,913	11,897	11,897
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
High education x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes
ANC 2011 winner x year			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Below Median High Education," that captures birth region favoritism before the inclusion in municipality in which the share of highly educated individuals is below the median; "Pre-WGBI × Mun. Cabinet Members × Above Median High Education," which represents birth region favoritism before the inclusion in municipality in which the share of highly educated individuals is above the median; "Post-WGBI × Mun. Cabinet Members × Below Median High Education," that captures birth region favoritism after the inclusion in municipality in which the share of highly educated individuals is below the median; "Post-WGBI × Mun. Cabinet Members × Above Median High Education," which represents birth region favoritism after the inclusion in municipality in which the share of highly educated individuals is above the median. All regressions control for municipality-grants sector fixed effects, a non-linear time trend multiplied by grant sector dummies and by a dummy variable equal to one if the municipality has a share of highly educated individuals above the median. Column 2 includes a non-linear time trend by the municipality dimension captured by the quartile of the distribution of households in which the municipality falls in 2011, and the percentage of poor households in 2011. Column 3 adds the interaction term between a non-linear time trend and a dummy variable that equals 1 if the ANC had the majority of seats in the municipal council in 2011. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table 4 then investigates whether the rise in corruption salience influenced voting behavior. The analysis draws on municipal election outcomes from 2011 –just before the Arms Deal revelations –and from 2016, after the scandal had become public (BBC, 2012). The dependent variable is a binary indicator equal to one if the ANC secured a majority of votes in the respective municipal election.[41] Looking at

[41]The specification includes municipality fixed effects and a non-linear time trend interacted with the municipality dimension, captured by the quartile of the distribution of households in which the municipality falls, as well as the percentage of poor households in 2011. We do not include our political control variable in this specification, as it now serves as the outcome of interest. However, we control for incumbency by including a dummy variable equal to one if the ANC was the

Panel A of the table, the results indicate that cabinet members' birthplaces penalized the ANC when public resources were used irregularly prior to the election, compared to non-birth municipalities without irregular expenditure (column 1). Notably, these effects are not present in the 2011 elections (column 2). Instead, they are concentrated in the 2016 election (column 3), when public awareness of corruption in the central government had increased substantially. These results support the idea that voters held politicians more accountable by reducing their political support for the ANC following the corruption scandal (Ferraz & Finan, 2008).[42] Moreover, comparing Panel B and Panel C of this table, we find that the increase in electoral accountability is statistically significant only in municipalities with higher levels of education. This finding lends further support to the notion that citizens cognitive abilities and political awareness play a key role in shaping the patterns observed in this section (Glaeser & Saks, 2006; Weitz-Shapiro & Winters, 2017).[43] In contrast, municipalities with lower levels of education (Panel C) appear to reward the ANC in birthplaces where corruption was present in 2011. This supports the idea that citizens must be able to process information effectively in order to hold politicians accountable for the misuse of public resources, and it is consistent with previous findings in the South African context (De Kadt & Lieberman, 2020).

In summary, we show that increased government accountability –driven by the heightened salience of corruption– can incentivize greater commitment to fighting corruption. This, in turn, offers a promising pathway to mitigate the political resource curse. While prior research demonstrates that resource windfalls tend to fuel rent-seeking and corruption in contexts with weak institutional quality (Tornell & Lane, 1999; Brollo et al., 2013), our findings suggest that enhanced government accountability can play a pivotal role in counteracting these effects (Armand et al., 2020).

incumbent party in that specific election.

[42] Using Afrobarometer data from the financial years 2009, 2012, and 2016, we directly test whether the perception of corruption increased in birth municipalities after the inclusion. We acknowledge that these data are not representative at the subnational level, but they still provide suggestive evidence. Specifically, we estimate a linear probability model (LPM) using OLS, where the dependent variable is a dummy equal to one if the interviewed individual perceives at least one member of a specific state power as corrupt. Since the data are not panel, we cannot control for individual fixed effects. However, we include municipality fixed effects, municipal controls interacted with a non-linear time trend as in Equation 1, and individual characteristics following De Kadt and Lieberman (2020). Table A5 in the Appendix A shows that the corruption perception of the President and his office (column 1), the Parliament (column 2), and the local governments (column 3) in birth municipalities increased after the corruption scandal. In contrast, the only political independent body, represented by judges (column 4), do not exhibit any significant change when comparing birth and non-birth municipalities after the event.

[43] Municipalities with high education levels are defined as those in which the share of residents aged 20 or older with higher education exceeds the median. Municipalities with low education levels fall below this threshold.

Table 4: Political favoritism, misuse of public resources and electoral accountability

	ANC Municipal Majority		
	(1)	(2)	(3)
Panel A: Full Sample			
Municipality Cabinet Members	0.144	0.064*	0.099*
	(0.099)	(0.037)	(0.059)
Irregular Expenditures Before the Election	0.023	0.060	0.079
	(0.037)	(0.042)	(0.053)
Mun. Cabinet Members × Irregular Exp. Before the Election	-0.112***	-0.037	-0.220***
	(0.031)	(0.045)	(0.072)
Observations	282	170	195
Panel B: High Education Sample			
Municipality Cabinet Members	0.113	0.030	0.101
	(0.135)	(0.018)	(0.066)
Irregular Expenditures Before the Election	-0.002	0.058	0.172*
	(0.052)	(0.063)	(0.093)
Mun. Cabinet Members × Irregular Exp. Before the Election	-0.106***	-0.036	-0.214***
	(0.029)	(0.025)	(0.081)
Observations	140	85	93
Panel C: Low Education Sample			
Municipality Cabinet Members	0.241	0.293	0.230
	(0.203)	(0.222)	(0.295)
Irregular Expenditures Before the Election	0.028	0.064	-0.013
	(0.054)	(0.048)	(0.062)
Mun. Cabinet Members× Irregular Exp. Before the Election	-0.291	0.500**	-0.403
	(0.225)	(0.243)	(0.309)
Observations	142	85	102
Municipalities FE	Yes		
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC incumbent control	Yes	Yes	Yes
Municipal election years	2011 and 2016	2011	2016

Notes: The dependent variable is a dummy variable representing if ANC obtained the majority of the votes at the municipal election. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, "Irregular Expenditures Before the Election," that is a dummy variable equal to one if the municipality reported any irregular expenditure in the year preceding the election, and "Municipality Cabinet Members x Irregular Expenditures Before the Election," that is the interaction among the two variables. All regressions includes a non-linear time trend interacted with the municipality dimension, captured by the quartile of the household distribution in which the municipality falls in 2011 and the percentage of poor households in 2011. "ANC incumbent control" is a dummy indicating if ANC held the majority in the previous election. Column 1 includes municipality fixed effects for the 2011 and 2016 municipal election years. While, column 2 includes the 2011 municipal election year, and column 3 includes only the 2016 municipal election year. Panel A reports estimate on the entire sample of municipalities. While, Panel B includes only municipalities where the share of citizens aged 20 years and older with higher education is above the median, and Panel C includes municipalities where the share is below the median. Robust standard errors are reported in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

6 The consequences of less discretion

In this section, we examine whether the use of public resources improved in the post-inclusion years, which were marked by a reduction in the discretionary allocation of capital grants. We begin by examining whether irregular expenditures declined in birth municipalities following the significant drop in grant allocations documented in the previous section. We then assess whether the reduction in central government grants affected the provision of local public goods, focusing on key public service outcomes.

Table 5: Political favoritism, accountability and misuse of public expenses

	Irregular Exp.	Unauthorised Exp.	Fruitless Exp.
	(1)	(2)	(3)
Municipality Cabinet Members	0.511**	-0.151	0.307
	(0.237)	(0.305)	(0.510)
Post_WGBI ×	-0.351***	-0.016	0.020
Municipality Cabinet Members	(0.104)	(0.090)	(0.325)
Observations	1,703	1,641	1,687
Municipalities FE	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes

Notes: The dependent variable are the total real amount of irregular (column 1), unauthorised (column 2), and fruitless (column 3) expenditure done by a municipality in a given year. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Municipality Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy, which is equal to one if $t > 2012$. All regressions control for municipality fixed effects, and a non-linear time trend interacted with the municipality's characteristics, including its quartile position in the distribution of households in 2011, the percentage of poor households in 2011, and a dummy variable equal to one if the ANC had the majority of seats in the municipal council in 2011. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Specifically, we first investigate whether political favoritism contributes to higher levels of irregular expenditures, which should decrease in the subsequent period as political favoritism diminishes. Column 1 of Table 5 does show that municipalities that were ministers' birthplaces had significantly higher levels of irregular expenditures prior to the inclusion, with these irregularities decreasing in the subsequent years.[44] These findings indicate that the enhancement of accountability likely played a role in reducing corrupt behavior among local officials. While, we do not find any statistically significant differences in other measures of public resources misuse, such as unauthorised (column 2) or fruitless expenses (column

[44]We include municipal fixed effects and controls as specified in Equation 1. Note that municipality-grant sector fixed effects and the interaction between the grant sector and a non-linear time trend are excluded, as irregular expenditures cannot be specified by sector.

3), between birth and non-birth municipalities both before and after the capital inflow episode. It is important to note that both unauthorised and fruitless expenditures do not necessarily violate the law. Therefore, the lack of significant changes in the coefficients before and after the shock is not surprising. Rather, since only irregular expenditures involve clear legal violations, these results provide support for our hypothesis.

As a second outcome, we analyze whether the provision of public goods changes in response to the two shocks, in both birth and non-birth municipalities. This additional analysis aims to assess whether birth municipalities maintain their level of public goods provision after the shocks. To assess the provision of public goods, we focus on outcomes such as access to piped water, adequate sanitation, and waste collection –key parameters in the formula used to allocate the Municipal Infrastructure Grant (for more details, see Section 2.4). We draw on data from the Community Household Survey conducted by Statistics South Africa (2008, 2017), which is designed to fill data gaps between national population and housing censuses and to provide estimates at finer geographical levels than other household surveys.

We estimate a linear probability model where the dependent variable is a binary indicator for household access to piped water, adequate sanitation, or waste collection –key dimensions of public goods provision by local governments.[45] Since the survey is only available for the years 2007 and 2016, we use the average number of cabinet members originating from the municipality and still in office up to four years prior to these dates as a proxy for regional favoritism. Our specification includes municipality fixed effects and municipality-level controls interacted with a non-linear time trend, as outlined in Equation 1. We also control for time-varying individual characteristics of the household head, following De Kadt and Lieberman (2020). More specifically, we include a dummy variable equal to one if the head of household is male, as well as their age and education level. In addition, we control for a dummy indicating whether the head of household is Black South African, a dummy for urban residence, and dummies for whether they speak Zulu or Xhosa.[46]

[45] We define access to piped water as a dummy equal one if the household has access to piped water inside the dwelling, inside the yard, or within 200 meters from their dwellings. Access to adequate sanitation is defined as a dummy equal to one if the household reports having a flush toilet, chemical toilet, pit toilet with ventilation, or ecological toilet. Access to weekly refuse removal is defined as a dummy equal to one if the household reports having refuse removal at least once a week. However, it is important to note that we are not measuring the adequate level of refuse removal as defined by the "Division of Revenue Bill." To properly assess it, we would need to know whether the household resides in an urban, tribal, or farm area, but this information is not available for the year 2007.

[46] It is important to note that, since information on urban residence and home language is only available in the 2016 wave of the Community Survey, we impute the average values of these variables at the municipality level from the 2016 data for the year 2011. Moreover, rather than restricting the sample to Black South Africans as in De Kadt and Lieberman (2020), we include a dummy variable for Black to control for this characteristic.

Table 6: Political favoritism, resource windfall and public goods provision

	Piped Water	Adequate Sanitation	Waste Collection
	(1)	(2)	(3)
Avg. Municipality Cabinet Members	-0.006	0.016**	0.012
	(0.007)	(0.006)	(0.010)
Post_WGBI ×	0.001	0.011***	-0.007
Avg. Municipality Cabinet Members	(0.004)	(0.004)	(0.006)
Observations	1,226,304	1,226,304	1,226,304
R-squared	0.295	0.297	0.506
Municipalities FE	Yes	Yes	Yes
Baseline formula controls in 2011 x period	Yes	Yes	Yes
ANC 2011 winner x period	Yes	Yes	Yes
Household head controls	Yes	Yes	Yes

Notes: The dependent variable is a dummy equal to one if the household has access to piped water (column 1), adequate sanitation (column 2), or refuse removal at least once a week (column 3). The variables of interest are "Avg. Municipality Cabinet Members," that is the average number of cabinet members from a municipality and still in office over the years 2004-2007, and "Post-WGBI x Avg. Municipality Cabinet Members," which is the interaction term between the average number of cabinet members from a municipality and stil in office over the years 2013-2016 and the post inclusion dummy (equal to one if $t > 2012$). All regressions control for municipality fixed effects, and a non-linear time trend interacted with the municipality dimension, including quartile of the distribution of households in which the municipality falls, the percentage of poor households in 2011, and a dummy variable equal to one if the ANC had the majority of seats in the municipal council in 2011. We also include the following controls for the head of household: sex, age, education level, a dummy for whether the head is black, and dummies for whether the head speaks Zulu, Xhosa, or lives in an urban area. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table 6 presents the effect of the resource windfall on access to piped water (column 1), adequate sanitation (column 2), and weekly refuse removal (column 3) in birth municipalities. The results underscore the role of political discretion in shaping local public goods provision in ministers' birthplaces before and after 2012. Despite receiving higher capital grants, birth municipalities exhibit an improvement only in the share of households with access to adequate sanitation (column 2). Interestingly, although birth municipalities received 25 percent more grants prior to the inclusion, the increase in the probability of a household having improved sanitation is only 1.6 percentage points, ceteris paribus. Furthermore, birth municipalities do not show better access to piped water (column 1) or waste collection (column 3). Notably, despite receiving fewer grants after inclusion, the provision of sanitation services shows only a modest improvement.

Finally, Figure A4 in Appendix A presents descriptive evidence on changes in access to sanitation before (left bar graphs) and after the shocks (right bar graphs) in both non-birth municipalities (blue bars)

and birth municipalities (red bars). We focus on sanitation because it is the only outcome significantly affected by the shocks (see Table 6). In particular, we are interested in examining the changes in non-birth municipalities after they receive additional resources. As shown in the figure, access to sanitation improves in both types of municipalities following the shocks, with the largest increase observed in non-birth municipalities. These findings suggest that non-birth municipalities experience improved access to sanitation after the shocks, narrowing the gap between birth and non-birth regions. Meanwhile, as shown in Table 6, while regional favoritism by cabinet members does not significantly enhance the provision of public goods in birth municipalities, these regions do not see a deterioration in public goods provision following the shocks. This is consistent with our previous results, which show that irregular expenditure also decreased following the shocks, confirming that the reduction had a modest impact on efficient service provision.

Overall, our results suggest that the reduction in political favoritism by cabinet members does not result in economically significant changes in public goods provision. However, the reduced discretion arising from improved accountability significantly curtailed the misuse of public resources and promoted a more equitable allocation of these resources. The next section presents robustness checks to confirm these findings.

7 Robustness

This section provides a detailed discussion of the robustness tests conducted to validate our main results. The associated tables and figures can be found in Appendices B-D. We begin by addressing potential concerns regarding the identification strategy. Next, we assess the robustness of our findings through alternative specifications and investigate potential issues related to sample dependence.

7.1 Identification

7.1.1 Placebo with other sources of revenue

A potential threat to our identification strategy is that the shocks may have influenced other municipal revenue streams collected directly by municipalities. To address this concern, we conduct a placebo test to verify that the shocks did not affect the flow of these alternative revenue sources. Additionally, we examine whether the shocks impacted operating grants –which are less subject to discretionary allocation– as detailed in Section 2.4. To do so, we estimate a regression in which the dependent variables are the

logarithmic transformations (plus one) of real property tax revenue, service charges, other revenues, and operating grants received by municipality m in year t.[47] The results are presented in Table B1 in Appendix B. Controlling for the same variables as in Table 1, column 3 –excluding sector dummies– we find no significant effect on any components of municipal revenue that are not subject to discretionary allocation by cabinet members.[48]

7.1.2 Accounting for cabinet members birthplace historical dynamics

We implement an alternative identification strategy inspired by the framework proposed by Imai et al. (2023), which highlights the importance of accounting for treatment history when estimating dynamic effects in panel data. While their original methodology is tailored to binary treatments and relies on matching to form comparable treated and control units, we adapt its core logic to our context in two key ways. First, instead of matching, we employ a cohort-stacked regression approach. This method enables us to account for the historical dynamics of cabinet members born in a municipality by comparing treated and control municipalities within well-defined cohorts. Each cohort consists of municipalities that share an identical history with respect to the number of cabinet ministers born there in each year from 2009 up to $t-1$. This structure ensures that comparisons are drawn between municipalities that have followed similar trajectories in terms of cabinet member birthplace over time. Moreover, this approach allows us to account for the fact that some municipalities gain or lose cabinet members over time. Importantly, our treatment variable –the number of cabinet ministers born in a municipality– is continuous rather than binary. Second, we adapt the estimation strategy to reflect the specific characteristics of our outcome variable. Capital grants received are non-negative and exhibit a high proportion of zero values. To address this, we estimate all specifications using a Poisson Pseudo-Maximum Likelihood (PPML) estimator, which is well suited for handling zero-inflated, non-negative dependent variables, consistent with our baseline approach.

Formally, for each treatment year t, we construct a cohort of municipalities that share the same number of cabinet members in every year from 2009 through $t-1$, and estimate the effect of a change in the number of cabinet members born in the municipality in year t using the same specification as in our

[47] Other revenues are calculated as the difference between total revenues and the sum of capital and operating grants.

[48] As an additional robustness check, we estimate the same specification using the inverse hyperbolic sine (IHS) transformation instead of the logarithmic one. The IHS transformation provides a similar functional form while allowing the inclusion of zero values, thus avoiding the need to add one to the data. The results (available upon request) remain consistent. We also re-estimate the specification using per capita revenues, applying both logarithmic and IHS transformations. These results, also available upon request, further confirm our findings.

baseline model in Equation 1.[49] As before, δ_1 and δ_2 are the coefficients of interest, capturing the role of favoritism in the allocation of grants before and after the two shocks. We further extend this approach to examine heterogeneous effects based on whether municipalities experienced irregular expenditure and on the education levels of cabinet members, both before and after 2012– mirroring the strategy outlined in Section 5.1. This approach provides a complementary robustness test by explicitly conditioning on the historical trajectory of cabinet representation in each municipality and estimating the effect of changes in the number of cabinet members born there on capital grant allocations. Overall, the results presented in Table B2 in Appendix B support our baseline findings, as shown in Tables 1, 2, and 3, although some effect sizes differ.[50]

7.2 Alternative specifications

7.2.1 Additional controls

To demonstrate that using a more parsimonious specification does not affect the significance of our results, Table C1 in Appendix C presents estimates with additional controls. Column 1 builds on the specification in Table 1, column 3, by incorporating other elements of the Municipal Infrastructure Grant formula, as detailed in Section 4. It includes the percentage of households in 2011 with access to adequate sanitation services, piped water, and weekly waste collection. To account for the possibility that municipalities may attract a larger share of grants due to past receipts, column 2 introduces a measure of municipal dependence on government grants for the 2011 financial year. This measure is calculated as the ratio of total grants received by a municipality to its total revenue collected in that year, using data from the Municipal Finance dataset. Finally, to account for other socioeconomic variables that may indirectly influence the allocation of capital grants, column 3 includes the controls outlined in the formula for operating grants. Specifically, we incorporate 2011 values for the unemployment rate, average household income, the percentage of households residing in tribal areas, and the total number of seats in the municipal council. The number of seats is sourced from the Electoral Commission website, while the other variables are derived from the 2011 South African National Census. Property values are excluded due to data availability constraints. In all specifications, the controls are interacted with a non-linear time trend. Baseline results remain consistent across all specifications. As shown in Table C2, the results hold even after adding these controls to column 1 of Table 2.

[49] Standard errors $\epsilon_{s,m,t}$ are clustered at the cohort level –that is, among municipalities with identical prior dynamics.

[50] It is worth noting that the results in Table B2 for the pre-shock period in municipalities with low levels of highly educated cabinet members are not statistically significant, unlike the baseline estimates reported in Table 3.

7.2.2 Alternative transformations of capital grants data

We then consider grants without distinguishing between sector types. This allows us to account for per capita grants but reduces the number of observations in the sample and makes it impossible to include time-varying sector controls. Therefore, we re-estimate Equation 1 using OLS and exclude the interaction between non-linear time trends and sector dummies. The dependent variable is defined as the logarithmic transformation of the real per capita grants (plus 1) received by municipality m in year t.[51] The results are shown in Table C3 in Appendix C. Column 1 includes year and municipality fixed effects, while column 2 includes municipality fixed effects along with the baseline controls described in Section 4. Column 3, our preferred specification, adds the political dummy. The results are consistent across all specifications and with the baseline findings. However, this specification presents larger coefficients, which, in most cases, are only significant at the 10 percent level. Moreover, as shown by Table C4, the results hold when applying this specification to the case in Table 2.[52]

7.2.3 Ministers' importance

Since not all cabinet members wield the same influence over the central government, this section distinguishes ministers based on their significance. Rather than adopting the definition of key ministers used in previous studies (Francois et al., 2015; Widmer & Zurlinden, 2022), we classify cabinet members according to their spending capacity, as outlined in the annual "Division of Revenue Bill."[53] We re-estimate Equation 1 by defining $Cabinet_members_{m,t}$ as the number of cabinet members with spending capacity born in municipality m and in office at the beginning of financial year t. As shown in Table C5, our baseline results remain consistent across all specifications. In addition, Table C6 demonstrates that findings related to accountability persist. However, in one specification (column 2), even birth municipalities without irregular expenditures may divert more resources before the shock. Nonetheless, this effect is smaller in absolute terms and less significant compared to the findings for birth municipalities reporting irregular expenditures.

[51] Results are robust when using an inverse hyperbolic sine transformation.

[52] Although less significant, results are robust when using an inverse hyperbolic sine transformation.

[53] By focusing on spending capacity, this classification provides a more precise and institutionally grounded way to investigate the role of cabinet members in public goods provision. Ministers with spending capacity are defined as those heading departments responsible for specific local or provincial conditional grants. These ministers can influence the allocation of resources by pressuring provinces to divert funds to their birthplaces. Cabinet members with spending capacity include the ministers for Agriculture, Arts, Basic and Higher Education, Energy, Finance, Health, Housing (later Human Settlements), Provincial and Local Government (later Cooperative Governance), Sport, Transport, and Water. The Minister for Social Development gained spending capacity in 2016. The President is also included as the head of the executive.

7.3 Sample dependence

7.3.1 FIFA World Cup and regional favoritism

As an additional robustness test, we examine whether our results are influenced by grants related to the FIFA World Cup hosted by South Africa in the summer of 2010. Specifically, "Sport and recreation" grants saw a significant reduction following the shocks. To address this, we re-estimate our analysis excluding "Sport and recreation" grants from the sample. The results, presented in Table D1 and Table D2 in Appendix D, confirm that both the baseline findings and the accountability results remain robust. Furthermore, recognizing the possibility that other grants may have been larger in the year immediately preceding the event, we re-run our analysis excluding the 2009 financial year. As before, the results from our preferred specifications remain consistent and are available upon request.

7.3.2 Excluding dismissed cabinet members

Our results could potentially be influenced by the dismissal of corrupt ministers in 2012. To test this, we exclude the municipalities of Johannesburg, Nquza Hills, and Umzumbe from the analysis, as the dismissed ministers were natives of these areas.[54] The results, shown in Table D3 and Table D4, confirm that both the baseline findings and the accountability results remain robust.

7.3.3 Alternative source of capital grants data

Finally, we test whether the results remain robust when using an alternative source of data on capital grants. In our baseline results, we rely on the "Income and Expenditure" dataset. However, Table D5 in Appendix D demonstrates that the baseline findings hold when we use the "Capital Acquisition" dataset instead. It is important to interpret these results with caution, as the allocation criteria in this dataset remain uncertain (see Section 3.1 for further details). Additionally, the results in Table 2 remain robust when applying this alternative dataset, as shown in Table D6.

8 Conclusion

This paper demonstrates how enhanced government accountability can mitigate political favoritism, particularly during periods of public resource windfalls. Using South Africas unexpected inclusion in

[54] Johannesburg is also the birthplace of Minister Ayanda Dlodlo, who was blacklisted after the publication of the list of municipalities' "Restricted suppliers."

the WGBI in 2012 as a case study, we examine the link between increased citizen accountability and the reduction of regional favoritism. This shift coincided with a rise in accountability prompted by whistleblowing from multinational enterprises involved in a government deal that took place 12 years earlier. Our analysis reveals that, while cabinet members had previously exhibited favoritism toward their birthplaces in the allocation of grants, this bias diminished following South Africa's inclusion in the WGBI. We provide evidence that this reduction in favoritism was driven by increased political accountability, triggered by a heightened awareness of government corruption following allegations surrounding the 1999 Arms Deal.

Our findings highlight how enhancing accountability can mitigate the adverse effects of funding windfalls, such as increased favoritism and inefficient investments, particularly in contexts with weak institutional quality (Tornell & Lane, 1999; Brollo et al., 2013; Caselli & Michaels, 2013). We demonstrate that greater transparency and citizen oversight can curb –or even prevent– political favoritism by holding politicians accountable. Accordingly, we emphasize the crucial role of government accountability in ensuring the equitable and efficient allocation of public resources (Armand et al., 2020).

Finally, our analysis offers valuable policy insights. Governments should prioritize initiatives that enhance transparency and strengthen institutional frameworks. South Africa provides effective examples, including independent oversight bodies, mandatory public disclosure of government spending, and strong media freedom to ensure timely reporting and redress of corruption. Regular audits and participatory budgeting can further empower citizens to hold leaders accountable. Leveraging such interventions is a promising avenue for future research, especially in settings with weak institutions, as they help prevent the political resource curse and promote the equitable and efficient use of public resources.

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Online Appendices

ONLINE APPENDIX A: Descriptive and additional results

ONLINE APPENDIX B: Identification

ONLINE APPENDIX C: Alternative specifications

bers with spending capacity

ONLINE APPENDIX D: Sample dependence

Table D1: Political favoritism and external shocks in South African municipalities, excluding "Sports and recreation" grants

Table D2: Political favoritism, external shocks and accountability in South African municipalities, excluding "Sports and recreation" grants

Table D3: Political favoritism and external shocks in South African municipalities by sector, without dismissed ministers

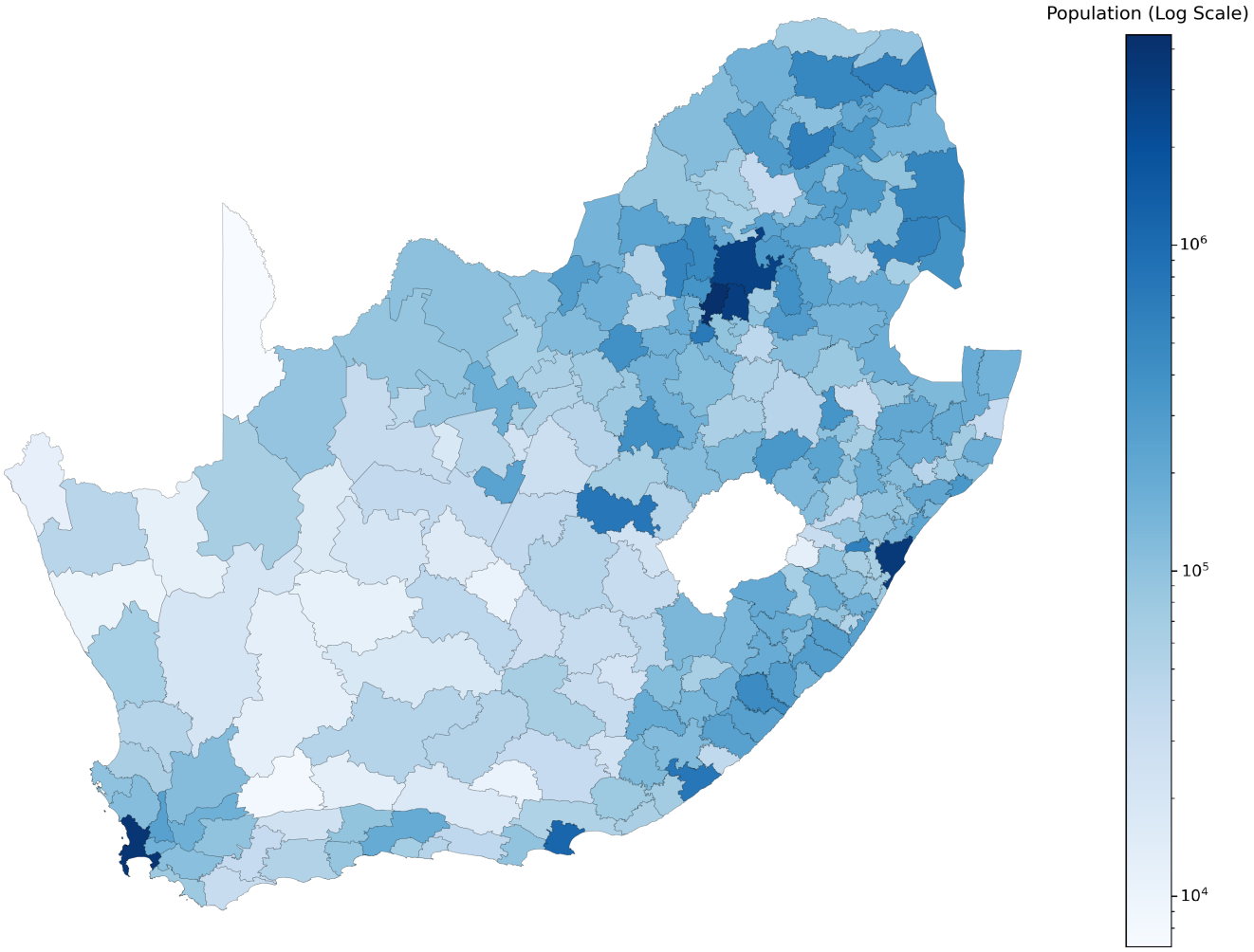
Table D4: Political favoritism, external shocks and accountability in South African municipalities, without dismissed ministers

Table D5: Political favoritism and external shocks in South African municipalities, other database

Table D6: Political favoritism, external shocks and accountability in South African municipalities, other database

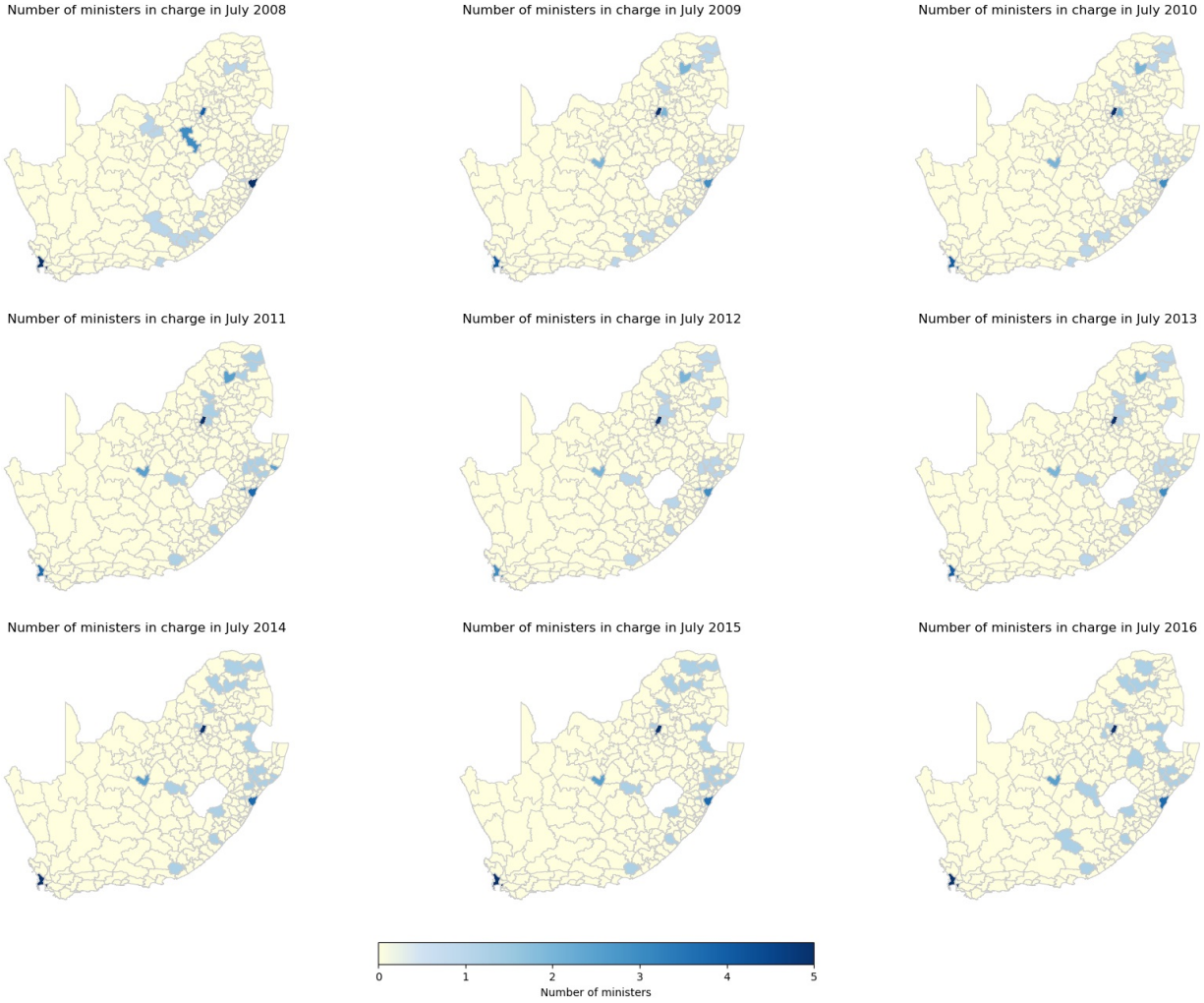
A Online Appendix A: Descriptive

Figure A1: Population of South African municipalities as of Census 2011



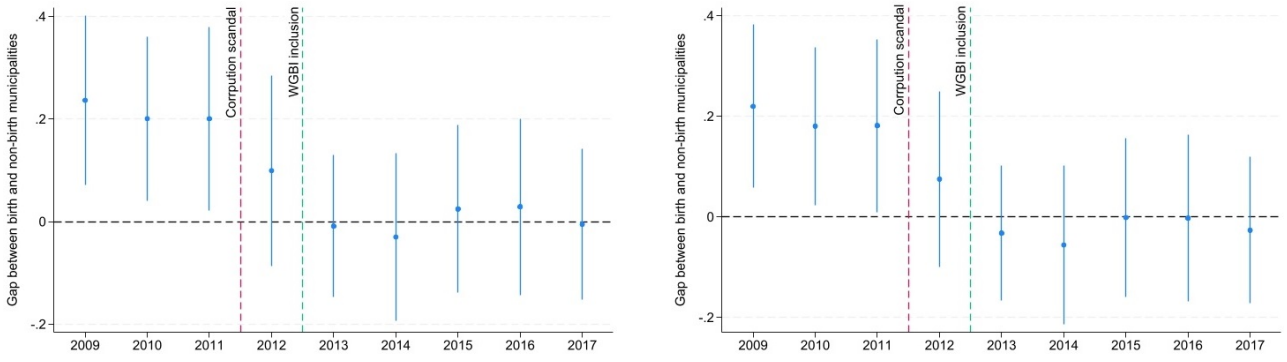
Notes: The map shows the population (logarithmic scale) of South African municipalities based on Census 2011 data. Darker shades of blue indicate municipalities with higher populations. The boundaries reflect the demarcation changes implemented in May 2011.

Figure A2: Number of ministers in each South African municipality over years



Notes: The map shows the number of cabinet members in power as of July each year who are natives of South African municipalities. The blue shading represents the number of ministers born in a municipality, ranging from 1 (light blue) to 5 (dark blue). Municipalities in yellow indicate non-birthplaces of cabinet members

Figure A3: Cabinet members dynamic heterogeneous effects on capital grants in South African municipalities

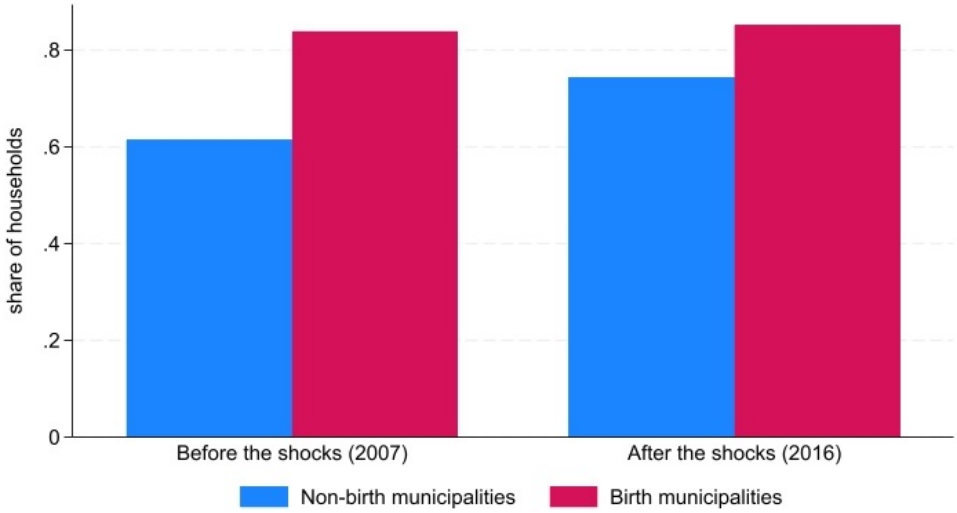


A. With irregular expenditure in 2011

B. High Education Municipalities

Notes: Panel A presents the dynamic specification from column 1 of Table 2. Panel B displays the dynamic specification from column 3 of Table 3. The 95 percent confidence intervals are reported based on clustered standard errors at the municipality level. The red dashed line indicates the shock in accountability, while the green dashed line marks the shock in resources.

Figure A4: Households access to adequate sanitation before and after the shocks in birth and non-birth municipalities



Notes: The figure reports the share of households whit access to adequate sanitation. The blue bar represents the share in non-birth municipalities, while the red bar represents the share in birth municipalities. The graph on the left shows the share of households with access to adequate sanitation before the shocks, while the graph on the right shows it after the shocks.

Table A1: South African municipalities and number of ministers over years

financial year ends	ministers						tot.
	0	1	2	3	4	5	
2009	217	12	0	1	1	2	233
2010	213	13	4	1	1	1	233
2011	213	13	4	1	1	1	233
2012	213	14	4	2	1	0	234
2013	210	17	3	2	0	1	233
2014	210	18	2	1	1	1	233
2015	209	21	1	1	2	0	234
2016	174	21	1	1	2	0	199
2017	187	21	1	1	2	0	212

Notes: Number of municipalities that are the birthplaces of cabinet members at the beginning of each financial year for which financial data are available.

Table A2: Total cabinet members and new ministers over years

financial year ends	total	new
2009	30	-
2010*	36	25
2011	36	0
2012	36	7
2013	36	3
2014	36	2
2015*	37	11
2016	37	0
2017	38	3

Notes: Total number of cabinet members over the financial years, along with the number of new members compared to the previous financial year. Financial years marked with * denote the first years after national elections.

Table A3: Definition and sources

Variable	Description	Source	Unit
Dependent variables			
Capital grants by sector	Transfers recognised as capital deflated using the CPI index at the end of the year	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
ANC Municipal Majority	Dummy=1 if the ANC has the majority of seats after elections	Own elaboration from the Electoral Commission of South Africa	Binary
Irregular expenditures	Irregular expenditures deflated using the CPI index at the end of the year, divided by municipality population	Own elaboration from Municipal Finance Data - "Unauthorised, Irregular, Fruitless and Wasteful Expenditure" dataset (from 2012) and from "Auditors financial statements" of each municipality (for 2010 and 2011)	Rand
Unauthorised expenditures	Unauthorised expenditures deflated using the CPI index at the end of the year, divided by municipality population	Own elaboration from Municipal Finance Data - "Unauthorised, Irregular, Fruitless and Wasteful Expenditure" dataset (from 2012) and from "Auditors financial statements" of each municipality (for 2010 and 2011)	Rand
Fruitless expenditures	Fruitless expenditures deflated using the CPI index at the end of the year, divided by municipality population	Own elaboration from Municipal Finance Data - "Unauthorised, Irregular, Fruitless and Wasteful Expenditure" dataset (from 2012) and from "Auditors financial statements" of each municipality (for 2010 and 2011)	Rand
Piped water	Dummy = 1 if the household has piped water inside their dwelling, in the yard or within 200 meters of their dwelling	Own elaboration from Community Survey 2007 and 2016	Binary
Adequate sanitation	Dummy = 1 if the household has flush toilet, chemical toilet, pit toilet with ventilation or ecological toilet	Own elaboration from Community Survey 2007 and 2016	Binary
Waste collection	Dummy = 1 if the household hass access to refuse removal at least once a week	Own elaboration from Community Survey 2007 and 2016	Binary
President	Dummy = 1 if the individual has answered that at least "Some of them" to the question "How many of the following people do you think are involved in corruption, or havent you heard enough about them to say: The President and Officials in his Office?"	Afrobarometer data, rounds 4, 5, and 6, years 2008, 2011 and 2015	Binary
Parliament	Dummy = 1 if the individual has answered that at least "Some of them" to the question "How many of the following people do you think are involved in corruption, or havent you heard enough about them to say: Parliament?"	Afrobarometer data, rounds 4, 5, and 6, years 2008, 2011 and 2015	Binary

Local government	Dummy = 1 if the individual has answered that at least "Some of them" to the question "How many of the following people do you think are involved in corruption, or havent you heard enough about them to say: Local government?"	Afrobarometer data, rounds 4, 5, and 6, years 2008, 2011 and 2015	Binary
Judges	Dummy = 1 if the individual has answered that at least "Some of them" to the question "How many of the following people do you think are involved in corruption, or havent you heard enough about them to say: Judges?"	Afrobarometer data, rounds 4, 5, and 6, years 2008, 2011 and 2015	Binary
Taxes	Property rates plus penalties and collection charges applied on property rates deflated using CPI index	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
Charges	Service charges deflated using CPI index	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
Operating grants	Transfers recognised as operating deflated using the CPI index at the end of the year	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
Other revenues	Total operating revenues minus transfers recognised as capital and transfers recognised as operating deflated using the CPI index at the end of the year	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
Per capita capital grants	Transfers recognised as capital deflated using the CPI index at the end of the year, divided by municipality population	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	Rand
Independent variables of interest			
Municipality Cabinet Members	Number of ministers born in a municipality in power in a given year	Own elaboration from Asatryan et al. (2023), Widmer and Zurlinden (2022), and hand collected data	Numeric
Post-WGBI	Dummy=1 if financial year $>$ 2012 and 0 otherwise	Own calculation	Binary
Irregular expenditures 2011	Dummy = 1 if the municipality reports a value of irregular expenditures $>$ 0 in 2011	Own elaboration from the municipality "Auditors financial statements" of 2011	Binary
Above median high education	Dummy=1 if a municipality have a share of citizens at least 20 years old with a high education above the median	Own calculation from Census 2011	Binary
Avg. Municipality Cabinet Members	Average number of ministers born in a municipality in power in a specific period	Own elaboration from Asatryan et al. (2023), Widmer and Zurlinden (2022), and hand collected data	Numeric
Mun. Cabinet Members with Spending Capacity	Number of ministers with spending capacity according to the "Division of Revenue Bill" born in a municipality and in power in a given year	Own elaboration from Asatryan et al. (2023), Widmer and Zurlinden (2022), and hand collected data, and based on the "Division of Revenue Bill" from financial year 2009 to 2017	Numeric
Baseline formula controls			
Quartile of total households in 2011	Quartile of the distribution of households in which the municipality falls in 2011	Own elaboration Census 2011	Numeric
Percentage of poor households in 2011	Percentage of poor households in a municipality in 2011	Own elaboration from Census 2011	%
Voting variables			
ANC 2011 winner	Dummy = 1 if the ANC had the majority of seats in the municipal council in 2011	Own elaboration from the Electoral Commission of South Africa	Binary

Development formula controls			
Piped water share	Percentage of household with piped water inside their dwelling, in the yard or within 200 meters of their dwelling, in a municipality in 2011	Own elaboration from Census 2011	%
Adequate sanitation share	Percentage of household with flush toilet, chemical toilet, pit toilet with ventilation or ecological toilet in a municipality in 2011	Own elaboration from Census 2011	%
Adequate waste collection share	Percentage of household with access to refuse removal in a municipality in 2011 as established by the "Division of Revenue Bill"	Own elaboration from Census 2011	%
Operating formula controls			
Avg. household income	Average household income in a municipality in 2011	Own calculation from Census 2011	Rand
Tribal households	Percentage of households living in traditional or tribal areas in a municipality in 2011	Own elaboration from Census 2011	%
Unemployment	Unemployment rate in a municipality in 2011	Own elaboration from Census 2011	%
Total seats	Total number of seats in a municipality council in 2011	Electoral Commission of South Africa	
Other controls and variables			
Grants dependence in 2011	Sum of transfer recognised as capital and transfer recognised as operating, divided by total operating revenues	Own elaboration from Municipal Finance Data - "Income and Expenditure" dataset	%
Population	Population in a municipality in 2011	Census 2011	Numeric
CPI	South Africa's consumer price index at the end of the year	World Development Indicators	Numeric
GDP	South Africa's gross domestic product	Own elaboration from Statistics South Africa	Million of Rand

Table A4: Summary statistics

Variable	Obs	Mean	Std. dev.	Min	Max
Capital grants by sector	32,704	5,035,016	43,100,000	0	2,090,000,000
Number of ministers	32,704	0.1453033	0.5471254	0	5
Quartile of mun. total households	32,448	2.481262	1.118776	1	4
Percentage of poor household	32,448	0.6432444	0.1041232	0.4142302	0.8137159
ANC winner in 2011	32,448	0.7677515	0.4222732	0	1

Notes: It reports the summary statistics of the variables included in Table 1.

Table A5: Political favoritism, external shocks and corruption perception

	President	Parliament	Local gov.	Judges
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	-0.0671***	-0.0432***	-0.0131	-0.0390*
	(0.0254)	(0.0152)	(0.0134)	(0.0214)
Post_WGBI ×	0.0290*	0.0222**	0.0290**	0.0304
Municipality Cabinet Members	(0.0149)	(0.0107)	(0.0114)	(0.0208)
Observations	6,140	6,466	6,662	6,407
R-squared	0.245	0.14	0.120	0.136
Municipalities FE	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x period	Yes	Yes	Yes	Yes
ANC 2011 winner x period	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes

Notes: The dependent variable is a dummy variable that equals 1 if the individual perceives a specific entity to be corrupt: the President (column 1), Parliament (column 2), local government (column 3), or judges (column 4). The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Municipality Cabinet Members," the interaction term between the number of cabinet members and a post-inclusion dummy equal to one if $t > 2012$. All regressions control for municipality fixed effects and a non-linear time trend, which is interacted with municipality characteristics such as the quartile of the household distribution, the percentage of poor households in 2011, and a dummy variable for whether the ANC held the majority of seats in the municipal council in 2011. Additionally, individual-level controls include sex, age, education level, a dummy for being black, dummies for speaking Zulu and Xhosa, and a dummy for living in an urban area. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

B Online Appendix B: Identification

Table B1: Placebo - Favoritism and external shocks in South African municipalities on other revenues

	Tax	Charges	Other	Oper. grants
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	0.174	-0.0945	-0.0108	0.111
	(0.130)	(0.0814)	(0.0323)	(0.228)
Post-WGBI ×	-0.0688	-0.0151	0.0217	0.0667
Municipality Cabinet Members	(0.0842)	(0.0482)	(0.0244)	(0.0786)
Observations	2,028	2,028	2,027	2,028
R-squared	0.648	0.925	0.935	0.494
Municipalities FE	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes	Yes

Notes: All dependent variables are computed as the logarithmic transformation (plus 1) of the real outcome of interest. In column 1, the dependent variable is the amount of property tax; in column 2, the amount of service charges; in column 3, other revenues (calculated as total revenues minus capital and operating grants); and in column 4, the amount of operating grants. The variables of interest are "Municipality cabinet members," that is the number of minister born in a municipality and in office in a given year, and "Post-WGBI x Mun. Cabinet Members," an interaction term between the number of cabinet members and the post-inclusion dummy, which equals 1 if $t > 2012$. All regressions include municipality fixed effects, non-linear time trends interacted with the municipality dimension, captured by the quartile of the distribution of households in which the municipality falls, the percentage of poor households in 2011, and a dummy variable equal to one if the ANC held the majority of seats in the municipal council in 2011. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table B2: Political favoritism, external shocks and accountability in South African municipalities, Historical Dynamics Cohort Stacked Regression

	Capital grants by sector		
	(1)	(2)	(3)
Mun. Cabinet Members	0.348***		
	(0.132)		
Post WGBI × Mun. Cabinet Members	-0.504*		
	(0.281)		
Pre WGBI × Mun. Cabinet Members			
× Irregular Expenditures in 2011		0.410***	
		(0.134)	
× No Irregular Expenditures in 2011		0.163	
		(0.179)	
Post WGBI × Mun. Cabinet Members			
× Irregular Expenditures in 2011		-0.139	
		(0.256)	
× No Irregular Expenditures in 2011		-0.388*	
		(0.199)	
Pre WGBI × Mun. Cabinet Members			
× Below Median High Education			0.105
			(0.266)
× Above Median High Education			0.377***
			(0.134)
Post WGBI × Mun. Cabinet Members			
× Below Median High Education			0.381***
			(0.102)
× Above Median High Education			-0.246
			(0.238)
Observations	5,117	4,823	5,117
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Irregular Expenditures in 2011 x Post-WGBI		Yes	
Above Median High Education x Post-WGBI			Yes

Notes: PPML estimates using historical matching stacked regression. The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The independent variable of interest and the controls included in column 1 follow the same specification of Table 1, while the ones included in column 2 follow column 1 of Table 2, and those in column 3 follow column 1 of Table 3. Standard errors (in parenthesis) are clustered at the cohort level. For more details on how we construct the cohorts, see Section 7.1.2. *** p<0.01, ** p<0.05, * p<0.1

C Online Appendix C: Alternative specification

Table C1: Political favoritism and external shocks in South African municipalities by sector, more controls

	Capital grants by sector		
	(1)	(2)	(3)
Municipality Cabinet Members	0.208**	0.193***	0.220***
	(0.083)	(0.068)	(0.065)
Post-WGBI ×	-0.160***	-0.181***	-0.183***
Municipality Cabinet Members	(0.029)	(0.031)	(0.029)
Observations	11,897	11,897	11,897
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Development formula controls in 2011 x year	Yes		
Grants dependence in 2011 x year		Yes	
Operating formula controls in 2011 x year			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Mun. Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy, equal to one if $t > 2012$. All regressions include municipality fixed effects, non-linear time trends interacted with the municipality dimension, captured by the quartile of the distribution of households in which the municipality falls, the percentage of poor households in 2011, and a dummy variable equal to one if the ANC held the majority of seats in the municipal council in 2011. Column 1 includes the percentage of households in 2011 that lacked access to piped water, sanitation, and waste collection, as defined by the "Division of Revenue Bill," fixed in 2011, and interacted with a non-linear time trend. Column 2 includes the percentage of municipality revenues derived from governments grants in 2011 multiplied by a non-linear time trend. Column 3 includes the municipality unemployment rate, the percentage of household living in traditional lands, the average household income, and the total number of seats in the municipality council, all fixed in 2011 and interacted with a non-linear time trend. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table C2: Political favoritism, external shocks and accountability in South African municipalities by sector, more controls

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.218**	0.198***	0.217***
	(0.0866)	(0.0722)	(0.0654)
× No Irregular Expenditures in 2011	0.241	0.252	0.280
	(0.186)	(0.204)	(0.196)
Post_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.0568	0.0132	0.0453
	(0.0861)	(0.0694)	(0.0682)
× No Irregular Expenditures in 2011	-0.0555	-0.0669	0.0126
	(0.144)	(0.154)	(0.152)
Observations	11,280	11,280	11,280
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Development formula controls in 2011 x year	Yes		
Grants dependence in 2011		Yes	
Operating formula controls in 2011 x year			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," which captures birth region favoritism before the WGBI inclusion for municipalities with irregular local expenditure; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism before the WGBI inclusion for municipalities without irregular local expenditure; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," which captures birth region favoritism after the WGBI inclusion for municipalities with irregular local expenditure; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism after the WGBI inclusion for municipalities without irregular local expenditure. All regressions control for municipality-sector fixed effects, a non-linear time trend interacted with sector dummies, the municipality dimension captured by the quartile of the household distribution in 2011, the percentage of poor households in 2011, and a dummy variable for municipalities where the ANC held the majority in the municipal council in 2011. Additionally, we include the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 1 includes the percentage of households in 2011 that lacked access to piped water, adequate sanitation, and waste collection as defined by the "Division of Revenue Bill," fixed in 2011, and multiplied by a non-linear time trend. Column 2 includes the percentage of municipality revenue from government grants in 2011, multiplied by a non-linear time trend. Column 3 includes the municipality's unemployment rate, the percentage of households living in traditional lands, average household income, and the total number of seats in the municipality council, all fixed in 2011 and multiplied by a non-linear time trend. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table C3: Political favoritism and external shocks in South African municipalities, per capita and log transformation

	log(Capital grants p.c.)		
	(1)	(2)	(3)
Municipality Cabinet Members	0.371*	0.399**	0.387**
	(0.19)	(0.193)	(0.187)
Post-WGBI ×	-0.304***	-0.346***	-0.337***
Municipality Cabinet Members	(0.0709)	(0.101)	(0.102)
Observations	2,028	2,028	2,028
R-squared	0.414	0.431	0.436
Municipalities FE	Yes	Yes	Yes
Year FE	Yes		
Baseline formula controls in 2011 x year		Yes	Yes
ANC 2011 winner x year			Yes

Notes: The dependent variable is the logarithmic transformation of the real per capita capital grants (plus 1) received by a municipality. The variables of interest are "Municipality cabinet members," that is the number of minister born in a municipality and in office in a given year, and "Post-WGBI x Mun. Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy, equal to one if $t >$ 2012. All regressions control for municipality fixed effects. Column 1 includes year fixed effects. Column 2 includes the municipality dimension captured by the quartile of the household distribution in which the municipality falls and the percentage of poor households in 2011, both interacted with a non-linear time trend. Column 3 includes also a dummy variable equal to one if the ANC has the majority of seats in the municipal council in 2011 interacted with a non-linear time-trend. Column 4 includes only municipalities being the birthplaces of at least one cabinet member during our sample period. Standard error (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table C4: Political favoritism, external shocks and accountability in South African municipalities, per capita and log transformation

	log(Capital grants p.c.)	
	(1)	(2)
Pre_WGBI× Mun. Cabinet Members		
× Irregular Expenditures in 2011	0.398**	0.345*
	(0.197)	(0.204)
× No Irregular Expenditures in 2011	0.623	0.586
	(0.446)	(0.499)
Post_WGBI× Mun. Cabinet Members		
× Irregular Expenditures in 2011	0.0617	-0.024
	(0.227)	(0.227)
× No Irregular Expenditures in 2011	-0.258	-0.12
	(0.445)	(0.484)
Observations	1,909	1,689
Municipalities FE	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes
ANC 2011 winner x year	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes
Includes 2011 financial year	Yes	

Notes: The dependent variable is the logarithm of real per capita capital grants received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion in municipality with irregular expenditure in 2011; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism before the inclusion in municipality without irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion in municipality with irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism after the inclusion in municipality without irregular expenditure in 2011. All regressions control for municipality fixed effects, a non-linear time trend interacted with the municipality dimension captured by the quartile of the household distribution in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011. We also control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 2 excludes the 2011 financial year. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table C5: Political favoritism and external shocks in South African municipalities by sector, members with spending capacity

	Capital grants by sector			
	(1)	(2)	(3)	(4)
Mun. Cabinet Members with Spending Capacity	0.266***	0.257***	0.275***	0.398***
	(0.0366)	(0.0401)	(0.0281)	(0.0307)
Post_WGBI ×	-0.253***	-0.245***	-0.268***	-0.336***
Mun. Cabinet Members with Spending Capacity	(0.0254)	(0.0382)	(0.0380)	(0.0369)
Observations	11,913	11,897	11,897	1,451
Municipalities x grants sector FE	Yes	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes	Yes
ANC 2011 winner x year			Yes	Yes
At least one member with spending capacity in our sample				Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are "Mun. Cabinet Members with Spending Capacity," that is the number of cabinet members with spending capacity born in a municipality and in office in a given year, and "Post-WGBI x Mun. Cabinet Members with Spending Capacity," that is the interaction term between the number of cabinet members with spending capacity and the post inclusion dummy, equal to one if $t > 2012$. All regressions control for municipality grant sector fixed effects and a non-linear time trend interacted with grant sector dummies. Column 2 includes the municipality dimension captured by the quartile of the household distribution in which the municipality falls and the percentage of poor households in 2011, both interacted with a non-linear time trend. Column 3 includes a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011 interacted by a non-linear time trend. Column 4 includes only municipalities being the birthplaces of at least one cabinet member with spending capacity during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table C6: Political favoritism, external shocks and accountability in South African municipalities, members with spending capacity

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members with Spending Capacity			
× Irregular Expenditures in 2011	0.278***	0.282***	0.401***
	(0.0287)	(0.0329)	(0.0376)
× No Irregular Expenditures in 2011	0.0626	0.168**	0.593*
	(0.0780)	(0.0833)	(0.318)
Post_WGBI× Mun. Cabinet Members with Spending Capacity			
× Irregular Expenditures in 2011	0.0102	0.0354	0.0613
	(0.0462)	(0.0464)	(0.0526)
× No Irregular Expenditures in 2011	-0.0407	-0.0200	0.133
	(0.0884)	(0.0842)	(0.142)
Observations	11,280	9,777	1,289
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Includes 2011 financial year	Yes		Yes
At least one member with spending capacity during our sample			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members with Spending Capacity × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion in municipality with irregular expenditure in 2011 and being the birthplaces of at least a cabinet member with spending capacity; "Pre-WGBI × Mun. Cabinet Members with Spending Capacity × No Irregular Expenditure in 2011," which represents birth region favoritism before the inclusion in municipalities without irregular expenditure in 2011 and being the birthplaces of at least one cabinet member with spending capacity; "Post-WGBI × Mun. Cabinet Members with Spending Capacity × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion in municipalities with irregular expenditure in 2011 and being the birthplaces of at least a cabinet member with spending capacity; "Post-WGBI × Mun. Cabinet Members with Spending Capacity × No Irregular Expenditure in 2011," which represents birth region favoritism after the inclusion in municipalities without irregular expenditure in 2011 and being the birthplaces of at least one cabinet member with spending capacity. All regressions control for municipality grant sector fixed effects, a non-linear time trend interacted with grant sector dummies, the municipality dimension captured by the quartile of the household distribution in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011. We also control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 2 excludes the 2011 financial year, while column 3 includes only municipalities being the birthplaces of at least one cabinet member with spending capacity during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

D Online Appendix D: Sample dependence

Table D1: Political favoritism and external shocks in South African municipalities, excluding "Sports and recreation" grants

	Capital grants by sector			
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	0.158	0.152	0.208**	0.232**
	(0.105)	(0.0991)	(0.0890)	(0.0995)
Post_WGBI ×	-0.182***	-0.187***	-0.176***	-0.153***
Municipality Cabinet Members	(0.0196)	(0.0316)	(0.0301)	(0.0288)
Observations	11,238	11,222	11,222	2,300
Municipalities x grants sector FE	Yes	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes	Yes
ANC 2011 winner x year			Yes	Yes
At least one cabinet member during our sample				Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Municipality Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy, equal to one if $t > 2012$. All regressions control for municipality grant sector fixed effects and a non-linear time trend interacted with the grants sector. Column 2 includes the municipality dimension, captured by the quartile of the household distribution in which the municipality falls, along with the percentage of poor households in 2011, both interacted with a non-linear time trend. Column 3 adds a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011, interacted with a non-linear time trend. Column 4 includes only municipalities that had at least one cabinet member during the sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table D2: Political favoritism, external shocks and accountability in South African municipalities, excluding "Sports and recreation" grants

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.216**	0.210**	0.242**
	(0.0923)	(0.0963)	(0.112)
× No Irregular Expenditures in 2011	0.244	0.264	0.339
	(0.201)	(0.207)	(0.252)
Post_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.0383	0.0397	0.0893
	(0.0875)	(0.0882)	(0.118)
× No Irregular Expenditures in 2011	-0.0722	-0.0468	0.0790
	(0.169)	(0.163)	(0.135)
Observations	10,623	9,211	1,985
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Includes 2011 financial year	Yes		Yes
At least one cabinet member during our sample			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion for those municipalities with irregular expenditure in 2011; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which captures birth region favoritism before the inclusion in municipalities that did not have irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion for municipalities with irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which captures birth region favoritism after the inclusion for municipalities without irregular expenditure in 2011. All regressions control for municipality-grants sector fixed effects, a non-linear time trend interacted with grants sector dummies, the municipality dimension captured by the quartile of the household distribution in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011. We control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 2 excludes the 2011 financial year, while column 3 includes only municipalities with at least one cabinet member during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table D3: Political favoritism and external shocks in South African municipalities by sector, without dismissed ministers

	Capital grants by sector			
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	0.160**	0.149**	0.190***	0.172**
	(0.0785)	(0.0715)	(0.0726)	(0.0729)
Post_WGBI ×	-0.203***	-0.205***	-0.181***	-0.133***
Municipality Cabinet Members	(0.0239)	(0.0351)	(0.0355)	(0.0432)
Observations	11,724	11,708	11,708	2,284
Municipalities x grants sector FE	Yes	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes	Yes
ANC 2011 winner x year			Yes	Yes
At least one cabinet member during our sample				Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are "Municipality Cabinet Members," that is the number of ministers born in a municipality and in office in a given year, and "Post-WGBI x Municipality Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy, equal to one if $t > 2012$. All regressions control for municipality grant sector fixed effects and a non-linear time trend interacted with grant sector. Column 2 includes the municipality dimension captured by the quartile of the household distribution in which the municipality falls and the percentage of poor households in 2011, both interacted with a non-linear time trend. Column 3 includes also a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011, interacted with a non-linear time trend. Column 4 includes only municipalities with at least one cabinet member during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table D4: Political favoritism, external shocks and accountability in South African municipalities, without dismissed ministers

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.194**	0.197**	0.160*
	(0.0756)	(0.0788)	(0.0820)
× No Irregular Expenditures in 2011	0.206	0.213	0.340
	(0.212)	(0.203)	(0.233)
Post_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.0171	-0.00607	0.0617
	(0.0755)	(0.0796)	(0.106)
× No Irregular Expenditures in 2011	-0.0406	-0.0245	0.0919
	(0.168)	(0.150)	(0.156)
Observations	11,091	9,617	1,951
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Includes 2011 financial year	Yes		Yes
At least one cabinet member during our sample			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion in municipality with irregular expenditure in 2011; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism before the inclusion in municipalities without irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion in municipality with irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism after the inclusion in municipality without irregular expenditure in 2011. All regressions control for municipality-grants sector fixed effects, a non-linear time trend interacted with grant sector dummies, the municipality dimension captured by the quartile of the household distribution in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011. We also control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 2 excludes the 2011 financial year, while column 3 includes only municipalities being the birthplaces of at least one cabinet member during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table D5: Political favoritism and external shocks in South African municipalities, other database

	Capital grants by sector			
	(1)	(2)	(3)	(4)
Municipality Cabinet Members	0.092	0.094	0.140**	0.170***
	(0.088)	(0.072)	(0.058)	(0.039)
Post-WGBI ×	-0.106**	-0.142**	-0.149**	-0.166**
Municipality Cabinet Members	(0.048)	(0.055)	(0.058)	(0.067)
Observations	13,392	13,361	13,361	3,024
Municipalities x grants sector FE	Yes	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes	Yes
Baseline formula controls in 2011 x year		Yes	Yes	Yes
ANC 2011 winner x year			Yes	Yes
At least one cabinet member during our sample				Yes

Notes: The dependent variable is the total amount of national capital grants by sector received by a municipality in a given year. The variables of interest are "Municipality cabinet members," that is the number of minister born in a municipality and in office in a given year, and "Post-WGBI x Mun. Cabinet Members," that is the interaction term between the number of cabinet members and the post inclusion dummy equal to one if $t > 2012$. All regressions control for municipality grant sector fixed effects and grant sector dummies interacted with a non-linear time trend. Column 2 includes the municipality dimension captured by the quartile of the household distribution in which the municipality falls and the percentage of poor households in 2011, both interacted with a non-linear time trend. Column 3 includes a dummy equal to one if the ANC had the majority of seats in the municipal council in 2011 interacted with a non-linear time trend. Column 4 includes only municipalities that are the birthplaces of at least one cabinet member during the sample period. Standard error (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1

Table D6: Political favoritism, external shocks and accountability in South African municipalities, other database

	Capital grants by sector		
	(1)	(2)	(3)
Pre_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	0.138**	0.144**	0.172***
	(0.0612)	(0.0585)	(0.0412)
× No Irregular Expenditures in 2011	0.435	0.494	0.458
	(0.305)	(0.334)	(0.404)
Post_WGBI× Mun. Cabinet Members			
× Irregular Expenditures in 2011	-0.012	-0.0177	0.0027
	(0.0931)	(0.0919)	(0.0872)
× No Irregular Expenditures in 2011	0.0393	0.0259	0.095
	(0.140)	(0.135)	(0.174)
Observations	12,680	10,965	2,644
Municipalities x grants sector FE	Yes	Yes	Yes
Grants sector x year	Yes	Yes	Yes
Baseline formula controls in 2011 x year	Yes	Yes	Yes
ANC 2011 winner x year	Yes	Yes	Yes
Post_WGBI x No Irregular Expenditures 2011	Yes	Yes	Yes
Includes 2011 financial year	Yes		Yes
At least one cabinet member during our sample			Yes

Notes: The dependent variable is the total real amount of capital grants by sector received by a municipality in a given year. The variables of interest are: "Pre-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism before the inclusion in municipality with irregular expenditure in 2011; "Pre-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism before the inclusion in municipality without irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × Irregular Expenditure in 2011," that captures birth region favoritism after the inclusion in municipality with irregular expenditure in 2011; "Post-WGBI × Mun. Cabinet Members × No Irregular Expenditure in 2011," which represents birth region favoritism after the inclusion in municipality without irregular expenditure in 2011. All regressions control for municipality-grant sector fixed effects, a non-linear time trend interacted with grant sector dummies, the municipality dimension captured by the quartile of the household distribution in which the municipality falls in 2011, the percentage of poor households in 2011 and a dummy variable that is equal to one if the ANC had the majority of seats in the municipal council in 2011. We also control for the interaction term "Post-WGBI × No Irregular Expenditure in 2011" across all specifications. Column 2 excludes the 2011 financial year, while column 3 includes only municipalities being the birthplaces of at least one cabinet member during our sample period. Standard errors (in parenthesis) are clustered at the municipality level. *** p<0.01, ** p<0.05, * p<0.1