

Cabinet Size and Governance in Sub-Saharan Africa

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Abstract

There is frequent public and media concern over the cost of bloated cabinets in many Sub-Saharan African countries. Scholarship on elite clientelism links cabinet positions with corruption and practices that undermine sound policy making. This paper presents new data on the number of ministers in African governments and shows a negative association with several measures of governance. The associations are robust in a regression framework that exploits

within-country variation over time and accounts for various potential confounders. These patterns suggest that policy makers, donors, investors, and citizens should pay close attention to the number of ministers appointed to the cabinet. Although the paper cautions against simplistic policy prescriptions, a sizable increase in the number of ministers is likely bad news for governance.

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1. Introduction

The number of ministers appointed to the cabinet is a frequent concern in many developing countries, especially in Sub-Saharan Africa. In 2017, Ghana's President, Nana Akufo-Addo, appointed the largest cabinet in a quarter of a century, prompting the opposition to condemn his "elephant size" government (Reuters 2017). Conversely, when in May 2019 South Africa's President Cyril Ramaphosa cut the number of cabinet ministers from 36 to 28, many observers interpreted this as an attempt to tackle government corruption (Reuters 2019). Beyond these anecdotes, is there a systematic relationship between the number of ministers in the cabinet, or cabinet size, and governance outcomes? We focus on Sub-Saharan Africa, where public and media concerns about an excessive number of ministers are common, and where prior scholarship links cabinet appointments with corruption and poor governance.

Existing theoretical and empirical work documents a negative relationship between cabinet size and fiscal performance, due to the "common pool resource" problem in budgeting. In this literature, more ministers are associated with higher spending and larger deficits. Empirical work covers mostly industrialized democracies (Perotti and Kontopoulos 2002, Volkerink and de Haan 2001) but also wider set of countries including some emerging market economies and developing countries (Wehner 2010, Woo 2003). A study by LeVan and Assenov (2016) looks at Sub-Saharan African countries and finds that more ministries are associated with higher expenditure but not with deficits. With some exceptions discussed in the following section, outcomes beyond fiscal policy are less frequently considered. Here, we take a step towards addressing this gap.

To do so, we commence with an overview of the link between cabinet size and governance, drawing on the literature concerned with elite clientelism and related work on African politics. We then present new data on cabinet size in Sub-Saharan African countries, building on prior work by Arriola (2009), and assess their association with a series of governance measures related to corruption and the quality of public policy. Analyzing cross-national patterns as well as within-country variation over time, we find a robust correlation between cabinet size and several measures of governance in this sample. The conclusion summarizes policy implications and explores possible avenues for further research.

2. From cabinets to governance

Scholars of African politics have highlighted a link between clientelism and cabinet appointments. Van de Walle (2012) distinguishes mass clientelism and elite clientelism. Mass clientelism relies on the practice of using state resources, or patronage, to provide jobs and services for mass clienteles, and usually involves party organizations and electoral politics. This type of clientelism requires considerable resources and is therefore likely to take place in richer countries, also in mature Western democracies. For poorer countries, on the other hand, clientelism is more likely to be limited to a narrower clientele, so-called elite clientelism. In Sub-Saharan Africa, the characteristic of elite clientelism is *prebendalism*, or the strategic political

allocation of public offices to key elites (van de Walle 2012: 113).³ In such settings, a cabinet position forms the top echelon of elite offices and can be seen as the ultimate gift, “bringing with it patronage opportunities as well as significant perks and status-enhancing privileges” (van de Walle, 2001: 103; see also Kroeger 2018, LeVan and Assenov 2016).

Elite clientelism in the form of prebendalism is closely linked to grand corruption, which channels benefits other than the official salary to a political office holder. In an earlier empirical analysis, Mills (2012) uses data for 42 African countries over the period 1985-2010 and finds that cabinet size is associated with higher levels of grand corruption. One reason is that horizontal accountability – whereby members of a country’s legislature hold the executive branch to account – is a likely victim of prebendalism. The handing out of cabinet positions to members of parliament based on loyalty acts as a disincentive for them to exercise effective oversight. For instance, Ghana’s former President John Kufuor picked about three-quarters of his cabinet ministers from among parliamentarians, who in order to be considered had to be loyal rather than scrutinize the executive (Lindberg 2010).⁴

Elite clientelism can be contained by programmatic political parties, which appeal to voters on the basis of specific policies that are grounded in an ideological program (Keefer 2013: 7). Programmatic parties are able to solve collective action problems and make credible commitments to deliver public goods, which requires mechanisms to discipline and sanction party leaders and members whose actions are not conducive to delivering promised policies. In contrast, clientelist politicians prefer discretion and weak oversight of the implementation of policies, so that they can extract personal benefits and channel resources to their supporters (Cruz and Keefer 2015). This implies that the potential for cabinet size to be associated with poor governance and corruption is especially likely in settings where programmatic political parties are weak or absent, as is the case in many Sub-Saharan African countries.

Clientelistic politics is not the only driver of cabinet size. Examining data on post-war cabinets in 17 Western European countries, Indridason and Bowler (2014) find that inter-party politics influences the size of the cabinet. As coalition parties require an agreement about the division of ministerial portfolios, increasing the size of the cabinet can at times smooth that process. Portfolios tend to be allocated roughly proportional to the government parties’ legislative strength. Achieving proportionality is difficult in small cabinets, but the problem can often be solved by adding a portfolio. Intra-party politics matters, too, when otherwise dissatisfied party members and/or factions are brought on board by altering the size of the cabinet. The need for coalition building through cabinet appointments is not limited to parliamentary democracies, as Cheibub (2007) shows for presidential systems in Latin America.

³ In the words of van de Walle (2012: 114): “Hiring a member of one’s ethnic group to a senior position in the customs office is an example of patronage. Allowing the customs officer to use the position for personal enrichment by manipulating import and export taxes is an example of a prebend.”

⁴ This problem is not limited to African countries. In the United Kingdom, there has been a significant increase in junior ministers without cabinet rank over the past decades. This has boosted the “payroll vote”, comprising Members of Parliament with a government job who are expected to vote as instructed or resign (House of Commons 2010: 8).

These arguments can be translated into the context of Sub-Saharan Africa. Here, cabinet appointments and changes are used by presidents to consolidate their hold on power, in attempts to contain the threat of losing to their political opponents in democratic elections or of being toppled by insiders through coups d'états (Francois et al. 2015, Arriola 2009). This co-opting of elites helps to explain why cabinets can get larger at strategic moments, notably ahead of elections.⁵ Moreover, a “winner-takes-all” political system can be unstable, and governments may face frequent threats of coups. Where presidents use ministerial appointments to buy loyalty from members of the elite who might otherwise have mounted leadership challenges, a large cabinet can increase political stability (Hyden 2006: 104). Arriola (2009) tests this hypothesis using data on cabinets for 40 African countries over the period 1970-2000 and finds that cabinet appointments can be used to extend a leader’s tenure and lower the probability of being deposed through a coup, unless leaders overextend their coalitions (Arriola 2009: 1350). Torgler and Frey (2012) analyze more than 100 countries over 20 years and find that large cabinets reduce the likelihood of an assassination attempt on high government officials or politicians. This helps to explain why power sharing arrangements have been used across Africa during attempts to resolve conflict. Somalia, for example, had especially large cabinets following the establishment of the Transitional Federal Government in 2004.

Overall, this discussion yields expectations about the relationship between cabinet size and governance outcomes. Elite clientelism implies that an increase in the number of cabinet ministers is likely to increase corruption and lower the quality of policy formulation and implementation. Yet, in analyzing this relationship, we need to account for other factors that might also be associated with both cabinet size and governance outcomes, in particular pressures to accommodate political allies and to buy off potential rivals.

3. A new data set

To take a fresh empirical look at the relationship between cabinet size and governance and policy outcomes, we assemble a range of relevant data for Sub-Saharan African countries. The variables we include fall into three main groups, which we introduce below. The data appendix provides full variable definitions and sources and summary statistics are in appendix 1.

The main independent variable of interest is the number of cabinet ministers. No off-the-shelf data set exists that reliably captures this information. The *Cross-National Time-Series Data Archive* initiated by Arthur Banks includes the size of the cabinet.⁶ However, the sources used are not fully disclosed and the manual warns that “[i]n many cases, counts are approximate”. Instead, we build on Arriola’s (2009) data set on cabinet size, as it is coded on the basis of information on the membership of cabinets obtained from a single high-quality source, Europa Publications’ *Africa South of the Sahara*, which is published annually. Focusing on political heads who are ultimately in charge of government departments, the data set records the number of ministers with full cabinet rank for each country and year in the sample. Excluded are members of the executive without cabinet rank, notably junior or deputy ministers, and individuals with lower-level executive functions, as their authority and discretion is limited. This

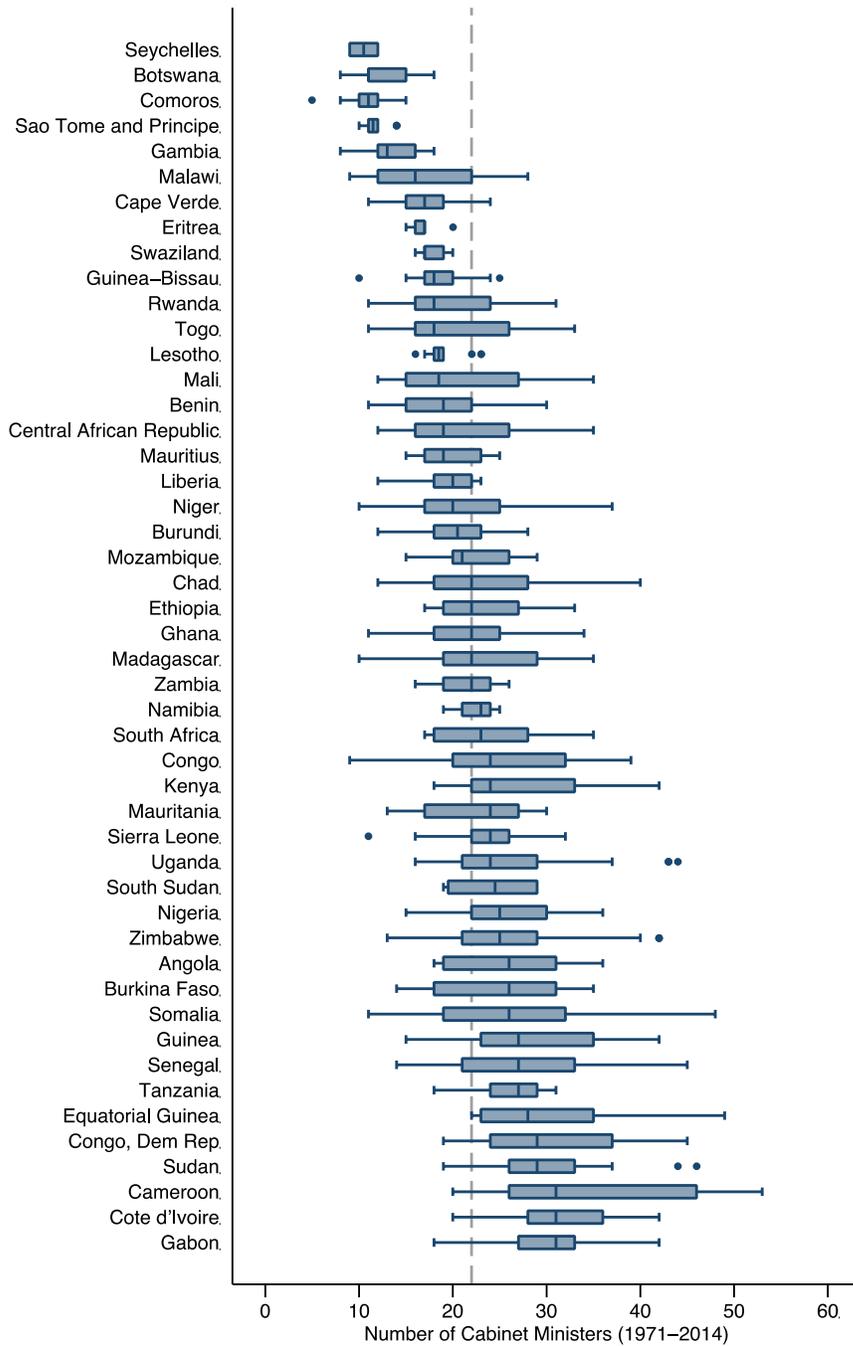
⁵ In addition, cabinet reshuffles can be used to create an atmosphere of ‘perpetual musical chairs’ that prevents individual ministers from amassing too much power (Roessler 2011: 309).

⁶ Cabinet size is captured by the *Polit10* variable in the 2018 edition of the Banks data set.

approach ensures the greatest possible consistency. We updated Arriola's data set to 2014 and expanded the countries included to 48, with a total of 1,797 observations. Median cabinet size over this period is 22 and the mean is 23, but there is tremendous dispersion both within and between countries. Cabinet size in our sample ranges from 5 (the Comoros in 2002) to 53 (Cameroon in 2006). Figure 1 summarizes the data.⁷

⁷ The correlation of our data with Banks' is .73. In 55 cases, the ministerial count in the Banks data set differs by more than 10 from ours.

Figure 1: Variation in cabinet size in Sub-Saharan Africa



Notes: The dashed line indicates the pooled sample median (22). N = 1,797. The data are from Arriola (2009) with authors' updates coded from subsequent editions of Europa Publications, Africa South of the Sahara.

We examine the relationship of cabinet size with a number of plausible outcome measures indicated by the preceding discussion. One principal source is the well-known *Worldwide Governance Indicators* (WGI) data set produced by the World Bank since 1996, which includes perception-based estimates across several dimensions of governance, aggregating up a number of variables from different sources (Kaufmann et al. 2010). Of these indicators, we use the variables

that are closely linked to the predictions generated in the previous section. These include the measures that relate to the capacity of the government to effectively formulate and implement sound policies (Government Effectiveness, Regulatory Quality) and the respect of citizens and the state for the institutions that govern economic and social interactions among them (Rule of Law, Control of Corruption). The prior discussion of elite clientelism suggests that cabinet size should be negatively associated with all four of these measures.

There is an extensive debate around the validity and methodology of the WGI (Anheier et al. 2018, Apaza 2009). Whether these measures capture distinct concepts is disputed, and Langbein and Knack (2010) conclude that they appear to measure the same broad concept. For robustness, we also use a novel corruption index from the Varieties of Democracy (*V-Dem*) project that captures executive corruption and is based on expert scoring (see also Bäck et al. 2019).⁸ Finally, we include the well-known Corruption Perceptions Index produced by Transparency International.⁹ It would be ideal to have objective measures of corruption and governance. However, most objective measures are country specific – such as audit outcomes indicating corruption (Ferraz and Finan 2008) or amounts of funding diverted from authorized purposes (Olken 2007). Hence, perception-based measures remain important. To ensure comparability and to aid interpretation, we rescale these measures to a theoretical range from zero to 100.¹⁰

We draw on the World Bank/Inter-American Development Bank's *Database of Political Institutions* to control for a number of underlying pressures on cabinet size identified in the preceding section. We include the partisan fractionalization of the executive, as multi-party coalitions may lead to increased cabinet size to accommodate politicians from across the different parties that participate in the government. Next, we use indicators of whether the chief executive or defense minister are military officers. A strong presence of military officers may suggest threats to the stability of the government, which presidents might attempt to manage by enlarging the number of ministers to accommodate important allies and potential rivals. In addition, we use the coding by Cruz and Keefer (2015) to account for the presence of programmatic parties, which can limit clientelism and promote cohesive policies.

In addition, we measure the number of years the chief executive has been in office. A long tenure may suggest that elite clientelism is particularly entrenched and highly personalized. At the time of writing, the longest-serving president in the world is Teodoro Obiang Nguema Mbasogo of Equatorial Guinea, who took office in 1979. Equatorial Guinea is also among the worst countries in the world on several governance indicators – in 2014, for instance, it had the worst score of all countries in our sample on the Control of Corruption measure. Next, to account for the possibility that corruption responds to electoral pressures, we control for the number of years before the end of the current electoral term. Further, it is possible that close links between the

⁸ We also used a second index that captures wider public sector corruption and obtained very similar results. In our sample, the correlation between the *V-Dem* executive and public sector corruption indices is .82.

⁹ In addition, we worked with the more recent Ibrahim Index of African Governance. The results obtained are very similar to the ones we report, but we do not include them here as the data only start in 2008.

¹⁰ The units of the WGI are those of a standard normal random variable, with zero mean, unit standard deviation, and ranging approximately from -2.5 to 2.5 (Kaufmann et al. 2010: 9). Some extreme scores are outside this range. In our sample, five scores are slightly below zero on our rescaled Regulatory Quality and Rule of Law indicators (see appendix 1). All five of these are for Somalia and fall between 2006 and 2009, a period of civil war.

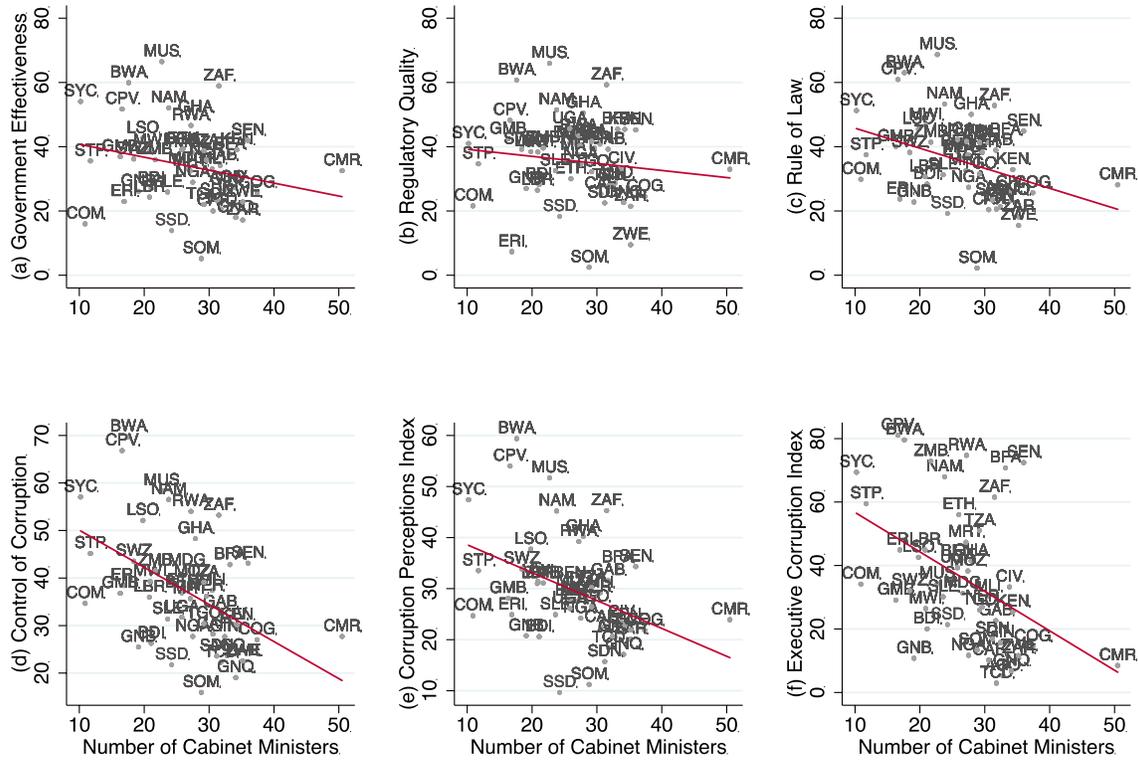
government and business may affect a government's approach to regulation and policy, or its susceptibility to bribes. To account for this possibility, we include an indicator of whether the head of the executive is from a party to the left of the ideological spectrum. These measures, too, are from the *Database of Political Institutions*.

Finally, we also account for the broader political and economic context of a country. Democracies have checks and balances that can help to limit corruption and expose the selection of leaders to electoral competition, so we control for it alternatively with variables from the *Polity* and *V-Dem* data sets. Moreover, as prior research finds that economic development is associated with better government performance (La Porta et al. 1999), we include GDP per capita (from the *World Development Indicators* data set).

4. Results

For a first look at the bivariate relationship of cabinet size with governance we average the available data for the 10 most recent years included in our data set and focus on cross-national patterns. The results are displayed in Figure 2. All measures of governance have a negative relationship with cabinet size, which in all six panels (a to f) implies worse governance. All correlations are significant at the 1% level with coefficients ranging from -.49 (for Control of Corruption) to -.13 (Regulatory Quality). Yet there is a substantial amount of variation that is not accounted for by cabinet size, which is expected. These cross-national patterns are affected by a potentially large number of observable and unobservable characteristics.

Figure 2: Cabinet size has a negative correlation with governance indicators (2005-14 averages)



Notes: The variables on the Y-axes are from the September 2018 update of the Worldwide Governance Indicators (panels a-d), various editions of the Corruption Perceptions Index (panel e), and the July 2018 version of the V-Dem dataset (panel f). See data appendix for full variable definitions and sources. Country codes are taken from the IMF’s International Financial Statistics and included in appendix 2. The available data are averaged over the 2005-14 period.

To probe these relationships further, we run a set of regressions that exploit within-country variation and account for several potentially confounding variables discussed above. The basic specification is as follows:

$$\text{Governance}_{i,t} = \beta_1 \text{Cabinet}_{i,t} + \beta_k \text{Controls}_{i,t} + \text{Country}_i + \text{Year}_t + \varepsilon_{i,t}$$

A governance indicator for country i in year t is regressed onto our measure of cabinet size and k controls discussed in the previous section. Country fixed effects absorb unchanging country characteristics and much of the explanatory power of slowly or rarely changing variables, while year effects account for common shocks.

Table 1 displays the results. As in the cross-country averages, cabinet size has a consistently negative association with measures of governance in these regressions. The coefficients on this variable are significant in four of six cases, except for Regulatory Quality and the Executive Corruption Index, where they get close to statistical significance at conventional levels. Substantively, the size of the coefficients appears relatively modest but not negligible: Adding 10

ministers to the cabinet is associated with reductions ranging from 1 to 2.3 percentage points across these measures of governance. Looking at the control variables, two patterns stand out. GDP per capita has a consistently positive association with the outcome measures, and left leaders with worse governance scores.

Although the time series available for most measures of governance is short, which gives rise to Nickell bias in dynamic models with fixed effects, we checked whether our results are robust to including a lagged dependent variable. These supplementary results are reported in Table 2. In terms of our variable of interest, the basic pattern of results goes through. While the coefficients on the cabinet size variable are smaller, the estimates still achieve statistical significance at conventional levels in four of six regressions. Executive corruption as measured with the *V-Dem* data is largely accounted for by the lagged dependent variable. In terms of control variables, one notable change is that the coefficients on the democracy measures are more precisely estimated. Democracy has a positive association with five of six governance measures.

Table 1: Main regression results

	(1)	(2)	(3)	(4)	(5)	(6)
	GE	RQ	RL	CC	CPI	ECI
Cabinet size	-0.143*** (0.051)	-0.103 (0.063)	-0.167*** (0.053)	-0.153*** (0.053)	-0.198** (0.081)	-0.228 (0.179)
Polity	0.137 (0.200)	0.244 (0.176)	0.416** (0.164)	0.039 (0.140)	-0.171 (0.179)	
Electoral democracy						13.353 (11.674)
Left	-3.044** (1.249)	-0.861 (1.355)	-2.441* (1.403)	-3.256** (1.227)	-2.162** (1.031)	-1.601 (1.950)
Government fractionalization	-2.751 (2.553)	-1.724 (1.973)	-0.703 (1.746)	-1.500 (1.772)	-0.618 (1.772)	3.603 (4.748)
Programmatic parties	1.393 (1.546)	0.976 (1.199)	1.265 (1.231)	0.639 (1.368)	-0.478 (2.017)	0.883 (4.086)
GDP per capita	8.476* (4.258)	12.307*** (3.750)	8.101** (3.537)	6.881** (2.744)	12.880*** (2.479)	6.882 (5.385)
Military	0.574 (1.218)	0.342 (1.146)	-0.202 (1.069)	0.484 (0.735)	-4.576*** (1.024)	-1.899 (3.729)
Defense minister	-0.099 (1.265)	0.633 (1.254)	1.559 (1.151)	0.503 (0.579)	-2.120* (1.106)	1.306 (1.907)
Years in office	0.088 (0.067)	0.137** (0.065)	0.075 (0.057)	-0.069 (0.057)	0.030 (0.056)	-0.200 (0.129)
Years to election	0.095 (0.071)	0.096 (0.085)	0.050 (0.086)	0.061 (0.086)	0.060 (0.123)	-0.025 (0.177)
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	560	561	561	561	480	1,017
R-squared (within)	0.213	0.237	0.212	0.152	0.447	0.151
Countries	40	40	40	40	40	40

Notes: Standard errors clustered by country in parentheses. Dependent variables are from the September 2018 update of the Worldwide Governance Indicators (estimates of GE = Government Effectiveness; RQ = Regulatory Quality; RL = Rule of Law; CC = Control of Corruption), various editions of the Corruption Perceptions Index (CPI), and the July 2018 version of the V-Dem dataset (ECI = Executive Corruption Index, reversed). See data appendix for full variable definitions and sources. *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 2: Supplementary regressions with lagged dependent variable

	(1)	(2)	(3)	(4)	(5)	(6)
	GE	RQ	RL	CC	CPI	ECI
Cabinet size	-0.076** (0.031)	-0.035 (0.025)	-0.090*** (0.026)	-0.097*** (0.032)	-0.101* (0.059)	0.005 (0.034)
Polity	0.225** (0.096)	0.219*** (0.076)	0.305** (0.136)	0.161 (0.111)	-0.099 (0.088)	
Electoral democracy						3.937 (3.302)
Left	-1.696*** (0.497)	-0.156 (0.554)	-1.146** (0.459)	-1.455** (0.642)	-0.460 (0.514)	-0.843 (0.553)
Government fractionalization	-2.177* (1.196)	0.460 (0.974)	-1.148 (1.163)	-0.322 (1.156)	-0.230 (1.302)	-0.357 (0.960)
Programmatic parties	-0.047 (0.617)	-0.482 (0.776)	0.305 (0.740)	-0.765 (0.907)	-0.142 (0.988)	0.593 (0.870)
GDP per capita	3.816** (1.884)	2.934* (1.517)	3.545** (1.602)	2.873* (1.578)	5.055** (2.263)	-1.127 (0.762)
Military	-0.497 (0.620)	0.834 (0.518)	1.016 (1.221)	0.558 (0.383)	-1.905** (0.802)	1.978** (0.842)
Defense minister	-0.270 (0.506)	-0.470 (0.357)	1.246** (0.562)	0.430 (0.589)	-0.991 (0.655)	0.014 (0.491)
Years in office	0.055** (0.026)	0.053*** (0.017)	0.010 (0.023)	-0.035 (0.024)	-0.042* (0.023)	-0.015 (0.018)
Years to election	0.037 (0.050)	-0.023 (0.058)	-0.036 (0.054)	-0.019 (0.070)	0.072 (0.088)	-0.002 (0.066)
Lagged dependent variable	0.520*** (0.046)	0.656*** (0.046)	0.622*** (0.050)	0.634*** (0.079)	0.598*** (0.051)	0.935*** (0.020)
Country FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	436	436	436	436	441	1,001
R-squared (within)	0.483	0.580	0.577	0.552	0.674	0.848
Countries	40	40	40	40	40	40

Notes: Standard errors clustered by country in parentheses. Dependent variables are from the September 2018 update of the Worldwide Governance Indicators (estimates of GE = Government Effectiveness; RQ = Regulatory Quality; RL = Rule of Law; CC = Control of Corruption), various editions of the Corruption Perceptions Index (CPI), and the July 2018 version of the V-Dem dataset (ECI = Executive Corruption Index, reversed). See data appendix for full variable definitions and sources. *** p < 0.01, ** p < 0.05, * p < 0.1.

5. Conclusions

The overall takeaway from the above analysis is that cabinet size has a negative association with a basket of widely used measures of governance, both when looking at cross-country averages and when we exploit within-country variation. Although the correlations presented here do not allow a causal interpretation, the pattern we document is evident also with a demanding regression framework that attempts to limit some threats to valid inference. In particular, we control for time-invariant country characteristics as well as several variables that the literature identifies as linked to the number of ministers, and which may also affect governance outcomes.

What are the implications of the patterns we document? One implication is that a large increase in cabinet size should alert policy makers, donors, investors, and citizens of the potential impact on governance. In Kenya, for example, presidents have used cabinet appointments as instruments of patronage, resulting in cabinets of more than 30 ministers as well as similar numbers of assistant ministers. The inflation in cabinet positions must have been perceived as having been associated with bad outcomes, since a restriction to 22 cabinet secretaries was drafted into the new constitution of 2010 (Kramon and Posner 2011). Assuming that there is a fixed amount of resources to monitor individual politicians, a more compact number of ministers may allow for more concentrated oversight and could strengthen accountability.

At the same time, where the political reward system is based on extra-legal perks, formalistic approaches may not yield intended consequences, unless they also tackle these underlying dynamics. This is one reason why anti-corruption commissions across Africa and elsewhere have often been so ineffectual in fighting corruption (Doig et al. 2005). Moreover, allowance might have to be made for the political management functions of cabinet appointments, which can contribute to overall stability and help contain political tensions – even if this entails a price in terms of other dimensions of governance. Such trade-offs should be kept in mind when investigating specific cases more closely and when formulating policy recommendations for a particular setting.

We acknowledge that other aspects of cabinet appointments may have governance consequences, too. Notably, the personal characteristics of individuals selected for ministerial office may relate to their performance including in terms of policy outcomes (Besley 2005, Hallerberg and Wehner 2018). Moreover, the stability of cabinets is also important. Martínez-Gallardo (2010) notes that frequent ministerial turnover has a negative effect on the ability of ministers to credibly commit to long-term policy, with negative implications for policy stability and the quality of governance more broadly. There may be a link between the personal characteristics of ministers, their turnover, and the size of cabinets, which deserves further analysis.

To what extent are the results relevant beyond Sub-Saharan Africa? The underlying arguments linking cabinet size to poor governance in this context focus on the role of elite clientelism. It is plausible that a similar pattern exists in other regions where this form of clientelism is dominant. Yet settings where clientelistic relationships are weaker and programmatic parties stronger may also suffer governance problems from overly large cabinets, although perhaps for different reasons. For instance, an inquiry by a UK parliamentary committee detected “a growing

consensus that the ever increasing number of ministers harms the effectiveness of government” (House of Commons 2010: 7) and described a range of pathologies that can arise in governments with too many ministers. These include coordination challenges and the proliferation of initiatives that serve to raise the public profile of individual ministers but disrupt the smooth running of government. While, ultimately, questions of external validity must be answered with further research, this suggests that large cabinets are likely to be problematic more generally.

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Data Appendix

Cabinet: The number of ministers with full cabinet rank, excluding other members of the executive without cabinet rank, notably junior or deputy ministers, and individuals with lower-level executive functions. Source: Arriola (2009) plus authors' updates from later editions of Europa Publications, Africa South of the Sahara.

Control of Corruption (CC): Captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Rescaled so that most scores lie between about 0 and about 100, with higher scores corresponding to better outcomes. Source: September 2018 update of the Worldwide Governance Indicators, CCE.

Corruption Perceptions Index (CPI): Measure of perceived levels of public sector corruption according to experts and businesspeople. Ranges from 0 to 100, with higher scores corresponding to better outcomes. Source: Transparency International, data compiled by Jeffrey Jacob.

Defense minister: Indicator of whether the defense minister is a military officer. 1 = military officer, 0 = not a military officer. Source: Inter-American Development Bank, Database of Political Institutions 2017, DEFMIN.

Electoral democracy: Measure of the extent to which the ideal of electoral democracy is achieved. Ranges from 0 (not at all) to 1 (fully achieved). Source: July 2018 version of the V-Dem data set, v2x_polyarchy.

Executive Corruption Index (ECI), reversed: Measures how routinely members of the executive, or their agents grant favors in exchange for bribes, kickbacks, or other material inducements, and how often they steal, embezzle, or misappropriate public funds or other state resources for personal or family use. Rescaled to range from 0 (corrupt) to 100 (not corrupt). Source: July 2018 version of the V-Dem data set, v2x_execorr.

GDP per capita: Log of GDP per capita (constant 2010 US\$). Source: World Bank, World Development Indicators, March 2019, NY.GDP.PCAP.KD.

Government Effectiveness (GE): Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Rescaled so that most scores lie between about 0 and about 100, with higher scores corresponding to better outcomes. Source: September 2018 update of the Worldwide Governance Indicators, GEE.

Government fractionalization: The probability that two deputies picked at random from among the government parties will be of different parties. Ranges from 0 to 1. Source: Inter-American Development Bank, Database of Political Institutions 2017, GOVFRAC.

Left: Party of the chief executive is communist, socialist, social democratic, or left-wing. 1 = left, 0 = not left. Source: Inter-American Development Bank, Database of Political Institutions 2017, EXECRLC.

Military: Indicator of whether the chief executive is a military officer. 1 = military officer, 0 = not a military officer. Source: Inter-American Development Bank, Database of Political Institutions 2017, MILITARY.

Polity: Revised Combined Polity Score ranging from -10 (strongly autocratic) to +10 (strongly democratic). Source: October 2018 version of the Polity IV data set, polity2.

Programmatic parties: Following Cruz and Keefer (2015), the share of the largest three government parties and the largest opposition party that are right, left, or center in their orientation. When the orientation of a political party is either not discernible in the sources employed or unrelated to economic policy, it is counted as non-programmatic. Ranges from 0 to 1. Source: Inter-American Development Bank, Database of Political Institutions 2017, GOV1RLC, GOV2RLC, GOV3RLC, OPP1RLC.

Regulatory Quality (RQ): Captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Rescaled so that most scores lie between about 0 and about 100, with higher scores corresponding to better outcomes. Source: September 2018 update of the Worldwide Governance Indicators, RQE.

Rule of Law (RL): Captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Rescaled so that most scores lie between about 0 and about 100, with higher scores corresponding to better outcomes. Source: September 2018 update of the Worldwide Governance Indicators, RLE.

Years in office: The number of years that the chief executive has been in office. Source: Inter-American Development Bank, Database of Political Institutions 2017, YRSOFFC.

Years to election: Years left in the current electoral term of the executive. Source: Inter-American Development Bank, Database of Political Institutions 2017, YRCURNT.

Appendix 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Cabinet	1,797	22.809	7.632	5	53
Control of Corruption	735	37.285	12.473	12.626	74.335
Corruption Perceptions Index	596	29.916	11.289	0.000	65.000
Defense minister	1,489	0.413	0.493	0	1
Electoral democracy	1,797	0.334	0.208	0.072	0.851
Executive Corruption Index, reversed	1,797	37.641	24.546	2.244	91.965
GDP per capita (logged)	1,618	6.871	0.986	4.880	9.920
Government Effectiveness	734	34.826	12.512	1.082	70.873
Government fractionalization	1,351	0.123	0.223	0.000	0.876
Left	1,797	0.278	0.448	0	1
Military	1,620	0.390	0.488	0	1
Polity	1,729	-1.282	6.032	-9	10
Programmatic parties	1,366	0.433	0.415	0.000	1.000
Regulatory Quality	735	36.016	12.871	-2.901	72.545
Rule of Law	735	35.515	13.496	-2.129	71.543
Years in office	1,629	9.491	7.962	1	42
Years to election	1,219	2.326	1.648	0	7

Appendix 2: Country codes used in Figure 2

Country	Code
Angola	AGO
Benin	BEN
Botswana	BWA
Burkina Faso	BFA
Burundi	BDI
Cameroon	CMR
Cabo Verde	CPV
Central African Republic	CAF
Chad	TCD
Comoros	COM
Congo, Rep.	COG
Congo, Dem. Rep.	ZAR
Côte d'Ivoire	CIV
Equatorial Guinea	GNQ
Eritrea	ERI
Eswatini	SWZ
Ethiopia	ETH
Gabon	GAB
Gambia, The	GMB
Ghana	GHA
Guinea	GIN
Guinea-Bissau	GNB
Kenya	KEN
Lesotho	LSO
Liberia	LBR
Madagascar	MDG
Malawi	MWI
Mali	MLI
Mauritania	MRT
Mauritius	MUS
Mozambique	MOZ
Namibia	NAM
Niger	NER
Nigeria	NGA
Rwanda	RWA
São Tomé and Príncipe	STP
Senegal	SEN
Seychelles	SYC
Sierra Leone	SLE
Somalia	SOM
South Africa	ZAF
Sudan	SDN
Tanzania	TZA
Togo	TGO
Uganda	UGA
Zambia	ZMB
Zimbabwe	ZWE

Source: IMF International Financial Statistics.