The Fiscal State in Africa: Evidence from a Century of Growth

Thilo N.H. Albers,[a] Morten Jerven,[b] and Marvin Suesse[c]*

[a]Department of Economics, Humboldt University, Berlin, Germany; Department of Economic History, Lund University, Sweden

[b]Department of International Environment and Development, Norwegian University of Life Sciences, Ås; Department of Economic History, Lund University, Sweden

[c]Department of Economics, Trinity College Dublin, Ireland; Department of Economic History, Lund University, Sweden

*Corresponding author. Email: marvin.suesse@tcd.ie

Abstract   What is the level of state capacity in developing countries today, and what have been its drivers over the past century? We construct a comprehensive new data set of tax and revenue collection for forty-six African polities from 1900 to 2015. Our data show that polities in Africa have been characterized by strong growth in fiscal capacity on average, but that substantial heterogeneity exists. The empirical analysis reveals that canonical state-building factors such as democratic institutions and interstate warfare have limited power to explain these divergent growth paths. On the other hand, accounting for the relationship between African polities and the international environment—through the availability of external finance and the legacy of colonialism—is key to understanding their differing investments in fiscal capacity. These insights add important nuances to established theories of state building. Not only can the availability of external finance deter investment in fiscal capacity, but it also moderates the efficacy of canonical state-building factors.

The role of the state has been divisive in the study of African politics. While some authors have described the state in Africa as weak and barely able to collect enough revenues to fulfill its basic functions, others have pictured the African polity as too strong, invasive, and extractive.[1] Politicians have echoed these concerns: Amílcar Cabral, one of the heroes of the continent's wars of independence, saw the

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1. See Herbst 2000; Samatar and Samatar 2002 versus Acemoglu, Johnson, and Robinson 2001; Frimpong-Ansah 1992; Mamdani 1996; Young 1994.

nature of the state as the root of a "failure of African independence."[2] Scholars of international relations have similarly expressed doubts whether states on the continent are capable actors in their own right, or whether they have been dwarfed by non-state actors.[3] Some have gone so far as to depict states in Africa as mere fictions created by international law without any foundation in domestic authority or control.[4] Are African states just form without substance?

We seek to quantify the "substance" of states in Africa by measuring their capacity to tax. Taxes are the backbone of effective statehood: not only does their collection require domestic authority and control, taxes themselves are a prerequisite for a state to carry out its basic functions. As Besley and Persson note, "The power to tax is about much more than raising tax revenues; it is at the core of state development."[5] This has been a central notion in the social sciences since Joseph Schumpeter founded the study of fiscal states a century ago. Based on the centrality of taxation, our analysis proceeds in three steps.

Our first contribution is an integrated historical analysis based on a comprehensive new data set.[6] We harness rich archival material to create a database of disaggregated government revenues from the early days of colonial rule until the present. We standardize these data across polities, both by classifying them according to modern standards and by creating an accompanying set of deflators. The latter allows us to express government revenue in a comparable metric across time and space. To our knowledge, this represents the first data set covering fiscal outcomes for a significant group of polities in the Global South for the entire twentieth century. The new data show that measured in real terms, African polities have been capable of realizing large gains in total revenues since independence. Polities have also increased revenues from hard-to-collect taxes, a common measure of fiscal capacity. These results suggest that reports of the death of the state in Africa may have been premature.

Our historical analysis further uncovers a pattern of strong growth in fiscal capacity whenever there was insufficient trade to be taxed (such as during the world wars). Conversely, when alternative finance was available through aid and debt in the decade following World War II, investment in fiscal capacity was low. The waves of democratization in the 1960s and 2000s coincide with high rates of growth in fiscal capacity, whereas the reverse is true for the period of instability in the 1980s or during decolonization in the late 1950s. The historical analysis thus reveals the importance of the international environment (wars, decolonization, access to external finance) in shaping domestic capacities.

As a second contribution, we draw on these insights to distill theories of fiscal capacity into testable hypotheses, which we take to our data. We commence with

2. Cabral 1973, 43.
3. Cornelissen, Cheru, and Shaw 2012; Dunn and Shaw 2001; Lemke 2003; Taylor 2001.
4. Bates 2001; Herbst 2000; Jackson 1990.
5. Besley and Persson 2014, 100.
6. Despite promising recent work on individual country or period groupings (Cogneau, Dupraz, and Mesplé-Somps 2021; Frankema and Waijenburg 2014; Lee and Paine 2022; Mansour 2014; Prichard and Leonard 2010), we do not systematically know how much revenue African polities have historically collected.

canonical theories of fiscal capacity. These approaches emphasize the importance of democracy, government turnover, and international conflict.[7] However, these canonical factors are largely derived from the historical experience of state building in the West. Hence we complement our analysis with theories related to Bayart's concept of "extraversion." These approaches emphasize that governments in Africa secure their rule by turning to external resources.[8] A key mechanism and testable prediction of extraversion theories is that governments substitute away from domestic fiscal-capacity investments and instead turn to external rents from foreign aid, credit, and resource exports. We test both the canonical theories and the role of substitution in a fixed-effects panel specification. The association between fiscal capacity and canonical variables, with the exception of government turnover, is weak. Among the extraversion variables, access to credit and aid indeed exhibit the hypothesized substitution effect, while increases in resource exports do not generally lead to lower fiscal capacity.

In a third step, we investigate the relationship between extraversion and canonical models of fiscal capacity. First, recent scholarship emphasizes that external finance moderates the effect of canonical factors on fiscal capacity, a different mechanism from the substitution mechanism just described.[9] For example, we find that international wars in Africa stimulated fiscal capacity only when resource exports were stagnant and external credit was scarce. Second, the institutional legacy of colonialism—of key importance to theories of extraversion—has shaped the efficacy of canonical forces. For example, ethnic divisions exacerbated by colonial rule diminish the likelihood of democracy increasing fiscal capacity. Taken together, our empirical results imply that it is indispensable to embed theories of domestic revenue mobilization on the African continent in their international environment and historical context.

It is important to emphasize that we do not attempt to advance a general theory of state building in Africa. Indeed, the heterogeneity of our empirical results cautions against such an enterprise. There are also rich scholarly traditions within both political science and African studies on the interaction of taxation, legitimacy, distributive politics, and elite power structures that we only touch on peripherally.[10] Our focus is on fiscal capacity more narrowly defined, although we do believe that raising taxes is a crucial element of state building more widely conceived. Moreover, we recognize that fiscal capacity is a concept with ambiguous normative implications. Governments can use taxes to increase funding for schools and infrastructure, as Mozambique did under Chissano in the 1990s, or Botswana did in the 1980s. Alternatively, funds can be frittered away on prestige projects, or disappear into the pockets of corrupt government officials, as they did in Mobutu's Zaire. In many of the colonial polities we study, tax revenues were used to cement white

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7. Besley and Persson 2009, 2010; Scheve and Stasavage 2010; Tilly 1992.
8. Bayart 2000; Clapham 1996; Cooper 2002; Moore 2004; Olukoshi and Laakso 1996.
9. Queralt 2019.
10. Kasara 2007; Kramon and Posner 2013; Mamdani 1996.

minority rule over African populations. In Rhodesia and South Africa, repressive minority rule continued even after independence, bolstered by an efficient fiscal apparatus.[11] Despite this history of misuse of taxation systems and government funds, however, tax collection remains a necessary (though clearly not sufficient) condition for the extension of vital public services across the continent.

Data: Tax Collection and Fiscal Capacity

Despite the centrality of taxes to statehood and economic development, large gaps exist in our knowledge about trends in taxation in Africa.[12] These gaps stem from two causes. First, while records of state revenues exist for almost all polities since 1900, they are scattered across numerous archives, and their granularity varies substantially. Second, it is difficult to compare nominal revenues over time and across jurisdictions in the absence of reliable GDP data.[13] Our data set employs a harmonization strategy that solves both problems.

The data set is based on revenue data for more than 4,700 country-year combinations extracted from a large variety of sources, mainly colonial budgets, revenue statements, and IMF Article IV consultation documents.[14] Our first step was to break down any revenue data we found into their smallest components, called items. These more than 135,000 items are usually revenue streams from individual taxes, such as a colonial hut tax or an export duty on copper. We then reclassified each item per modern IMF definitions into direct taxes, indirect taxes (subdivided into indirect taxes proper and trade taxes), non-tax ordinary revenue, resource income, and extraordinary revenue. We then summed all items within each category, which is now consistently coded.

Not all of these categories are relevant to fiscal capacity. In this paper, we define fiscal capacity as the tax revenue a government can collect in the long run. Following much of the literature, we measure this with tax revenue generated by hard-to-collect taxes, net of cyclical effects.[15] This builds on two assumptions. First, although hard-to-collect taxes require a substantial upfront investment, they eventually provide a larger revenue stream than what can be provided by trade taxes. This assumption is consistent with the patterns in modern cross-sectional data: tax revenue as a share of GDP is higher when countries receive a larger share of their revenues from direct taxes.[16] Second, the revenue stream of hard-to-collect taxes will be less volatile than that generated by trade or resource taxes. Indeed, revenues of developing countries that rely on trade taxes are typically more volatile than those that rely on

11. Mkandawire 2010b.
12. See the online supplement (Section 1) for a survey.
13. Jerven 2013b.
14. See the online supplement (Section 2).
15. Besley and Persson 2014.
16. Ibid.

direct taxes.[17] Our data exhibit the same pattern: aggregate revenue volatility is systematically correlated with the share of trade and resource taxes.[18]

We thus exclude trade and resource taxes from our measure of fiscal capacity. The taxes we define as hard to collect are direct taxes and indirect taxes proper, the latter including value-added taxes (VAT). In developed economies, indirect taxes are often treated as easy taxes, but this characterization is not transferable to developing countries, where institutions and technology need to be built up before VAT can effectively be collected.[19]

Finally, we need to deflate nominal revenues. The choice of deflator is motivated by a simple consideration: nominal incomes should be converted into real incomes using the prices of the relevant consumption basket. During much of our period, the main expenditure item for governments in Africa was their wage bill.[20] We therefore take nominal wages as the deflator for the revenue series. For a polity i in year t we then have:

$$\text{real tax revenue per capita}_{i,t} = \frac{\text{nominal tax revenue}_{i,t}}{\text{nominal day wage}_{i,t}} \times \frac{1}{\text{population}_{i,t}} \quad (1)$$

Our approach has four conceptual strengths. First, because we use daily wages and normalize by population, fiscal capacity is expressed in a meaningful unit: the number of work days the government collects from each worker.[21] Second, we do not have to rely on inflation or nominal GDP estimates, which are rarely available before 1960 and often unreliable thereafter.[22] Wages, on the other hand, are relatively well recorded, which is why they are regularly used in contexts with limited data availability.[23] Third, we use data on urban wages only. These wages are not reflective of the country as a whole, but of the regions where governments tax and spend most actively due to the well-known urban focus of African politics.[24] Fourth, many colonial governments supplemented monetary taxes with forced labor. Our method allows us to capture this important feature of the colonial state, as we can add estimates of forced-labor days to the estimates for monetary taxes, expressed in labor days.[25]

The online supplement provides two validation exercises for our measure of fiscal capacity. First, we check whether our measure is reflective of changes in tax policy. We run a

17. Cagé and Gadenne 2018.

18. Note that this statement does not imply that levying trade taxes is costless. However, taxing trade requires less human and capital resources than taxing private incomes. Accordingly, early colonial states preferred to tax trade whenever trade costs were low enough (see the online supplement, Section 2.4).

19. Fjeldstad et al. 2020. Indeed, recent work on capacity building in developing countries, following Pomeranz 2015, has focused on measures that enhance the institutional capacity to collect VAT.

20. Gardner 2012.

21. See the online supplement (Section 2.2) for more information.

22. Jerven 2013a.

23. See Karaman and Pamuk 2013, a study of fiscal capacity in early modern Europe.

24. Bates 2005.

25. The exact extent of forced labor is not known, as colonial authorities did not keep systematic records of these practices. We estimate lower and upper bounds based on the secondary literature, in particular van Waijenburg 2018.

fixed-effects regression of deflated direct tax revenues on the head tax rate in colonial polities. The results show a strong association between rates and revenues, as expected. In addition, the results show that there is substantial variation that is not explained by tax rates. In other words, factors such as the enforcement of existing rates, administrative capacity to conduct censuses, and taxpayer compliance matter as well.[26] Our measure of fiscal capacity should be understood as a comprehensive measure encompassing all of these facets. Second, for periods where nominal GDP data are available, we can compare our metric to tax revenues as a share of GDP. The correlation between these measures is high, and they produce comparable patterns. If anything, our deflator is less volatile because it is not subject to idiosyncratic swings in GDP.

In a nutshell, our measure of real tax revenue provides a metric for resource collection by the state that is comparable both between African polities, and across the century. We have achieved near-comprehensive coverage for a balanced sample of forty-one African polities. We also work with a full sample encompassing five additional polities (Djibouti, Ethiopia, Liberia, Libya, and Somalia) for which we have data coverage after World War II only.

## Revenue Patterns in African Polities Since 1900

Figure 1 summarizes the evolution of fiscal states in Africa. The upper panel reports the mean level of total ordinary revenues across polities, as well as the mean and median levels of fiscal capacity. The lower panel shows the composition of revenues.

One previously underappreciated feature of the fiscal state stands out: the twentieth century was a century of growth. Both ordinary revenue and fiscal capacity were more than eleven times larger per capita in 2000 than they were in 1900. This growth has not always been stable, as the growth rates below the graph show. However, the perception of "state weakness" largely stems from the crisis period between 1980 and 2000 and neglects periods of strong growth both before and after those decades. We also note that growth in revenues is not always due to a higher share of resource or trade taxes. Since the 1990s, the share of hard-to-collect taxes has increased, whereas the share of trade taxes has dropped significantly. Nonetheless, the average trend depicted in Figure 1 masks substantial heterogeneity across time and polities. This is partly illustrated by the widening difference between the mean and median since the 1960s in the upper panel. Before moving to a formal investigation of the polity-specific trajectories, this section investigates the broad trends qualitatively.

Early colonial period: 1900–1914. By the start of the sample period, in 1900, most colonial polities had established some degree of territorial control.[27] However,

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26. Berwick and Christia 2018; Hanson and Sigman 2021.
27. Young 1994.
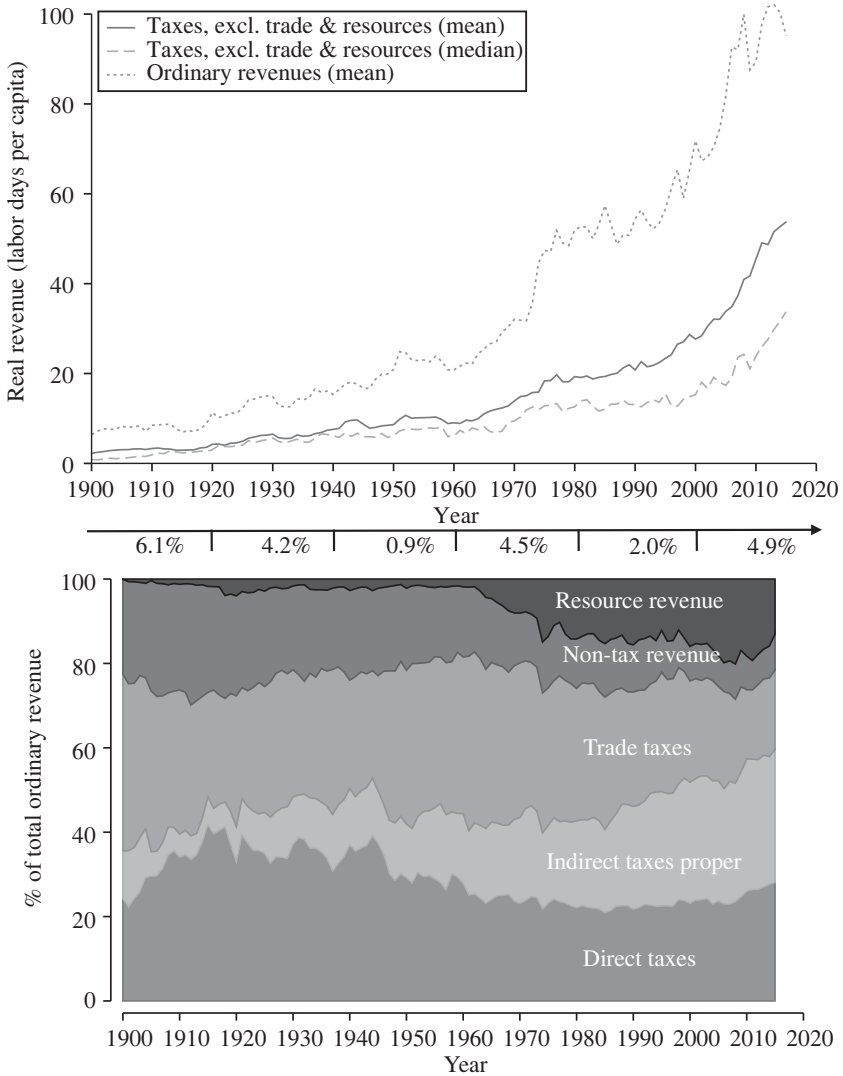
Notes: Data are averaged for all 41 polities of the balanced sample. The upper panel shows real revenue levels over time. The line below the panel reports the mean annual growth of fiscal capacity across all polities, excluding World War I (growth rate 3.1%) and World War II (growth rate 2.6%). The lower panel reports average shares for the respective revenue categories across the sample. These are rescaled such that they total 100 percent. For details on the data construction and corresponding graphs for the full sample, see the online supplement.

FIGURE 1. *Real revenues and their composition in Africa over the last century*

because control depended on European military conquest, it was fragile and was often challenged by African rulers. Especially in British colonies, administration could be executed only by incorporating precolonial rulers into the governance structure through systems of indirect rule.[28] Initial fiscal capacity was correspondingly low; the average tax burden was equivalent to about 2.2 labor days in 1900. Nonetheless, metropolitan treasuries were generally unwilling to subsidize their colonies. Credit markets were an option only for the few polities that had a history of borrowing as sovereign states, such as Egypt, Morocco, and Madagascar.

Fiscal autonomy and low revenues gave rise to the revenue imperative as the overriding aim of the colonial polity.[29] As evidenced by high growth rates in fiscal capacity, colonial states invested heavily in tax collection, often through the introduction of poll taxes ("hut taxes") on the native population. Frequent tax rebellions, such as the Aba Women's War in southeastern Nigeria, are clear examples of Africans contesting this fiscal expansion. Two alternatives were available to the early colonial polity: trade taxes and forced labor. Forced labor added on average between two and twelve labor days per capita to the state's tax take, and even more in the Portuguese colonies.[30] Trade taxes, easily administered at ports, were a way of monetizing the suitability of colonial territories for growing cash crops, especially oil seeds, rubber, and cotton.[31]

War and interwar period: 1915–1945.   During the interwar period, metropolitan centers tentatively sought to "develop" their African holdings economically, which lead to an increase in grants. Access to capital markets was also eased through systems of imperial trusteeship.[32] However, the deteriorating economic situation in Europe quickly stymied these efforts. Cash crops continued to dominate and total revenues were high during the commodity boom of the late 1920s but fell precipitously during the Great Depression. Faced with volatile trade taxes and scarce grants, colonial polities continued to increase direct tax collection. Attempts to introduce income taxes were made, especially in areas such as Kenya, where an influx of white settlers provided a taxable base. However, settlers could also use local consultative assemblies to delay such measures.[33] Now firmly entrenched, colonial governments were rarely challenged through armed rebellions, and hence much of the growth in real tax income came from expanding the taxation of African populations. In so-called peasant colonies, where hut taxes were not established, export taxes were used to collect revenue. Here too, the economic burden was perceived to fall heavily on African farmers in the form of low producer prices.

28. Müller-Crepon 2020.
29. Gardner 2012.
30. See the online supplement (Figure 2.4).
31. Frankema and Waijenburg 2014.
32. See Havinden and Meredith 1996 for grants and Sunderland 2007 for credit markets.
33. Gardner 2012.

The world wars had a profound fiscal effect on African polities. Loans became hard to obtain as the London market was closed to colonial issues, while colonies in the French Maghreb were still able to issue bonds. Conversely, British colonies continued to receive some financial support from the metropole, while France, facing the threat of military annihilation at home, requested funds from its colonies.[34] Resource exports oscillated dramatically, and non-military commodities experienced a serious glut. Meanwhile, African polities on whose territory fighting took place had to shoulder the costs of equipping expeditions, recruiting soldiers, and hiring laborers.[35] In many polities, direct tax collection thus increased strongly because shortfalls in alternative revenue sources left such expenditures otherwise uncovered. The humps in the share of direct taxes during the world wars in Figure 1 reflect this compositional effect. In absolute terms, the average annual growth rates of hard-to-collect taxes also remained high, amounting to 3.1 percent during World War I and 2.6 percent during World War II. Clearly, these growth rates mask substantial heterogeneity across countries and the highly erratic nature of revenue growth during the wars.[36]

Late colonial period: 1946–1959.   Our results show that fiscal capacity grew slowly as the end of the colonial period drew nearer. Real tax and total revenues even declined as decolonization became imminent. In possible anticipation of political change, colonizers pursued only minimal state-building goals. Several other factors contributed to the lackluster expansion of fiscal capacity. Resource exports were generally buoyant in the mid-1950s. Colonial states levied export taxes, often through marketing boards for cash crops, thus prolonging the pronounced reliance of the African fiscal state on trade taxes displayed in Figure 1. Credit market access became near universal, bolstered by investment programs from multilateral agencies such as the International Bank for Reconstruction and Development. Metropolitan transfers picked up, too, as colonizers at last expanded the range of public goods they supplied beyond administration and security, following ideas of development planning that became increasingly popular after the war.[37]

Early independence period: 1960–1979.   At independence, many African governments took up the developmental ethos of state-led economic growth.[38] Our data suggest that during this period, significant investments in fiscal capacity took place. As Figure 1 shows, real tax revenues grew rapidly from 1960 until at least the mid-1970s. African states doubled their real tax take from the equivalent of nine days of labor to eighteen days. Total revenues rose even more strongly, largely reflecting the strong growth in resource revenues. We note that apparently

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34. See Havinden and Meredith 1996 for bond issues and Huillery 2014 for colonial subsidies.
35. Young 1994.
36. See the online supplement (Section 4) for the growth rates and standard deviations.
37. Havinden and Meredith 1996.
38. Mkandawire 2001.

these resource windfalls were quite compatible with increases in fiscal capacity.[39] Moreover, the expansion of direct tax revenue was accompanied by a continued reliance on trade taxes, a characteristic feature of developmental states that used export taxes to finance investment in industry.

Clearly, then, sovereign African polities were able to grow fiscally when the conditions were right. What were those conditions? Independence was accompanied by a sharp, albeit short-lived, surge in popular participation before many polities settled into the relative stasis of one-party rule.[40] Although there was significant institutional continuity between metropolitan transfers and the aid former colonizers provided, the amounts offered declined strongly.[41] Aid was forthcoming from new players, in particular the United States and the USSR, but this was tied to significant political concessions. Polities did make use of their de jure complete access to credit markets, but global interest rates generally rose over the period, limiting the attractiveness of this option.

Crisis: 1980–1999.   Our results corroborate the common view of the 1980s as a crisis period for African states. Growth in real tax revenues averaged close to zero across polities and collapsed in many. Growth in total revenues was also low, affected by the reduction in trade taxes through trade liberalization programs[42] and the slashing of non-tax revenues in the wake of privatization. Although average tax revenues recovered slightly in the 1990s, the median tax level in Figure 1 suggests that most polities did not exit this crisis until the turn of the century. The causes of this crisis have been analyzed elsewhere.[43] For our present purposes we note that this period combined frequent and often irregular changes in leadership with generally undemocratic governments that lacked the legitimacy to tax. Sometimes, changes in government were associated with civil war. These factors likely eroded incentives for investment in fiscal capacity. African states also made increased use of multilateral loans: the IMF granted access to its financial facilities in the form of structural adjustment loans from 1979 on.[44]

Recovery: 2000–2015.   We detect a strong recovery in real tax revenue at the start of the new century. The lower panel of Figure 1 suggests that much of this expansion was driven by an increase in indirect taxes proper (VAT), which casts new light on the findings of a literature that has hitherto been skeptical about the effect of this tax.[45] We also detect an increase in direct tax revenue. The strong increase in tax

39. Some of the polities with the largest increases in capacity during this period were mineral exporters, including Botswana (diamonds), Zambia (copper), and Gabon (oil).
40. Young 2012.
41. Pacquement 2010.
42. Cagé and Gadenne 2018.
43. Bates 2001; Frimpong-Ansah 1992.
44. Van de Walle 2001.
45. Ahlerup, Baskaran, and Bigsten 2015; Moore 2014.

revenues is concurrent with several instances of democratization, which have transformed the political landscape of the continent, although not all democratizations have proved permanent.[46] We also find that even during this period of fiscal expansion, resource revenues have remained buoyant. However, not all countries have participated in this pattern of growth. The large gap between median and mean fiscal capacity in Figure 1 has stayed about the same size over the past two decades, and no significant convergence in fiscal capacity among African polities has taken place.

Determinants of Fiscal Capacity in African Polities

Our historical analysis points to the importance of domestic political institutions and international conflict in shaping fiscal capacity. The narrative also highlights the crucial role of access to external finance and colonial legacies for African polities. We now develop a common framework for understanding these disparate factors.

Canonical Factors

We commence with the widely used approach established by Besley and Persson, which defines a government as a group of political decision makers with similar preferences.[47] We also build on their premise that increasing revenue from hard-to-collect-taxes, that is fiscal capacity, entails short-term expenses for a government in conducting censuses, assessing incomes, and building institutional infrastructure. These investments yield a positive return to the government in the future as permanently higher levels of taxation are unlocked. Tax revenues may yield utility to the government through direct consumption or through spending on public goods that are closely aligned to the government's preferences.

Government turnover.   The government's decision problem is complicated by the fact that the returns on investments in fiscal capacity are uncertain because of government turnover. For example, the current government may no longer be in power by the time higher tax revenues materialize. This is likely to reduce the expected payoff from investments, either because they cannot be consumed directly or because the spending preferences of the new government are likely to differ. A precarious government that is likely to lose power quickly will therefore not commit to costly investments in hard-to-collect-taxes and may prefer to fund itself through easily obtainable means, such as trade taxes. This leads us to the following hypothesis:

H1 (Government turnover): Investment in fiscal capacity will decrease if it is likely that the current government will lose power.

46. Young 2012.
47. Besley, Ilzetzki, and Persson 2013; Besley and Persson 2009.

Cohesive institutions. The extent to which opposition groups enjoy the fruits of investment in fiscal capacity will depend on the institutional environment. If the government faces institutional constraints on its spending decisions, such as a powerful legislature or a rule-bound bureaucracy, it will not be able to use the newly materialized tax revenues exclusively to its own advantage. If such cohesive institutions exist, the opposition may be more likely to conclude that investments in fiscal capacity are outlays for a common future good benefiting both government and opposition. This will make it easier for the government to enact reforms to increase fiscal capacity. Furthermore, democratic polities could see more tax compliance from citizens, who now have a stake in the future of their polity. This positive relationship between democratization, broadly conceived, and fiscal capacity is corroborated by empirical evidence for contemporary developing countries.[48] We therefore propose:

H2 (Cohesive institutions): Investment in fiscal capacity will increase if purely redistributive spending by the executive is constrained.

Common interest shocks. Government and opposition may also be bound together in their spending preferences by common interests rather than by restrictive rules. This is most likely if exogenous shocks, such as war, threaten the survival of both. In such an emergency, government and opposition may assent to programs that increase tax collection. This proposition has a pedigree: in what is now known as the bellicose theory of capacity, the fiscal history of Europe is often explained as involving competing states that constructed tax systems to fund their military exploits.[49]

However, scholars working on African history have been skeptical of the bellicose theory because much of the literature points to the dearth of interstate conflict in Africa. Herbst argued that the relatively benign interstate environment did not threaten the survival of either the colonial or sovereign African polity.[50] On the other hand, military spending accounted for about a third of total outlays of colonial governments in the interwar period,[51] which suggests that security was an important motive. In fact, as discussed in the previous section, African polities were strongly affected by conflicts initiated by their colonial rulers that increased revenue needs, most notably the two world wars. Our data show increases in real tax revenues during these periods. We therefore do not discount the bellicose theory at the outset.

H3 (Common interest shocks): Shocks demanding a unified response from all interest groups within a polity will lead to an increase in tax collection.

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48. Profeta and Scabrosetti 2010; Ricciuti, Savoia, and Sen 2019.
49. The hypothesis goes back at least to Schumpeter and is now usually associated with the work of Tilly 1992. For more recent empirical work, see Scheve and Stasavage 2010.
50. Herbst 2000; see also Dincecco, Fenske, and Onorato 2019.
51. Alexopoulou and Frankema 2018.

Yet we recognize the need to adjust the bellicose theory to our context. At first glance, wars during the colonial period do not seem to fit with notions of common interest shocks emphasized by scholars such as Tilly for Europe. However, in the African context, the pressure of war did often unify factions within the colonial elite. This sometimes involved a softening of the antagonism between white settler representatives (who were more prone to advocate taxing African populations) and colonial authorities (who were more inclined to tax lightly in fear of rebellion). This temporary alignment spurred higher tax rates on native populations during and directly after wars.[52] Nonetheless, these considerations imply that it is important to distinguish between wars in the colonial and postcolonial periods because the composition of elites will differ. Another important distinction is between international and domestic conflict. Civil conflicts may intensify tax pressure on a central government, similar to international conflicts. However, civil wars will also diminish a government's ability to control territory and present a sign of divided, rather than common, interests.[53] Hence, one might be tempted to blame the erosion of fiscal capacity in many African countries in the 1980s and early 1990s on civil conflict.

Extraversion and the African Fiscal State

Beyond these canonical factors, Africa-specific theories of state formation emphasize the importance of colonial legacies and the availability of external finance. Bayart's concept of extraversion encapsulates both of these forces, positing that governments in Africa have often secured their rule by mobilizing resources provided by the external environment. Similarly, Cooper has characterized colonial and postcolonial states as "gatekeepers" that control access to vital external rents.[54] We begin by providing a hypothesis as to why rulers may substitute away from domestic revenue mobilization and use external finance instead. We then develop an argument showing how both financial and political extraversion factors moderate the effect of canonical factors.

The basic mechanism that underlies financial extraversion is an economic one. The incentive for rulers to invest in domestic fiscal capacity depends on its opportunity costs, that is, on the payoff derived from tapping into other revenue sources. These alternative revenues can be obtained by engaging with the external environment. For example, close relations to (former) colonial powers can unlock aid or subsidies, multinational private and public lenders offer standardized credit contracts, and globalized commodity markets provide an outlet for taxable resource exports. Governments may therefore not turn to domestic revenues but control and exploit the ever-tighter links between African territories and the world economy.[55] In particular, the literature

52. Gardner 2012.
53. Bates 2001; Besley and Persson 2008; Ch et al. 2018.
54. Bayart 2000; Cooper 2002.
55. Bayart 2000; Clapham 1996; Olukoshi and Laakso 1996.

points to (1) exporting natural resources, which effectively allows governments to tax foreign commodity consumers rather than domestic populations; (2) procuring intergovernmental aid, which may be acquired through international political maneuvering rather than fiscal prudence; and (3) accessing international credit, which helps governments soften their revenue constraints.[56] These insights are in line with much of our historical analysis, which pointed to the importance of access to external finance in shaping the dynamics of real revenues. Our fourth hypothesis thus is:

H4 (External revenues): Investment in fiscal capacity will decrease if

1. *the value of resource incomes increases,*
2. *the availability of intergovernmental transfers such as aid increases, or*
3. *access to external credit markets increases.*

Yet our historical analysis also cautions against blanket statements regarding the enfeebling effect of external revenues, suggesting that external finance has mattered in conjunction with canonical forces. For example, the impact of the world wars on domestic fiscal capacity was highly heterogeneous, and partly depended on the availability of external aid from the metropolis. An emerging literature underscores this point by emphasizing that financial extraversion affects fiscal capacity by moderating canonical forces. States in Latin America struck by wartime expenditures turned to debt only if conditions on international financial markets were favorable. In these cases, war did not improve domestic fiscal capacity. For the African context, the internationalization of the state has been found to sever the positive Tillian link between war and state making.[57] Similarly, easy access to external revenue may negate the positive effects of cohesive institutions if overseas aid lessens the need for rulers to respond to the needs of domestic constituents.[58] Finally, the benefits of government stability for domestic investment may be undermined if rulers can resort to external resources to shore up domestic patronage coalitions.[59] Long-standing rulers may then become kleptocrats instead of state builders. As external finance presents itself as a substitute for investments in fiscal capacity, high levels of external finance may weaken or eliminate the positive influence of canonical forces:

H5 (Moderation effects of external revenues): The availability of external revenues moderates the effect of domestic institutions, government stability, and conflict on

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56. See Besley and Persson 2010; Collier and Hoeffler 2005 for (1); Djankov, Montalvo, and Reynal-Querol 2008 for (2); Moore 2004 for (3).
57. See Queralt 2019 for Latin America and Leander 2004 for the African context.
58. Findley et al. 2017.
59. Arriola 2009.

fiscal capacity. Higher levels of external finance will negate the positive effect of these canonical variables.

Although the external economic environment represents a central element of extraversion, theorists of the African state also emphasize the central role of the external *political* context, in particular colonialism, in influencing capacity building.[60] While these theories focus on state building more generally, they also lead to conjectures regarding the role of colonial extraversion for the operation of canonical variables of fiscal capacity. With respect to the bellicose hypothesis, the binary distinction between the colonial and postcolonial periods is important. As the internal composition of elites differed between the two periods, the degree to which common interest shocks could materialize will differ (see earlier). Regarding government turnover, the literature emphasizes how the gradual transition from colonial to sovereign rule in the 1950s shortened the time horizon of late colonial governments and bureaucrats. This lessened their propensity to invest in long-term state building.[61] Finally, modes of colonial rule encouraged the emergence of systems of patronage, often tied to ethnicity by the colonizers. Examples include multiethnic federalism in Nigeria, or in its most institutionalized form, the fiscally segregated settler economies of southern Africa.[62] At high levels of ethnic heterogeneity, we expect democracy to be less effective in fostering fiscal capacity because the cohesiveness of institutions is undermined by ethnic patronage or discrimination.

It is important to emphasize that such institutional legacies of colonial extraversion exert their effects on both the past and the present. This is evident in both the literature on the persistent effects of historical European settlement on present-day institutions and the notion that postcolonial states inherited the gatekeeper nature of colonial polities and therefore their external orientation.[63]

We thus posit:

H6 (Political extraversion): The effect of canonical factors is shaped by colonialism and its legacy.

Empirical Strategy

Our theoretical framework has narrowed down the explanations for the divergent trajectories of Africa's fiscal states to canonical and extraversion forces. In the following, we describe how we operationalize them as variables and embed them in a fixed-effects regression setup.

60. Bayart 2000; Cooper 2002.
61. Hargreaves 1996.
62. Cooper 2002; Mkandawire 2010b.
63. Acemoglu, Johnson, and Robinson 2001; Cooper 2002.

Operationalizing Canonical and Extraversion Forces

Government turnover.   We assume incumbents infer the probability of a change in government from the frequency of past turnovers.[64] Building on the data set of the Varieties of Democracy (V-Dem) project, we code past government turnover as a dummy representing either (1) a change in the party that provided the chief executive after an election, in the case of democracies; or (2) a change in the ruling regime (through whatever means), in the case of autocracies. In accordance with our theoretical framework, government turnover thus reflects changes in the group holding executive power, rather than a change in the individual leader.[65]

Cohesive institutions.   The V-Dem project provides a set of indicators describing the "quality" of democracy for a given polity throughout our sample period, including the colonial period. V-Dem indices are bounded between 0 and 1 and are based on expert assessment for each polity and year. Among its five top-level indices, "liberal democracy" matches our theoretical considerations most closely. Putting the emphasis on the extent of executive constraints and the protection of minorities, it reflects the inability of governments to redistribute at will to their own group, in line with our concept of cohesive institutions.[66]

Conflict.   Following our theoretical considerations, we use two criteria to classify armed conflicts: the era of the conflict (colonial or postcolonial) and the nature of the adversary (state or non-state). This gives us four types of conflict: colonial international wars; international wars since independence; anticolonial uprisings; and civil wars since independence.[67] Note that we analyze only those conflicts in which the government of an African polity is a participant and that are fought on the territory of the polity concerned. All wars are coded as an indicator variable, taking 1 in the year of war and 0 otherwise. For the postcolonial period, we rely on the UCDP/PRIO database. For the colonial period, we code conflicts based on the list provided by Brecke.[68]

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64. Note that this formulation implies backward-looking expectations. Their prevalence in practical settings has been emphasized by Gennaioli, Ma, and Shleifer 2016 and Frydman and Nave 2017.

65. Consider Tanzania. The polity is coded as experiencing a change in government in 1916, when effective control of the colony passed from Germany to Britain, and again in 1961 and 1962 (independence and establishment of the republic, respectively). Thereafter, no change is recorded until 2015, as all of the country's chief executives have hailed from the ruling TANU/CCM party.

66. The online supplement (Section 5.5) compares our measure with other top-level V-Dem scores measuring elements of democracy, such as participation and equality. Note that most indices of democracy other than V-Dem code sovereign polities only.

67. This implies that we always consider civil and international conflicts separately. Civil conflict in the colonial era involves colonial governments fighting rebellions, such as the Maji Maji uprising in German East Africa (1905–07). International conflict during this era consists of wars fought by the colonizers against other state actors. Apart from the world wars, which were fought partially on African soil, this includes the wars fought by colonizers against indigenous African states.

68. Brecke 1999.

External aid.   For the postcolonial period, we proxy access to aid with the political proximity of African polities to the five permanent members of the UN Security Council (UNSC). This captures the idea of extraversion, according to which leaders instrumentalize the international system to access rents. Such an idea fits the historical context of independent African states particularly well, when aid was partly determined by maintaining close ties to the principal former colonial powers, Britain and France, or by aligning with the interests of the USA, the Soviet Union, or China.[69] Moreover, some aid receipts will reflect domestic fiscal pressures, raising serious endogeneity concerns. Aid disbursement stemming from international political alliances, on the other hand, is plausibly exogenous to domestic tax receipts.[70]

We weight the political proximity of an African polity to a UNSC member with the budget balance of that member to take their capacity to disburse aid into account. For any sovereign African polity i in year t, access to external aid is defined as

$$A_{i,t} = \sum_j (S_{i,j,t} \times B_{j,t}) \tag{2}$$

where j is the permanent UNSC member, S is an index of similarity[71] between the alliances of the African polity and the UNSC power, and $B_{j,t}$ reflects the budget balance of the UNSC power. For the colonial period, we treat all African polities as being exclusively aligned with their imperial metropolis ($S_{i,j,t}$ 1), so that transfers received during the colonial period are determined by the budgetary situation in the metropolis alone.

Capital market access.   In colonial times, the imperial metropolis tightly regulated the ability of colonies to borrow on international markets.[72] We therefore code a time-varying dummy $D_{i,t}$, assigning it the value of 1 if a colony was institutionally able to issue debt. As an illustration, consider the British colonies in Africa. The willingness of investors to purchase colonial stock depended crucially on its designation as trustee stock, which provided bondholders with additional protection in case of default.[73] The 1900 Colonial Stocks Act accorded this privilege to Crown colonies.[74] This effectively granted Gambia, a Crown colony, access to credit markets, while Kenya was excluded until it was granted Crown colony status in 1920.[75] Therefore, Gambia's $D_{i,t}$ takes the value of 1 after 1900, while Kenya is coded as 0 until 1920. We interact this dummy for institutional access with the inverse of

69. For example, while it was a colony, Guinea's access to transfers depended solely on the priorities of the French Treasury. At independence, Guinea's leader Sékou Touré distanced himself from French plans for continued cooperation. Touré instead aligned himself with the Soviet Union and China, which provided funds. Guinea eventually pivoted to the USA, drawing aid from that donor.
70. Alesina and Dollar 2000; De Mesquita and Smith 2009.
71. Signorino and Ritter 1999.
72. Accominotti et al. 2010.
73. Sunderland 2007.
74. Gardner 2017.
75. Sunderland 2007.

global interest rates, r_t, to reflect the idea that credit market access is more important in times of low interest rates:

$$C_{i,t} = D_{i,t} \times \frac{1}{r_t} \tag{3}$$

where i is the polity and t the year.[76] All polities are coded as having full access to credit markets after attaining sovereignty.

Resource exports.   The value of resource exports depends on fluctuating world market prices, which are exogenous to the polity's domestic fiscal pressures. We have compiled a new data set of commodity export shares for all African polities, in addition to world market prices for these commodities. This is done by extending the commodity data set of Bazzi and Blattman,[77] which commences in 1957, to the early colonial period using British trade statistics and a variety of colonial records. We interact world market prices for each commodity $P_{t,k}$ with the share of that commodity in a polity's export basket, $s_{i,T,k}$, to produce our index of resource exports:

$$R_{i,t} = \frac{\sum_k (s_{i,T,k} \times P_{t,k})}{\Pi_t} \times X_{i,T} \tag{4}$$

where i refers to the polity, t to the year, and k to a commodity. T refers to the period before or after 1957. As nominal prices P are denoted in British pounds (before 1957) and US dollars (after 1957), we deflate nominal prices with the British and US price indices, Π, to produce a real index. We weight the final index for each polity by the share of primary exports in its GDP, $X_{i,T}$. This reflects the idea that swings in commodity prices should have a larger effect on a polity heavily dependent on primary exports, such as Libya.[78]

Political extraversion.   To capture the moderating effect of colonial legacies, we rely on settler and ethnicity data sets described in the online supplement (Section 3.3).

Specification

We collected our fiscal data and covariates at an annual frequency. Since the theoretical predictions pertain to the medium-term evolution of fiscal capacity, we average these data over five-year periods for the formal analysis. Although this reduces the number of observations, it has distinct advantages. First, the averaging eliminates much of idiosyncratic short-term movements, especially those due to business cycle fluctuations. Second, a five-year-window approximates the typical time horizon of rulers, because it corresponds to the average length of a legislative term

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76. We proxy global interest rates with the Bank of England rate.
77. Bazzi and Blattman 2014.
78. Export share s and trade weight X are fixed within each period T.

in countries where elections are held and to the typical period of economic and social plans of autocracies.[79]

We proceed to difference our dependent variable, fiscal capacity, because the focus of our theoretical predictions lies on *investment* in fiscal capacity. As investment is a flow rather than a stock variable, we prefer to analyze changes rather than levels.[80] Therefore we have:

$$\Delta\text{fiscal capacity}_{i,t} = \alpha + \sum_c \beta_c \text{canonical}_{c,t} + \sum_e \beta_e \text{external finance}_{e,t} + Z_{i,t}$$
$$+ \mu_i + \gamma_t + \varepsilon_{i,t} \tag{5}$$

where i is the polity and t is the five-year period. Subscript c denotes the four canonical variables (government turnover, democratic constraints, civil conflict, and international conflict). Note that we lag the incidence of conflicts and government turnover by one period to rule out confounding contemporaneous effects (such as physical destruction caused by wars). We index the external-finance variables (exposure to aid, resource exports, and access to credit) with e. We use μ_i and γ_t to denote polity and period fixed effects, respectively. Because the dependent variable denotes growth in tax revenues, the period fixed effects control for all factors that affect the average growth across the sample in a given period (such as a global crisis). The polity fixed effects control for all time-invariant factors that affect a polity's average growth in revenues.[81] In addition, $Z_{i,t}$ is a vector of time-varying controls, comprising dummies for sovereign polities, territorial changes, hyperinflation episodes, and socialist economic systems, as well as continuous variables for drought magnitude, real GDP growth, and sovereign default.

According to H5, external revenues moderate the effect of canonical variables. This requires us to augment the previous specification. For each canonical factor of interest, we run three separate models—one for each source of external finance—of the following form:

$$\Delta\text{fiscal capacity}_{i,t} = \alpha + \sum_c \beta_c \text{canonical}_{c,t} + \sum_e \beta_e \text{external finance}_{e,t} + Z_{i,t}$$
$$+ \mu_i + \gamma_t + \beta_{c,e}\text{canonical}_{c,t} \times \text{external finance}_{e,t} + \varepsilon_{i,t} \tag{6}$$

Rather than entering the moderator (external finance) linearly, we bin it into three categories: low, middle, and high.[82] We then interact each category separately with the canonical variable of interest, allowing us to assess its marginal effects at low, medium, and high levels of the respective external finance variable. To assess the

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79. The online supplement (Section 5.1) provides qualitatively similar results with annual data.

80. The online supplement (Section 5.2) provides comparable results from a specification where fiscal capacity is expressed in levels.

81. This includes the steady trend toward fiscal decentralization experienced in countries such as Kenya, as well as increasing urban–rural cleavages in many others. See Gardner 2010.

82. Hainmueller, Mummolo, and Xu 2019.

moderating role of colonial legacies according to H6, we employ specifications corresponding to equations (5) and (6), depending on the specific case.

Panel Data Results

We commence by examining the separate effects of canonical and extraversion forces, before investigating how extraversion factors moderate the operation of canonical variables.

Canonical and Extraversion Predictors of Fiscal Capacity

Table 1 presents our benchmark results for the correlates of growth in fiscal capacity, using our full panel of forty-six African polities from 1900 to 2015. The first two columns display the results for the canonical variables (H1 to H3 from the theoretical framework). We gradually add the variables modeling access to external sources of finance (H4) in columns (3) to (5). The full specification in column (6) includes all variables and controls, while column (7) displays the standardized coefficients.

The results generally point in the direction predicted by theory and our historical analysis. Polities with higher democracy scores experience greater investments in fiscal capacity, whereas frequent changes in government in the past five-year period are associated with reduced growth. Similarly, the results suggest that governments of polities with greater access to external credit or aid face weaker incentives to invest in raising domestic tax revenue. The standardized beta coefficients suggest that the importance of the international environment is substantial. For example, an increase of one standard deviation in exposure to international credit markets decreases tax revenues by 0.22 standard deviations. A similar-sized increase in access to foreign aid decreases domestic tax revenues by 0.18 standard deviations.

However, some coefficients, especially the democracy score, are only marginally significant.[83] Moreover, the magnitude of most effects, apart from external credit and aid, is quite small. Conflict incidence (domestic as well as interstate) is not statistically significant at all. Neither do resource exports seem to affect incentives to invest in fiscal capacity, which is seemingly at odds with expectations.

One might be concerned that these results are attributable to measurement error if our measures of access to external finance do not adequately capture the actual uptake of external funds. For example, not all countries facing high commodity prices are able to export freely and realize large resource rents. We therefore gathered new data on debt issuance and aid receipts for our African polities, in addition to the

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83. Of course, it may be that democracy is endogenous to changes in fiscal capacity. Prichard 2015 analyzes how increased political participation leads to a reformulation of tax policy in four African polities. However, we mitigate this concern by using a measure of democracy that focuses on executive constraints, rather than political participation.

TABLE 1. *Effects of canonical and extraversion forces on fiscal capacity*

	Dependent variable: Change in real tax collection per capita, excluding trade and resource taxes						
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
	Canonical factors		*External finance*			*Full specification*	
			Resources	*Aid*	*Credit*	*With controls*	*Standardized*
GOVERNMENT TURNOVER	−0.71**	−0.71**	−0.69**	−0.66**	−0.68**	−0.66*	−0.055*
	(0.35)	(0.34)	(0.34)	(0.33)	(0.33)	(0.33)	
LIBERAL DEMOCRACY SCORE	0.13*	0.13*	0.13*	0.12*	0.13**	0.09	0.141
	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.06)	
CIVIL WARS		−0.11	−0.12	−0.10	−0.11	0.06	0.003
		(1.11)	(1.11)	(1.12)	(1.11)	(1.07)	
INTERNATIONAL WARS		0.20	0.21	0.32	0.25	0.17	0.004
		(1.24)	(1.22)	(1.22)	(1.24)	(1.31)	
RESOURCE EXPORTS			−0.01			0.00	0.005
			(0.03)			(0.03)	
EXPOSURE TO FOREIGN AID				−4.67**		−4.69**	−0.177**
				(1.99)		(1.97)	
CREDIT MARKET ACCESS					−9.70**	−8.00*	−0.215*
					(4.75)	(4.42)	
Polity fixed effects	✓	✓	✓	✓	✓	✓	✓
Period fixed effects	✓	✓	✓	✓	✓	✓	✓
Controls						✓	✓
Adjusted R^2	0.19	0.19	0.19	0.19	0.19	0.21	0.21
Observations	873	873	873	873	873	873	873

Notes: Sample: African polities, 1900–2015 (five-year averages). Controls include droughts, independent statehood, socialist economic systems, territorial changes, hyperinflation episodes, real GDP growth, and sovereign debt default. See online supplement for definitions and full results. All regressions are OLS. Standard errors (in parentheses) are clustered at the polity level. * $p < .1$; ** $p < .05$; *** $p < .01$.

figures on resource revenues from our fiscal data set. In all cases, these uptake variables correlate well with our measures of access to external finance.[84] We also experimented with a broad array of different definitions of access to aid and resource exports. Throughout we found that access to aid negatively determines fiscal capacity, while the effect of resource exports is unremittingly close to zero.[85] This makes it unlikely that our results are due to the measures we use for access to finance.

A more promising explanation is that ignoring moderating effects presents an incomplete picture given the vast heterogeneity in local experiences discussed in

84. See the online supplement (Section 3.4) for the corresponding table.
85. See the online supplement (Section 5.6). We also ensure that our results are not driven by the presence of some large exporters with market power in our sample (such as cocoa in Ghana). Similarly, we do not find an effect of resource exports in different periods or for different commodity groups, with the possible exception of oil.

our historical analysis. This interpretation is supported when we vary the sample composition. While most variables, such as aid exposure, exert a relatively constant effect across subsamples, this is not true for others, such as turnover.[86] A range of factors may moderate the operation of the variables of interest, as emphasized by H5 and H6.

Before proceeding, it is worth emphasizing that the conclusions presented are qualitatively robust to (1) shifting the five-year windows; (2) employing annual data rather than five-year windows; (3) omitting potentially "bad" controls such as GDP growth or sovereign default; and (4) incorporating forced-labor estimates into our dependent variable. Finally, we construct a quasi-placebo test. A potential concern is that our covariates might generally correlate with factors that affect government revenues rather than fiscal capacity per se. For example, frequent changes in government could undermine a government's ability to raise any type of revenue effectively. If this were the case, we would expect total government revenue and fiscal capacity to react in the same way. It turns out, however, that these measures behave very differently. When we use total ordinary revenues rather than fiscal capacity as the dependent variable, most of the variation is explained by GDP, and variables such as government turnover and credit market access become insignificant. This suggests that our original measure captures fiscal capacity as intended.[87]

The Moderating Effects of Extraversion Factors

The evidence presented so far provides mixed support for the effect of canonical forces on investments in fiscal capacity. Government turnover has strong predictive power (H1), democracy less so (H2), and the war–taxation nexus (H3) does not turn out to be significant in the benchmark specification. We now turn to investigate the validity of H5 and H6, that is, how external finance and colonial legacies moderate the efficacy of canonical variables.

Executive turnover.   We have shown that government turnover decreases incentives to invest in fiscal capacity. However, as the discussion on H6 has indicated, government stability was itself influenced by colonial rule. As long as their political dominion was secure, colonial rulers exhibited long time horizons and increased revenue collection from their territories. In contrast, once decolonization became a possibility, rulers' time horizons shortened and investment in fiscal capacity stalled.[88] We show this empirically by introducing a decolonization dummy that takes the value of 1 for any polity that was still a colony after Ghana's declaration of independence. For many observers, Ghana's landmark 1957 declaration ushered

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86. Online supplement, Section 5.3.
87. See the online supplement (Section 5) for these and additional robustness checks.
88. Hargreaves 1996.

in the age of independence.[89] From this moment on, it became increasingly unlikely that colonial governments could sustain their power for long. Correspondingly, they were unlikely to invest in fiscal capacity. Table 2 indeed suggests that investments in fiscal capacity decreased substantially. In accordance with theory, colonial governments invested in tax collection only as long as their rule was expected to last. Because many countries were affected, the mechanism plays a substantial part in explaining the slow growth throughout the continent in the late 1950s.

Columns (2), (3) and (4) of Table 2 explore how access to external finance moderates the effect of government instability, in accordance with H5. The marginal effects in the bottom panel show that for medium or high access to external finance, government turnover leads to lower fiscal capacity. In the presence of medium and high levels of aid, credit, or exports, an additional regime change reduces the growth of domestic tax collection by between 1.0 and 1.5 wage days per period—a sizable magnitude. In contrast, high government turnover does not play a notable role in diminishing fiscal capacity if rulers cannot rely on external financing. The direction of the effect does not support the conjecture that the benefits of stable rule for fiscal capacity can be undermined by access to external finance, as proposed by H5.

However, the results do show that the external environment accentuates the effect of domestic instability. Rulers faced with a high possibility of dismissal and easy access to external revenues will not invest in building up fiscal capacity. This particular finding ties in with a literature that emphasizes how political instability has at times inhibited "developmental" rule in African polities.[90] These contributions corroborate that when chief executives on the continent face a shorter time horizon, they are less willing to invest in projects with a long-term benefit and have greater incentive to engage in short-term "corrupt" practices. Our results suggest that this dynamic is particularly prevalent when external sources of finance are plentiful. For example, we register ten changes in government in Burundi in the postcolonial period, making it one of the most unstable polities in Africa. Our fiscal data also identify it as one of the slowest-growing countries. At the same time, Burundi has become notorious not only for its heavy reliance on foreign aid but also for the way some of its governments have embezzled external funds.[91] The availability of external funding thus seems to have led precarious governments to avoid building domestic capacity.

Importantly, the theoretical argument regarding the effect of government turnovers on fiscal capacity pertains to a *group* in power rather than an *individual*. In the context of the extraction of external rents such as aid and credit, it should not matter if the leader changes, as long as the group maintains power. We explore this conjecture in the online supplement (Section 5.7), where we re-estimate the regressions in Table 2 but replace the group-turnover variable with one for individuals holding executive power. This includes changes in colonial governors and

89. Young 1994.
90. Goldsmith 2004.
91. International Crisis Group 2012; Nduwimana 2006.

TABLE 2. *Government turnover and fiscal capacity*

	(1) Decolonialization	(2)	(3)	(4)
		Moderation through external finance (coefficients)		
		Aid	Credit	Resources
GOVERNMENT TURNOVER (ΔGOV)	−0.74**	−0.01	−0.24	−0.64
	(0.35)	(0.66)	(0.60)	(0.47)
DECOLONIZATION	−2.49*	−2.87**	−1.96*	−2.53**
	(1.30)	(1.31)	(1.01)	(1.24)
ΔGOV × EXTERNAL FACTOR (med)		−1.05	−0.06	−0.40
		(0.92)	(0.93)	(0.68)
ΔGOV × EXTERNAL FACTOR (high)		−1.01	−1.32	0.18
		(0.76)	(1.14)	(0.60)

Dependent variable: Change in real tax collection per capita, excluding trade and resource taxes

		Moderation through external finance (marginal effects)		
Marginal effects for government turnover at				
…low level of moderator	—	−0.01	−0.24	−0.64
…medium level of moderator	—	−1.06*	−0.30	−1.05**
…high level of moderator	—	−1.02**	−1.56*	−0.46
Moderator coefficient				
− medium	—	0.51	−0.90	0.06
− high	—	−1.22	−0.97	−0.01
Polity fixed effects	✓	✓	✓	✓
Period fixed effects	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Hainmueller et al. Wald test (*p*-value)	−	0.89	0.00	0.34
Observations	873	873	873	873
Adjusted R^2	0.21	0.21	0.21	0.20

Notes: Sample: African polities, 1900–2015 (five-year averages). Same controls and main covariates as in column (6) in Table 1 are included, but not shown. *Change in government* refers to the number of changes in the party or regime holding power in the previous five years. Standard errors (in parentheses) are clustered at the polity level. * $p < .1$; ** $p < .05$; *** $p < .01$.

changes in the president for sovereign polities, even if both presidents are from the same party. The results are markedly different: turnover defined in this way is never a statistically significant predictor of fiscal capacity. This confirms our theoretical expectation: the possibility of revenues being redistributed to members of another group, rather than leadership change per se, decreases the incentive to invest in fiscal capacity.

Cohesive institutions. The benchmark results in Table 1 suggest a positive, albeit weak, association between democratic institutions and tax collection. Here, we explore the role of historical trajectories in affecting this relationship—that is,

Africa's place in the state system as shaped by the colonial powers (H6). We then analyze how external finance moderated the effect of democracy according to H5.

An influential literature explains how colonizers shaped local institutions by implementing metropolitan legal frameworks,[92] facilitating the immigration of European settlers,[93] and sharpening ethnic fractionalization.[94] Have these colonial legacies shaped the extent to which democracies engage in state building? Following this literature, we interact the democracy score with a British-colony dummy, and with the share of European settlers (columns (1) and (2) of Table 3). The marginal effects in the lower part of the table imply that in (former) British colonies and those with (historically) large settler populations, more democracy leads to more investment in fiscal capacity, while there is no such effect for non-British and non-settler colonies, respectively.

This finding, at first glance, appears to confirm established scholarship that argues that European settlers created democratic institutions in the colonial period which then persisted into the postcolonial era.[95] However, our results suggest that among the (former) settler colonies, the more democratic ones are more efficient at extracting taxes from their population. What are the likely mechanisms underlying this finding? Historically, the law in settler colonies sharply distinguished between natives and non-natives.[96] Voting rights were no exception and were granted only to the settler minority, a crucial feature of these "democracies" that is not captured by the index of executive constraints. Fiscal systems mirrored this segregationist politics, and this is why settler states were able to tax more: governments introduced separate taxes and separate public goods for the settler minority. The fact that democratic voice and public goods were not extended to the African majority lay at the root of the ability of states such as segregationist South Africa and Rhodesia to tax their white-minority populations heavily.[97] More "democratic" former settler colonies left behind strong fiscal states, but these were built on racial discrimination.

The importance of ethnicity extends into the present. In line with hypothesis H6 and the argument about ethnic patronage systems,[98] we would expect that the success of democracy in increasing fiscal capacity is conditional on low levels of ethnic fractionalization. Column (3) tests this conjecture. Indeed, the marginal effects in the lower panel of Table 3 show that democracy is associated with greater investment in fiscal capacity in ethnically homogeneous polities only. This result is also consistent with experiments and case studies, which suggest that ethnic fractionalization can restrict tax contributions if the willingness to share revenue with other ethnic groups is limited.[99]

92. Ali et al. 2019.
93. Acemoglu, Johnson, and Robinson 2001.
94. Ndegwa 1997.
95. Acemoglu, Johnson, and Robinson 2001; Hariri 2012.
96. Mamdani 2001.
97. Mkandawire 2010b.
98. Cooper 2002.
99. Miguel 2003.

TABLE 3. *Cohesive institutions and fiscal capacity*

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Change in real tax collection per capita, excluding trade and resource taxes					
	Moderation through colonialism (coefficients)			*Moderation through external finance (coefficients)*		
	Colonizer	Settler	Ethnic frac.	Aid	Credit	Resources
LIBERAL DEMOCRACY SCORE (LD)	−0.02 (0.05)	−0.01 (0.05)	0.30*** (0.08)	0.14* (0.08)	−0.06 (0.09)	−0.02 (0.05)
LD × (FORMER) BRITISH COLONY	0.17* (0.10)					
LD × SETTLER SHARE (MED.)		0.16 (0.15)				
LD × SETTLER SHARE (HIGH)		0.17*** (0.04)				
LD × ETHNIC FRACTIONALIZATION (MED.)			−0.26** (0.11)			
LD × ETHNIC FRACTIONALIZATION (HIGH)			−0.35*** (0.11)			
LD × EXTERNAL FACTOR (MED)				−0.03 (0.07)	−0.04 (0.05)	0.05 (0.04)
LD × EXTERNAL FACTOR (HIGH)				−0.12** (0.05)	0.21 (0.19)	0.23** (0.11)

	Moderation through colonialism (marginal effects)			*Moderation through external finance (marginal effects)*		
Marginal effects for LD at						
…low level of moderator	−0.02	−0.01	0.30***	0.14*	−0.06	−0.02
…medium level of moderator	—	0.15	0.03	0.11	−0.10	0.02
…high level of moderator	0.15**	0.16***	−0.06	0.02	0.15	0.21**
Moderator coefficient						
− medium	—	absorbed	absorbed	0.48	−0.17	−0.82
− high	absorbed	absorbed	absorbed	−0.33	−2.82	−3.21**
Polity fixed effects	✓	✓	✓	✓	✓	✓
Period fixed effects	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Hainmueller et al. Wald test (*p*-value)		0.36	0.03	0.01	0.00	0.89
Observations	873	873	873	873	873	873
Adjusted *R*2	0.22	0.22	0.24	0.21	0.22	0.22

Notes: Sample: African polities, 1900–2015 (five-year averages). The same controls and main covariates as in column (6) in Table 1 are included, but not shown. The liberal democracy score is rescaled as a percentage. Standard errors (in parentheses) are clustered at the polity level. * $p < .1$; ** $p < .05$; *** $p < .01$.

To summarize, colonialism shaped the institutional and ethnic politics of African states. This influences how canonical factors such as democracy can grow fiscal capacity. We find that financial extraversion factors, namely aid and resource exports, exercise a similar role. In column (4) we show how the effect of democracy is

moderated by foreign aid: democracy exerts a positive effect on fiscal capacity investments only if access to aid is restricted. This is consistent with the view that aid flows can indeed change the inner workings of African democracies.[100] For example, commitments to foreign donors may decrease democratic governments' accountability to local populations. In effect, aid-dependent democracies become more autocratic in their practical operations (though not necessarily on a constitutional level). This limits the otherwise positive impact of democracy for fiscal capacity. This effect seems to dominate empirically despite the greater propensity of Western donors since the end of the Cold War to push for democratic reforms as a precondition for aid.[101]

In column (6), we show that resource exports also moderate the effect of democratic institutions. The marginal effect in the middle panel demonstrates that, when faced with booming exports, more democratic countries invest *more* in fiscal capacity than their less democratic counterparts.[102] This suggests that democratic governments can use resource revenues during boom periods to invest in fiscal capacity.[103] It also ties in with a literature that emphasizes how commodity resource exporters can experience rapid economic growth, as long as they have strong domestic institutions.[104] In this case, high rents do not negate the efficacy of canonical forces. Rather, the presence of high resource rents accentuates the importance of more democratic structures. Column (6) also speaks to the importance of accounting for the heterogeneity in the sample. Once we introduce the interaction between democracy and resources, the marginal effect of the moderator (high resource exports) in the lower panel becomes negative and statistically significant. Whereas the average marginal effect of resource exports in the benchmark regression was close to zero, we now observe the substitution effect between domestic taxation and resource exports, having accounted for the democracy–resource nexus.

Conflict. Our theoretical framework postulates that common interest shocks, in particular interstate wars, can increase fiscal capacity. Yet our historical analysis cautions against treating all interstate wars the same way. It suggests that interstate wars coincided with periods of fiscal capacity growth during the colonial period, but that the continuance of this relationship is uncertain for sovereign polities. In Table 4, we therefore analyze interstate wars separately in the colonial and postcolonial period.

A comparison of columns (1) and (2) shows a marked difference between the two periods in the contemporaneous effect of interstate wars. While the coefficients for

100. Mkandawire 2010a.
101. Dunning 2004.
102. The argument holds for tax levels as well. The top quartile of countries by fiscal capacity for 2010–15 includes (in this order) Botswana (diamonds), South Africa (diamonds, gold), Namibia (diamonds), Gabon (oil), and Ghana (cocoa, gold, oil). At the same time, many autocratic resource-dependent polities, such as Nigeria and Libya, rank low.
103. Deaton 1999.
104. Mehlum, Moene, and Torvik 2006; Moore, Prichard, and Fjelstadt 2018.

colonial interstate wars are positive and significant, the reverse is true for sovereign African polities. This offers some support for the bellicose hypothesis. One factor behind the differential effect may be the larger scale of the conflict during colonial times (including the world wars), which is not well captured by our binary measure of conflict incidence. By contrast, African interstate wars since independence were relatively rare and not as global in their extent.

Moreover, the degree of control colonial governments exercised by the start of World War I made it comparatively easy for them to shift the burden of wartime taxation to African populations. Sovereign governments may have been less willing to do this. Instead, they turned to alternative revenue sources that we may not be able to capture perfectly. For example, postcolonial governments have been able to turn to privatization receipts.[105]

Another explanation of the differential power of the bellicose hypothesis is that external factors moderate the effect of wars. The degree to which external revenue sources could be marshaled specifically to finance the needs of war may have differed across the two periods. Examining how external finance moderates the effect of warfare in columns (3) through (8), we find that varying levels of aid do not affect the war–fiscal capacity nexus. In contrast, the marginal effects in columns (4) and (7) suggest that access to credit for war finance mattered profoundly for African polities. At high levels of access to international credit, colonial wars reduced tax collection by 4.7 wage days. A sovereign war increased tax collection by 3.1 wage days if access to credit markets was very limited. The importance of credit during wartime echoes the mechanism Queralt has explored for Latin America: faced with an unexpected war shock, governments turned to international credit for help. If credit markets were contracting, however, only domestic resources could be mobilized.[106] In the African setting, low levels of credit market access during sovereign wars are similarly associated with higher investments in fiscal capacity. Conversely, governments substituted foreign for domestic funds during emergencies if this avenue was open to them during the colonial period. This depended crucially on the leeway imperial policies of credit rationing gave colonies.[107] Our results are plausible in this light: if credit rationing induced strongly differential access to credit between colonies, as indicated by our historical analysis, interstate wars would have had highly heterogeneous effects on the propensity of colonial African polities to invest in domestic capacity.

A similar heterogeneity seems to have operated for resource exports (columns 5 and 8). Polities that exported commodities in high demand during wartime may have financed their additional expenses easily, while those facing a commodity

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105. As a case in point, Prichard 2015, 172–74 recounts how the Ethiopian government had few incentives to increase tax rates during the Ethiopian–Eritrean war of 1998–2000, one of the few large postcolonial international confrontations in Africa. Aid and credit market access resumed quickly, and the government was able to use one-off receipts from privatization to fund the war.

106. Queralt 2019.

107. Accominotti et al. 2010.

TABLE 4. *International wars and fiscal capacity*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Dependent variable: Change in real tax collection per capita, excluding trade and resource taxes					
	Periodicity of war		*Moderation through external finance (coefficients)*					
	Colonial	Independent	*Colonial polities*			*Independent polities*		
			Aid	Credit	Resources	Aid	Credit	Resources
WAR$_{t0}$	1.82**	−1.15						
	(0.84)	(1.29)						
WAR$_{t-1}$			1.50	2.09	7.90***	2.42	3.09**	2.84
			(3.50)	(3.30)	(0.42)	(1.49)	(1.48)	(2.50)
WAR$_{t-1}$ × EXTERNAL FACTOR (med.)			−0.27	1.07	−7.28***	−3.60	−4.42**	0.61
			(3.82)	(3.21)	(0.45)	(2.39)	(1.89)	(3.37)
WAR$_{t-1}$ × EXTERNAL FACTOR (high)			0.69	−6.81**	−7.27***	−0.32	0.56	−6.42**
			(2.18)	(3.18)	(2.41)	(3.16)	(4.45)	(2.59)
			Moderation through external finance (marginal effects)					
Marginal effects for war at								
…low level of moderator	—	—	1.50	2.09	7.90***	2.42	3.09**	2.84
…medium level of moderator	—	—	1.23	3.16	0.62*	−1.19	−1.33	3.45
…high level of moderator	—	—	2.19	−4.72***	0.63	2.10	3.65	−3.57**
Moderator coefficient								
− medium	—	—	−0.27	0.26	−0.14	3.10	−4.90	0.46
− high	—	—	−1.53**	1.31**	0.01	1.46	−	0.50
Polity fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Period fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Hainmueller et al. Wald test (*p*-value)	−	−	0.00	0.00	0.00	0.02	0.00	0.04
Observations	384	489	384	384	384	489	489	489
Adjusted R^2	0.10	0.24	0.07	0.11	0.10	0.23	0.24	0.23

Notes: Sample: African polities, 1900–2015 (five-year averages). The same controls and main covariates as in column (6) in Table 1 are included, but not shown. Standard errors (in parentheses) are clustered at the polity level. * $p < .1$; ** $p < .05$; *** $p < .01$.

glut needed to build domestic capacity. There are, nonetheless, subtle differences in the effects of resources during wars in the colonial versus postcolonial periods. The effects of resources in the colonial period are more pronounced and statistically very strong. Low commodity prices during wartime triggered a large increase in domestic tax revenues, whereas polities facing high prices did not register a marginal effect on tax revenues. This reflects the extraordinary price swings during the world wars, when global shocks related to the war led to a sharp price divergence between booming military commodities (metals and minerals) and sluggish agricultural products.[108] For sovereign polities, our results show that booming resource exports during wartime led to a decline in fiscal capacity, while sluggish exports did not engender a buildup of capacity. Thus there was no configuration of resource prices under which a war shock would lead to an investment in domestic tax institutions for sovereign African states.

Table 5 shifts the focus toward civil wars in both the colonial and postcolonial periods. As in the benchmark regressions, we do not find that civil wars significantly erode the capacity to tax. This holds for both periods under consideration.

One explanation may be that higher tax revenues encourage civil uprisings. For modern civil conflicts, this is known as the "greed hypothesis," which posits that plentiful state revenues constitute a more desirable prize to capture.[109] The high tax revenues that cause civil conflict could then counteract the negative effects of destruction on tax revenues, leading to our null result. In the colonial era, on the other hand, grievances were a factor in rebellions, as many uprisings during this period were a form of protest against high tax rates, a circumstance easily inferred from the names bestowed on these conflicts (such as the 1898 Hut Tax War in Sierra Leone). Colonial rebellions may therefore also have been endogenous to tax revenues. However, these conflicts often led imperial officials to push for a decrease in tax rates to stave off further unrest.[110] If this channel were dominant, we might expect the contemporaneous correlation between the change in tax revenues and civil wars in column (1) to be negative, but it is not.

Another possible explanation for our null result is that two effects neutralize each other. It may be that the negative effect of destruction and loss of control emphasized in the literature[111] is counteracted by a positive factor: the need to raise revenues to fund the fighting. An element of the bellicose theory of state building would then operate even in the context of civil wars. In any case, our results do not support the narrative that civil conflicts were decisive in eroding the capacity of African polities to tax. We similarly do not find robust evidence that the occurrence of civil conflict is moderated by access to aid, credit, or resource exports. Overall, we find neither

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108. Havinden and Meredith 1996.
109. Collier, Hoeffler, and Rohner 2009.
110. Ochiai 2017.
111. Besley and Persson 2008; Ch et al. 2018.

TABLE 5. *Civil wars and fiscal capacity*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Periodicity of war		*Moderation through external finance (coefficients)*					
	Colonial	*Independent*	*Colonial polities*			*Independent polities*		
			Aid	*Credit*	*Resources*	*Aid*	*Credit*	*Resources*
WAR$_{t0}$	0.50	−0.13						
	(0.34)	(1.27)						
WAR$_{t-1}$			0.07	−0.14	−0.19	−0.52	1.51	0.25
			(1.24)	(0.64)	(0.70)	(1.95)	(1.39)	(2.39)
WAR $t-1$ × EXTERNAL FACTOR (med.)			0.66	−1.63	–	0.12	−1.10	−1.41
			(1.13)	(1.36)	–	(1.77)	(1.17)	(2.56)
WAR $t-1$ × EXTERNAL FACTOR (high)			−1.31	1.96	−1.11	1.47	−2.77	1.09
			(1.42)	(1.23)	(1.43)	(2.14)	(2.07)	(3.14)
Moderation through external finance (marginal effects)								
Marginal effects for war at								
…low level of moderator	—	—	0.07	−0.14	−0.19	−0.52	1.51	0.25
…medium level of moderator	—	—	0.73	−1.77	–	−0.40	0.42	−1.16
…high level of moderator	—	—	−1.24	1.82*	−1.30	0.94	−1.26	1.34
Moderator coefficient								
− medium	—	—	−0.17	0.50	−0.29	2.62	−4.88	0.52
− high	—	—	−1.34**	1.15*	−0.13	0.82	0.00	−0.10
Polity fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Period fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Hainmueller et al. Wald test (*p*-value)	–	–	0.04	0.17	0.13	0.62	0.00	0.75
Observations	384	489	384	384	384	489	489	489
Adjusted R^2	0.09	0.24	0.07	0.09	0.09	0.23	0.24	0.23

Notes: Sample: African polities, 1900–2015 (five-year averages). The same controls and main covariates as in column (6) in Table 1 are included, but not shown. Standard errors (in parentheses) are clustered at the polity level. * $p < .1$; ** $p < .05$; *** $p < .01$.

evidence for an effect of civil wars on fiscal capacity generally nor evidence for moderation through our extraversion variables.

Conclusion

Employing comprehensive long-run panel data, our empirical analysis has shown that the African experience adds important nuances to established theoretical and empirical analyses of fiscal capacity.

The fact that fiscal capacity building is a process implies that one has to put its observed modern levels into historical perspective. We have argued that, on the revenue side, the trajectory of fiscal capacity building in many African polities is one of growth, rather than failure. Historically, governments in Africa have realized large gains in their capacity to tax when the circumstances were favorable. To the extent that fiscal capacity is a proxy for state building more generally, this may cast a new light on the capabilities of the state in Africa.

Notwithstanding this general picture, substantial variations over time and across countries are manifest in our data. We have argued that the degree of embeddedness of African polities in the international environment explains this heterogeneity. The relatively easy availability of foreign aid and international credit has led some governments to turn to external over domestic revenues in a process some have termed the "extraversion" of the African state. Such external dependence has historically had less bearing in a European context. The process of extraversion was part of the colonial legacies of African statehood. Moreover, we show that the availability of external revenues shapes the way traditional state-building factors, such as democratization, rulers' time horizons, and armed conflicts, operate. For example, conflicts during the colonial period could lead to higher state capacity, in line with the bellicose theory, but only if resource exports were not plentiful. On the other hand, the effect of democracy on fiscal capacity is particularly strong at high levels of resource exports. Government instability, in turn, can decrease investment in fiscal capacity, but it does so foremost in polities with easy access to external aid. Finally, the international system can matter directly, because macro-trends such as decolonization shaped rulers' time horizons and therefore their propensity to invest domestically. These cases illustrate that extraversion matters, but also that the direction of its effect is highly heterogeneous.

In their survey of Africa's international relations, Cornelissen, Cheru, and Shaw warn that "broad-brush categorizations of the African state as fragile, weak or disconnected from a wider geo-economic order misrepresent an important evolving reality on the continent."[112] Our results support this assertion by showing that the domestic politics of modern African states are an integral part of and partially dependent on a dynamic global order. We also caution against uncritically equating the use of

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112. Cornelissen, Cheru, and Shaw 2012, 8.

external revenues with state "weakness" or "failure." Tapping into external finance does not always lead to lower capacity. Exports of natural resources are a case in point here. In these cases, globalization may increase the funding available to states even as it embeds them in interdependent global networks.

Data Availability Statement

Replication files for this article may be found at <https://doi.org/10.7910/DVN/TT0SJZ>.

Supplementary Material

Supplementary material for this paper is available at <https://doi.org/10.1017/S0020818322000285>.

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Authors

Thilo N.H. Albers is Postdoctoral Researcher in Economic History at Humboldt University and Lund University. He can be reached at alberstn@hu-berlin.de.

Morten Jerven is Professor in Development Studies at the Norwegian University of Life Sciences and Visiting Professor in Economic History at Lund University. He can be reached at morten.jerven@nmbu.no. **Marvin Suesse** is Assistant Professor in Economics at Trinity College Dublin and Lund University. He can be reached at marvin.suesse@tcd.ie.