

# Government Impartiality and Sustained Growth in Sub-Saharan Africa

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**Summary.** — Many studies suggest that one of the main reasons for Africa’s dismal growth performance over most of the 20th century is its degree of ethnic fragmentation. Yet, there is still insufficient knowledge about whether ethnic diversity necessarily entails large economic costs, or whether the implications of diversity depend, inter alia, on the government’s approach toward the ethnic question. We note that economic growth tends to increase average incomes, but it also affects the income distribution. Then, if growth is accompanied by growing economic inequality, the perception of the impartiality of the government toward different ethnic groups is likely to be important for whether growth can be sustained, or whether sparks of growth will evaporate because of rising political divisions and internal conflicts. In this paper, we study whether the degree of ethnic impartiality in the government’s policies is related to the emergence of sustained growth in sub-Saharan Africa, irrespective of the actual content of the policies. We measure perceptions about the impartiality of the government with survey data from the Afrobarometer covering 20 countries starting in the late 1990 s. Our main definition of sustained growth is when there is a GDP per capita growth rate of at least 2% for at least five consecutive years. Our empirical results suggest that countries whose governments are perceived as impartial are more likely to experience sustained growth. We conclude that in order to ensure economic development, it is not only important to choose the “right” policies, but also to implement these policies in a fair manner.

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## 1. INTRODUCTION

A short period of high growth is a relatively frequent event even in poor countries (Pritchett, 2000). What is less frequent, however, are extended periods of high growth. Based on this observation, many authors argue that the main difference between the growth miracles of the last century and the rest of the developing world is the ability of the former to nurture a sudden spark of growth into a prolonged spell. There is thus a growing realization that the key economic challenge the developing world is facing today is not to generate high growth rates *per se*, but to sustain growth once it emerges (Berg, Ostry, & Zettelmeyer, 2012).

This paper contributes to the nascent literature on the political economy of growth spells by exploring whether the impartiality of the government toward different ethnic groups is a significant determinant of the incidence of sustained growth in a sample of sub-Saharan African countries. We ask, in other words, whether countries with an impartial government are more likely to turn random sparks of growth into prolonged spells.

Our dataset covers 20 sub-Saharan African countries from 1999 onward.<sup>1</sup> The empirical strategy is to relate the incidence of appropriately defined periods of sustained growth to a survey-based indicator of the perceived impartiality of the government’s exercise of authority. The results suggest that as the government becomes more impartial, the likelihood of sustained growth increases.

Government impartiality is a particularly important issue in Africa given the continent’s highly fragmented ethnic landscape. Many studies suggest that one of the main reasons for Africa’s dismal growth performance over most of the 20th century is its degree of ethnic fragmentation (Easterly & Levine, 1997; Posner, 2004).<sup>2</sup> Yet, there is still insufficient knowledge about whether ethnic diversity necessarily entails large economic costs, or whether the implications of diversity

depend, inter alia, on the government’s approach toward the ethnic question (Habyarimana, Humphreys, Posner, & Weinstein, 2008).

More specifically, many authors treat public policies in Africa as an outcome of ethnic divisions. For example, Easterly and Levine (1997) find that the quality of economic policies and public goods provision is lower in more fragmented countries. But government policies, while subject to prevailing ethnic divisions, are determined by other factors as well, such as the worldview and goals of its leaders, constraints on the executive and political accountability, international political developments, and economic opportunities. We conjecture that such factors influence how leaders approach the different ethnicities in their countries, and that the adopted approach toward the ethnic question, in turn, affects economic development.

The argument for why government impartiality should matter for sustained growth is as follows. Growth tends to increase average incomes, but it also affects the income distribution. If growth is accompanied by growing economic inequality, the perception of the impartiality of the government toward different ethnic groups is likely to be important for whether growth can be sustained, or whether sparks of growth will evaporate because of rising political divisions and internal conflicts (Alesina, Michalopoulos, & Papaioannou, 2015). It is not uncommon that the economic growth disproportionately benefits certain ethnic minorities. In countries where the ethnic majority is politically dominant, increasing economic success of minorities might trigger policy

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responses that hamper the prospects of sustaining the growth trend, such as increasing demands for more inter-group redistribution.<sup>3</sup> The economic consequences might be even worse if growth benefits primarily a politically powerful majority. In this case, minorities could believe that the government actively discriminates them, which could lead to ethnic strife, political conflicts, attempts toward secession, or merely to increased demands for inter-group redistribution.<sup>4</sup> In Section 2, we elaborate the arguments for why impartiality could be related also to economic performance in general.

The most closely related previous study is [Berg et al. \(2012\)](#). They explore various potential determinants of growth spells with a worldwide sample, and find that growth duration is related to a number of economic and political factors. The important political factor they identify is democratic institutions, but while they find a role of institutions in determining the length of growth spells, they do not study specific policies or how policies are implemented. Our contribution over [Berg et al. \(2012\)](#) is therefore the focus on the role of a specific but, for Africa, important issue: the impartiality of the government in its dealings with different ethnicities.

Another related study is [Johnson, Ostry, and Subramanian \(2010\)](#). By benchmarking the constraints for sustained growth in Africa, they identify “societal” fractionalization and internal conflicts as particularly important. A third related study is [Tsangarides \(2012\)](#), who finds that the determinants of growth spells in Africa differ from the rest of the world, and that in particular factors such as openness and droughts are more important for African countries. Neither of these two studies investigates the role of government impartiality.

Our paper is also related to the literature that explores the determinants of growth accelerations, i.e., periods where growth begins to increase. One example from this literature is [Hausmann, Pritchett, and Rodrik \(2005\)](#), who find that political regime change causes growth accelerations. Jointly addressing the relative importance of formal and informal institutions, [Sen \(2013\)](#) presents theoretical arguments and supporting evidence that informal institutions matter for growth accelerations while formal institutions matter more for growth maintenance. [Easterly, Ritzen, and Woolcock \(2006\)](#) use ethnic fragmentation as proxy for social cohesion and explore how social cohesion and its indirect effect on institutions is related to annual growth rates (rather than the incidence of growth spells). Their results suggest that institutional quality matters for how growth responds to social cohesion. Studies in this strand of the literature also do not address the role of government impartiality.

This paper also draws insights from the political science literature on impartiality. While scholars from economics and political science mostly agree that good governance is important for economic development, they tend to differ in their understanding of the defining features of good governance. Economists tend to favor a broader definition, one that encompasses both the implementation and the content of policies. For example, [Kaufmann, Kraay, and Mastruzzi \(2008\)](#) define governance as the traditions and institutions that determine whether policies are “efficient,” as traditionally understood by economists, as well as how the policies are exercised, i.e., impartially, democratically, or authoritarian. Political scientists, in particular [Rothstein and Teorell \(2008\)](#), instead argue that a useful definition of good governance should focus only on the “impartiality in the exercise of political authority,” irrespective of whether the policies themselves are “good” or “efficient.” The purpose of our paper is to study whether government impartiality alone can be an important determinant of growth spells, irrespective of the content of the policies that are being implemented.

The remainder of this paper proceeds as follows. Section 2 offers a more elaborate discussion on the possible importance of impartiality. In Section 3, we present our indicators for government impartiality and sustained growth. Section 4 contains our empirical framework and our regression analysis, and Section 5 concludes.

## 2. IMPARTIALITY, GOOD GOVERNANCE, AND ECONOMIC DEVELOPMENT IN SUB-SAHARAN AFRICA

### (a) *The importance of sustained growth for Africa*

Sub-Saharan Africa is the region of the world that has had the least success in reducing poverty over the last decades. The reason for this inability is ex-ante unclear. One possible explanation is that African countries do not redistribute sufficiently by transferring resources from the rich to the poor. On the other hand, while inequality is indeed high in Africa, it has not changed significantly over the last three decades ([Ravallion & Chen, 2012](#)). Hence, more growth, and not more redistribution, appears to be the key for poverty reduction in Africa.

There have been many instances of growth accelerations in African countries, but they have seldom been extended for a long time. Growth accelerations have become more common and more sustained only in recent years ([Berg et al., 2012](#)), yet even these recent accelerations have not been evenly distributed between countries. [Arbache and Page \(2010\)](#) note that growth in sub-Saharan Africa has become somewhat more stable since the turn of the century, but they also find that this more stable growth has led neither to improvements in investments nor to better governance. Thus, the challenge to sustain growth remains, and it remains important to understand what does and what does not lead to sustained growth in Africa.

### (b) *The role of institutions and policies*

We now have a broad literature in economics on the role of institutions for good governance. [Kaufmann et al. \(2008\)](#) define governance as the traditions and institutions that determine how authority is exercised in a particular country. Their definition includes three dimensions, namely the process by which governments are selected, held accountable, monitored, and replaced; the capacity of governments to manage resources efficiently and formulate, implement, and enforce sound policies and regulations; and the respect of citizens and the state for the institutions that govern economic and social interactions among them.

Institutions tend to be persistent and difficult to change in the short-run. For example, [Acemoglu, Johnson, and Robinson \(2001\)](#) and [Acemoglu and Johnson \(2005\)](#) find that inherited property rights institutions are significant explanatory variables in cross-country growth regressions. [La Porta, Lopes-de-Silanes, Pop-Eleches, and Schleifer \(2008\)](#) show that the (colonial) origin of the legal system determines contemporaneous economic development. More recent research on the role of institutions gives attention to the contemporaneous features of a country as well. [Besley and Persson \(2009\)](#), for example, argue that the ability of the state to raise revenues, its state or administrative capacity, has a positive effect on development. [Dincecco and Prado \(2012\)](#) offer empirical support for this hypothesis. Still, both the literature on historical institutions and contemporaneous state capacity tend to be concerned with the quality of policies as outcomes of institutions, while they are less concerned with whether these policies are implemented in an impartial fashion.

Rothstein and Teorell (2008) argue that the definition of good governance typically employed in economics is too broad. Good governance requires political equality on the “input” side of the relationship between a state and its citizens, and impartiality on the “output” side. Political equality is needed in order to ensure equal access to political power. By their definition, impartiality, the marker of good governance on the output side, implies that “when implementing laws and policies, government officials shall not take anything about the citizen/case into consideration that is not beforehand stipulated in the policy or the law” (Rothstein & Teorell, 2008, p. 168). Impartiality in their definition is thus a procedural norm that relates to the exercise of authority and does not concern the content of policies, or how policy makers are elected. Their definition is close to what is generally understood as the rule of law, which is part of Kaufmann *et al.*'s (2008) definition of governance, but still does not include anything about the quality of policies or the efficiency of the government. They hold that rights are more important and fundamental than utility, and thus that “impartiality is always preferable to efficiency” (Rothstein & Teorell, 2008, p. 182). Nevertheless, they contend that impartiality, since it implies meritocratic recruitment rather than recruitment based on political or clientelistic connections, may enhance efficiency.

Is it reasonable to have such a strong focus on procedures? To answer this question, we test whether a measure of impartiality can explain the sustainability of economic growth in Africa. Impartiality can work in one of two ways toward making growth more sustained. Impartiality can work because it is an important determinant of quality of government, or because it proxies for the broad aspects of quality of governance suggested by for example Kaufmann *et al.* (2008). It is plausible that an impartial government is also rational and efficient in terms of policy choice. An impartial approach to government may also be associated with secure property rights and equality of opportunity, that is, also no ethnic favoritism (which may reflect the inclusive institutions emphasized by Acemoglu & Robinson, 2012).

There has not yet been an attempt to test whether impartiality leads to sustained growth in Africa. In an unpublished manuscript, Teorell (2009) uses a cross-section of 52 countries to explore whether impartial governments have higher annual economic growth. Only South Africa is included from Africa, while the sample consists otherwise of developed and Eastern European countries. Using this small and unusual sample, Teorell (2009) finds that there is a significant relationship between impartiality and economic growth.

It is conceivable that the level of impartiality is higher where the bureaucracy has stronger autonomy. If so, there is indirect evidence that impartiality matter for government performance. Cingolani, Thomsson, and de Crombrughe (2015) find that bureaucratic autonomy matters more than state capacity when it comes to fighting child mortality and tuberculosis prevalence.

(c) *Ethnic divisions, impartiality, and sustainability of development in Africa*

The effect of ethnic divisions on sustainable growth could be direct or indirect. One could envisage that there is a direct effect of ethnic diversity, or lack of social cohesion, on economic growth and the sustainability thereof. This could take the form of a lack of trust among economic agents, making it harder to do business or to organize different forms of collective action. To capture this effect our empirical regressions

will, e.g., include a variable that captures the extent to which an individual identifies with the nation rather than his or her ethnic group.

The indirect dimension concerns the government's willingness or ability to decide on and implement policies that improve the prospects for sustained economic growth. We hypothesize that it will be harder to pursue an impartial development strategy in a society lacking social cohesion or national consensus. In a divided society, it will be harder both to agree on the content of policies and to ensure that they are implemented without specific groups being favored. Easterly and Levine (1997) hold that “Africa's growth tragedy” can be explained by reference to how ethnic divisions have fed into rent-seeking behavior and difficulties in agreeing on the provision of such public goods that are needed for economic growth. This is in line with more recent findings that the quality of government and the provision of public goods are lower in societies with more social and economic inequalities between ethnic groups (Baldwin & Huber, 2010; Kyriacou, 2013) and where ethnic groups are spatially more segregated (Alesina & Zhuravskaya, 2011).

Further, it is commonly asserted that African policy-makers often favor their co-ethnics and their home region. For instance, Kramon and Posner (2012) find evidence of ethnic favoritism when it comes to educational outcomes in Kenya, and Hodler and Raschky (2014) find that foreign aid is disproportionately located to the leaders' home regions. There is also indirect evidence that higher levels of perceived government impartiality indicate less real ethno-regional favoritism. Ahlerup and Isaksson (2015) use the same question in the Afrobarometer as we use in this paper to construct our indicator of impartiality in their analysis of ethnic and regional favoritism. They show that respondents are less likely to say that the government treats their group unfairly if they are co-ethnics with the president, live in the president's home region, or live in a region where a large share of the population belongs to the president's ethnic group. It is therefore likely that lower levels of impartiality, as we measure it, is a reflection of more intensive ethnic or regional favoritism. Considering that such favoritism implies that governments do not allocate resources according to objective economic criteria, a high level of impartiality is a signal that common resources are allocated to individuals, regions, or sectors where they are more likely to fulfill commonly agreed on goals, such as to ensure sustained economic growth. Furthermore, a plausible assumption is that the pressure for between-group distribution will be lower when people know that the government acts impartially.

Since a government that acts impartially effectively downplays ethnic identities, impartiality may have an effect on nation-building, often understood as being about forming a common national identity. There is no agreement in the literature about the benefits of nation-building policies. On the one hand, Bandyopadhyay and Green (2013) discuss various forms of practical nation-building policies in Africa and find them to be associated with a higher risk for conflict. They argue that this is because these policies acted as a “smoke-screen to advance the interest of the President and his party” and also “were highly controversial and led to more conflict than integration” (Bandyopadhyay & Green, 2013, p. 115). On the other hand, Miguel (2004) argues that nation-building policies in Tanzania are the reason why there is no link between ethnic diversity and lower public goods provision in this country, while such a link is found in neighboring Kenya. Ahlerup and Hansson (2011) uncover a non-linear relationship between nationalism and governance; an increase

in the sense of national identity is associated with better governance if the national identity is low, but worse governance if national identity is strong.

Nation-building relates to impartiality in the following way. By acting impartially, a government may over time contribute to create a common national identity for all its citizens, thus creating a nation from a diverse landscape of ethnic identities. In this process, the ethnic group ceases to be important in economic and political life as one's ethnic identity does not affect how one is treated by the government. However, nation-building policies have throughout history, as noted by, e.g., Tilly (1992), involved rulers actively seeking to homogenize their populations. Those whose ethnic identity or language is being forcefully suppressed will indeed not see the government as acting impartially.

Poor economic growth in Sub-Saharan Africa can be explained by reference to a volatility of revenues, public investments, and aid (Museru, Toerien, & Gossel, 2014). Divided societies, and societies with a lack of social cohesion, may find it harder to respond effectively to economic shocks, as governments in such societies will be less capable of equitably allocating adjustment burdens across groups. It is also likely that transitions between governments after elections will be more disruptive in such societies, since the new government may feel that it is now their group's turn to get their "fair share." Impartiality could thus imply more stable public policies, as an impartial government is one that does not act to benefit those groups that happen to have their members in power at the time. Consider, for example, the disastrous consequences that followed the Kenyan elections in 2007, where the opposition felt that the incumbent government had "stolen" the election (Wrong, 2009).

To sum up the arguments, we contend that there are three broad categories of mechanisms whereby impartiality may be linked to sustained growth. First, impartiality implies less ethno-regional favoritism. Second, impartiality implies less room for rent-seeking. Third, as the stake in elections will be lower, there will be more stability in economic and political conditions. Together, these mechanisms suggest that impartiality could lead to a more efficient use of available resources and higher social acceptance of potential relative changes in the income distribution resulting from economic growth.

### 3. DATA

In this section, we first describe our main explanatory variables and then our definition of sustained growth.

#### (a) *Impartiality*

##### (i) *Impartiality index*

The main explanatory variable is an index, the *Impartiality index*, which represents the share of the population in a country that thinks that the group they identify with is treated fairly by the government.

The *Afrobarometer* (2013) is a pan-African survey project that since 1999 has led detailed individual-level surveys in an increasing number of African countries. Starting with 12 countries in the first round, they now cover more than 30 countries in the sixth round. To assess the effect of impartiality on sustained growth, we need a sufficient number of years after the conclusion of each wave to identify sustained growth periods. The fourth wave, conducted in 2008–09 and covering 20 countries, is therefore the last wave we can use in this paper. We thus draw data from the first four rounds of the

*Afrobarometer* survey, conducted during 1999–2009, and get a sample that consists of up to 20 countries. During this period, a total of 66 surveys were made, but the question used to create the *Impartiality index* was not asked in two of them; the 1999 survey in Ghana, and the 2005 survey in Zimbabwe.

The following refers to the wordings used in the fourth wave of the *Afrobarometer*. There are minor nuances in the exact phrasing of the relevant questions between the waves, see the [Appendix](#) for details. First, the respondents are asked the open-ended question "What is your tribe? You know, your ethnic or cultural group." In a follow-up question, they are asked "How often are \_\_\_\_s [R's Ethnic Group] treated unfairly by the government?" The respondent can choose between the pre-defined answers "Never," "Sometimes," "Often," and "Always." Of these alternatives, only "Never" corresponds to an assessment that one's group is treated impartially by the government. For this reason, we give each respondent the value one if they answer "Never," and zero otherwise. We use the sample weights of each respondent to calculate the share of the population for each country that has a value of one. Our index thus relies not on the specific degree of perceived partiality, but on whether the respondents perceive it to be altogether absent. A complete list of all observations of the *Impartiality index* that can be coded from the *Afrobarometer* can be found in [Table 5](#) in the [Appendix](#).

[Table 1](#) presents summary statistics for the *Impartiality index* and the other variables used in the empirical analysis. Less than half of the populations in these sub-Saharan African countries feel that their group is never treated unfairly. There is considerable variation in perceived government impartiality, with the lowest value on the *Impartiality index* (8%) coming from the 1999 survey in Zimbabwe, and the highest value (88%) coming from the 2009 survey in Madagascar. [Figure 1](#) shows the *Impartiality index* averaged by country over the whole sample period. There is no obvious geographical pattern or clustering, and there is no apparent systematic difference between countries of the more Francophone West Africa and the more Anglophone East Africa. The highest average values are found furthest to the east, Madagascar (0.87), and furthest to the west, Senegal (0.76).

The *Impartiality index* builds on answers to a question of whether individuals perceive that the government has treated their ethnic group fairly. The respondents are here likely to consider, e.g., the allocation of public expenditures on items like education, health, and infrastructure, the allocation of jobs and positions of influence, and security-related issues. All else equal, more people in countries where the government allocates these along ethnic or regional lines are likely to say that the government treats their group unfairly. That is, the measured level of the *Impartiality index* will be lower. Simply put, people think it is unfair if they do not get their fair share of government resources or if they are denied their fair share of influence. In this African context, we thus primarily believe that impartiality would mean an absence of ethnic or regional favoritism. Such favoritism would go against resources being rationally allocated, in the sense of supporting the poor or promoting growth.

[Ahlerup and Isaksson \(2015\)](#) find that members of the president's ethnic group more seldom feel unfairly treated. This makes it relevant to ask whether higher levels on the *Impartiality index* reflect that the government acts fairly (impartially) toward most or all groups or that respondents who belong to the president's ethnic group, and therefore are favored by the government and thus perceive the government to be fair, make up a larger fraction of the population. We drew information on the ethnicity of the president in 2005 from [Ahlerup](#)

Table 1. *Summary statistics*

|                              | <i>N</i> | Mean       | Std.Dev.   | Min.    | Max.        |
|------------------------------|----------|------------|------------|---------|-------------|
| Sustained growth             | 64       | 0.22       | 0.42       | 0       | 1           |
| Impartiality index           | 64       | 0.43       | 0.21       | 0.08    | 0.88        |
| Gini                         | 61       | 50.85      | 9.97       | 33.83   | 74.33       |
| Linguistic fractionalization | 61       | 0.7        | 0.23       | 0.02    | 0.92        |
| Ethnic fractionalization     | 64       | 0.67       | 0.19       | 0.25    | 0.93        |
| Religious fractionalization  | 64       | 0.61       | 0.22       | 0.08    | 0.86        |
| Polity2                      | 64       | 5.16       | 3.75       | -4      | 10          |
| GDP per capita               | 64       | 2,310.86   | 2,336.92   | 396.53  | 9,695.64    |
| Quality of government        | 53       | 0.42       | 0.1        | 0.22    | 0.67        |
| Internal conflict            | 37       | 8.74       | 1.53       | 5.83    | 12          |
| Government consumption       | 64       | 0.15       | 0.06       | 0.02    | 0.28        |
| Natural resource rents       | 64       | 9.80       | 10.80      | 0.32    | 47.12       |
| Price level of investment    | 64       | 0.53       | 0.19       | 0.04    | 1.25        |
| Inflation                    | 60       | 10.22      | 7.36       | -0.29   | 44.80       |
| Real effective exchange rate | 61       | 99.19      | 14.65      | 59.57   | 154.43      |
| Population size              | 64       | 24,142,397 | 32,333,487 | 459,140 | 151,208,080 |
| National identity index      | 53       | 0.48       | 0.17       | 0.17    | 0.88        |

Notes: The table presents summary statistics for observations with data on the Impartiality index.

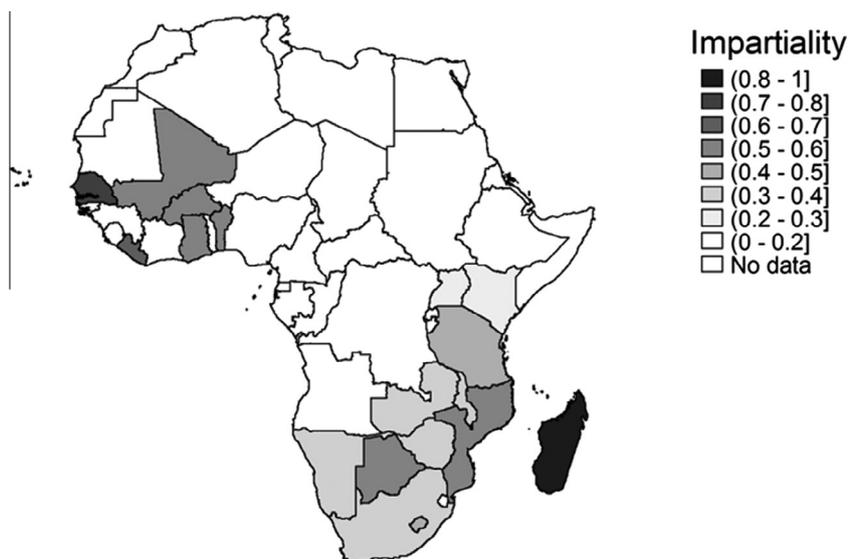


Figure 1. *Average Impartiality index (1999–2009).*

and Isaksson (2015) and investigated whether excluding members of this ethnic group makes a difference when calculating the *Impartiality index* for the third round of the Afrobarometer survey conducted in 2005–06. The effect on the *Impartiality index* is surprisingly modest, with a typical change of a few percentage points or less. We observe the same stability in the index if we omit respondents from the largest ethnic group in each country when calculating the index. We are therefore reasonably certain that the *Impartiality index* does not simply capture the relative size of the president's (potentially favorably treated) ethnic group.

We also calculated the value on the index separately for each ethnic group within each country. There were between-group differences within all these sub-Saharan African countries, but, importantly, also the lowest group-level values were clearly higher in countries where the value on the (country-level) *Impartiality index* was higher. Therefore, higher values on the *Impartiality index* do not simply come from a better treatment of major population groups, but also reflect that

members of the least favored groups in each country report that they feel more fairly treated.<sup>5</sup>

(ii) *Relationship between the impartiality index and other indicators of democracy and government*

The theoretical concept of impartiality is a distinct one, but can what is measured by the *Impartiality index* also be reasonably separated from what is measured by other popular indicators of democracy or governance? That is, does the *Impartiality index* also in practice relate to aspects of how the affairs of the government are conducted that are not already captured by other indicators that have been used in many previous studies in economics and political science?

In this sub-section, we discuss how the *Impartiality index* relates to two popular indicators that are based on information collected by experts and investors, the *Quality of Government* and *Polity2*. As these are but two of many existing broad and aggregated proxies for governance and democracy, the primary objective of the discussion in this sub-section is not



Table 2. Correlations

|   | 1               | 2               | 3               | 4               | 5               | 6               | 7               | 8               | 9               | 10              | 11              | 12              | 13             | 14             | 15              | 16             | 17   |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|----------------|------|
| 1 Sustained growth                        | 1.00            |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 2 Log Impartiality index                  | 0.11<br>(0.39)  | 1.00            |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 3 Polity2                                 | -0.34<br>(0.01) | 0.31<br>(0.01)  | 1.00            |                 |                 |                 |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 4 Log Gini                                | -0.46<br>(0.00) | -0.10<br>(0.43) | 0.52<br>(0.00)  | 1.00            |                 |                 |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 5 Log Linguistic fractionalization        | 0.26<br>(0.04)  | -0.30<br>(0.02) | -0.18<br>(0.16) | -0.12<br>(0.39) | 1.00            |                 |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 6 Log Ethnic fractionalization            | 0.23<br>(0.07)  | -0.11<br>(0.37) | -0.20<br>(0.11) | -0.39<br>(0.00) | 0.32<br>(0.01)  | 1.00            |                 |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 7 Log Religious fractionalization         | 0.04<br>(0.77)  | -0.32<br>(0.01) | -0.31<br>(0.01) | -0.02<br>(0.88) | -0.01<br>(0.92) | 0.13<br>(0.29)  | 1.00            |                 |                 |                 |                 |                 |                |                |                 |                |      |
| 8 Log National identity index             | 0.10<br>(0.48)  | -0.06<br>(0.69) | -0.05<br>(0.70) | 0.00<br>(0.99)  | -0.10<br>(0.49) | -0.03<br>(0.81) | -0.06<br>(0.68) | 1.00            |                 |                 |                 |                 |                |                |                 |                |      |
| 9 Log GDP per capita                      | -0.38<br>(0.00) | -0.11<br>(0.40) | 0.27<br>(0.03)  | 0.58<br>(0.00)  | -0.02<br>(0.85) | -0.40<br>(0.00) | 0.04<br>(0.77)  | 0.15<br>(0.28)  | 1.00            |                 |                 |                 |                |                |                 |                |      |
| 10 Log Quality of Government              | 0.05<br>(0.73)  | -0.02<br>(0.88) | -0.06<br>(0.68) | 0.29<br>(0.04)  | -0.09<br>(0.51) | -0.25<br>(0.07) | 0.30<br>(0.03)  | 0.27<br>(0.08)  | 0.37<br>(0.01)  | 1.00            |                 |                 |                |                |                 |                |      |
| 11 Log Internal conflict                  | -0.08<br>(0.64) | 0.50<br>(0.00)  | 0.51<br>(0.00)  | 0.44<br>(0.01)  | -0.17<br>(0.32) | -0.39<br>(0.02) | -0.21<br>(0.21) | 0.19<br>(0.35)  | 0.27<br>(0.11)  | 0.30<br>(0.07)  | 1.00            |                 |                |                |                 |                |      |
| 12 Log Government consumption             | 0.33<br>(0.01)  | 0.15<br>(0.24)  | -0.26<br>(0.04) | -0.11<br>(0.41) | 0.11<br>(0.42)  | -0.23<br>(0.07) | -0.27<br>(0.03) | -0.00<br>(0.98) | -0.12<br>(0.36) | 0.30<br>(0.03)  | 0.21<br>(0.22)  | 1.00            |                |                |                 |                |      |
| 13 Log Natural resource rents             | 0.23<br>(0.07)  | -0.05<br>(0.67) | -0.37<br>(0.00) | -0.54<br>(0.00) | 0.15<br>(0.25)  | 0.43<br>(0.00)  | 0.42<br>(0.00)  | -0.37<br>(0.01) | -0.53<br>(0.00) | -0.55<br>(0.00) | -0.61<br>(0.00) | -0.22<br>(0.08) | 1.00           |                |                 |                |      |
| 14 Log Price level of investment          | 0.08<br>(0.51)  | 0.19<br>(0.13)  | 0.39<br>(0.00)  | 0.03<br>(0.80)  | 0.06<br>(0.65)  | 0.29<br>(0.02)  | -0.13<br>(0.29) | -0.12<br>(0.41) | -0.21<br>(0.10) | -0.09<br>(0.52) | 0.08<br>(0.62)  | -0.17<br>(0.19) | 0.17<br>(0.18) | 1.00           |                 |                |      |
| 15 Inflation                              | -0.01<br>(0.92) | -0.11<br>(0.39) | 0.01<br>(0.93)  | -0.05<br>(0.68) | -0.04<br>(0.78) | 0.22<br>(0.09)  | 0.39<br>(0.00)  | -0.30<br>(0.03) | -0.22<br>(0.09) | -0.04<br>(0.76) | 0.13<br>(0.47)  | -0.28<br>(0.03) | 0.34<br>(0.01) | 0.02<br>(0.86) | 1.00            |                |      |
| 16 Log Real effective exchange rate index | 0.15<br>(0.23)  | 0.26<br>(0.04)  | -0.16<br>(0.23) | -0.27<br>(0.04) | 0.02<br>(0.85)  | 0.03<br>(0.81)  | -0.07<br>(0.57) | -0.03<br>(0.81) | -0.11<br>(0.38) | 0.13<br>(0.36)  | -0.06<br>(0.72) | 0.23<br>(0.08)  | 0.01<br>(0.96) | 0.00<br>(0.97) | -0.12<br>(0.37) | 1.00           |      |
| 17 Log Population size                    | 0.11<br>(0.38)  | -0.27<br>(0.03) | -0.37<br>(0.00) | -0.47<br>(0.00) | 0.28<br>(0.03)  | 0.69<br>(0.00)  | 0.44<br>(0.00)  | -0.00<br>(0.97) | -0.31<br>(0.01) | -0.49<br>(0.00) | -0.70<br>(0.00) | -0.35<br>(0.01) | 0.69<br>(0.00) | 0.07<br>(0.58) | 0.20<br>(0.12)  | 0.01<br>(0.96) | 1.00 |

Notes: The table presents raw pair-wise correlations (*p*-values) for observations with data on both the Impartiality index and Sustained growth.



explain why some countries manage to sustain a reasonably high GDP per capita growth for a number of years while other countries either have low growth or occasionally have high growth but cannot sustain it. We hold that this is a reasonable approach given that data on our variable of interest, government impartiality, is available only from the end of the 1990 s. The sample period is therefore quite short, and we need a definition of sustained growth that provides us with a sufficiently large sample. To focus only on growth accelerations or structural breaks would mean not searching for factors that characterize countries that year after year continues to experience high growth. Further, if we focused on decelerations or end of growth spells, we would lose observations for countries that were still in a period of relatively high growth at the end of our sample period. For instance, Liberia has had a GDP per capita growth higher than 2% since 2005, and Zambia since 2003. We do not know how long these growth spells will last. It does not seem reasonable neither to code them as ending in 2013, simply for the reason that we do not know the future, nor to omit them from the analysis on the basis that their growth spell is too long. Thus, while we in principle agree with, e.g., Sen (2013) on the virtues of understanding transitions between different growth phases, and agree that structural breaks, growth accelerations, growth collapses, and duration of spells are important, we believe that findings based on our definition of sustained growth can add to the literature.

A fairly common practice is to set the required threshold for growth in the range of 2% to three and a half percent, and the duration of growth spells are often required to be at least five or eight years. In the definition of sustained growth used in the baseline regressions, we follow this practice in principle but still opt for a relatively generous definition of sustained growth. We set *Sustained growth* to one if the growth rate in GDP per capita (World Bank, 2015) is 2% or more during the present and the next four years, i.e., for a period of at least five consecutive years. If this condition is not met, we set this variable to zero. We report robustness tests with other definitions. A threshold of 2% annual GDP per capita growth closely follows studies such as Berg *et al.* (2012). In their study, Berg *et al.* (2012) analyze growth spells with a length of either five or eight years. At the time of writing, the latest year for

which we could obtain growth in GDP per capita was 2013. Since we regress *Sustained growth* on lagged government impartiality, a threshold of five years means that 2008 would be the latest year for which we could use data on *Impartiality*, and a threshold of eight years means that 2005 would be the latest year. Considering our short sample, we chose the less restrictive threshold of five years. We provide evidence showing that our conclusions are not excessively sensitive to this choice. About one-fifth of the country-years in this sample had sustained growth during the sample period, see Table 1.

Figure 4 shows the average share of the years during 1999–2009 that are coded as having sustained growth. In contrast to what we saw for the *Impartiality index*, the East African countries seem to have done much better when it comes to acquiring sustained growth.

#### 4. EMPIRICAL FRAMEWORK AND REGRESSION ANALYSIS

##### (a) Empirical framework

The empirical specification to be estimated as a linear probability model is

$$\text{Sustained growth}_{i,t} = \alpha_i + \gamma \times \text{Impartiality index}_{i,t-1} + \beta_X X_t + \varepsilon_i,$$

where  $X_t$  is vector of controls and  $\varepsilon_i$  is an error term. Our main interest is in the sign of  $\gamma$ , i.e., whether government impartiality is positively related to sustained growth.

The main reasons for endogeneity are reversed causality or omitted variables. Given the cross-country sample and the observational nature of our data, we cannot deal with those issues by means of instrumental variables or similar approaches that would rely on quasi-exogenous variation. Instead, we deal with them in the following way. First, to avoid direct reversed causality we always lag all explanatory variables. We also test whether a history of sustained growth feeds positively onto the *Impartiality index*, and find that this is likely not the case. Second, a bias due to the omission of true correlates (an omitted variables bias) would be a concern if we did not control for factors systematically correlated with both

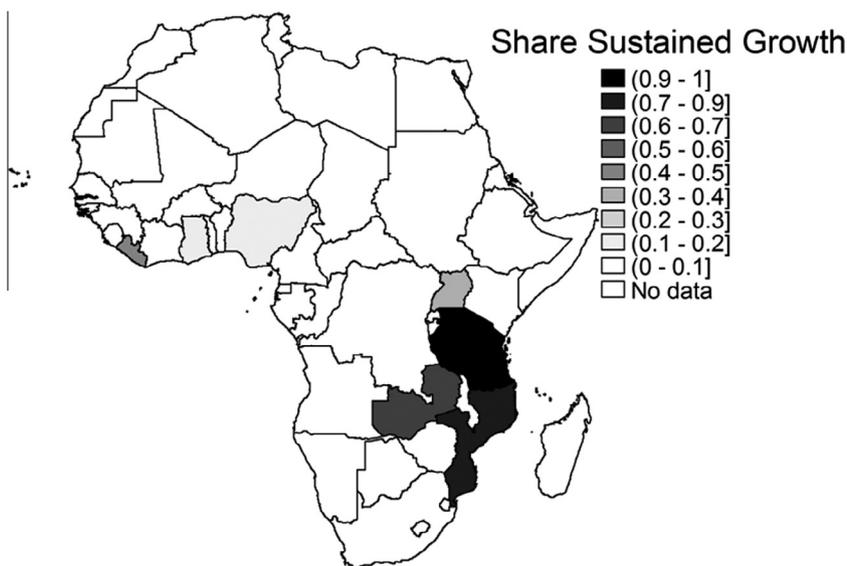


Figure 4. Share of years with Sustained growth (1999–2009).

the *Impartiality index* and *Sustained growth*. We use a fairly comprehensive set of control variables, considering our small sample, as well as country fixed effects in some models, to limit this potential threat, but admit that we cannot exclude it entirely.

In most of our pooled OLS-specifications, standard errors are robust to heteroskedasticity and autocorrelation. For the fixed effects specifications we cluster the standard errors at the country level. Given that the number of clusters (countries) is too low for ordinary clustering to be valid, we use the wild bootstrap procedure (Cameron, Gelbach, & Miller, 2008).

(b) *Empirical results*

Consistent with the theoretical arguments presented in Section 2, the probability of acquiring sustained economic growth is higher when the perceived level of government impartiality is higher. In Table 3, we present our main results and show that this positive relationship is quite robust. In the first column, we include the *Impartiality index* together with our indicator for democracy, *Polity2*. Including the level of democracy as a control is important since *Polity2* and the *Impartiality index* are positively correlated. Once the level of democracy is held constant, a higher level on the *Impartiality index* implies a higher probability of being on a sustained growth

path. At the same time, once *Impartiality* is held constant, more democratic countries are less likely to have *Sustained growth*. This negative relationship is in contrast to the findings of Berg *et al.* (2012), who, using a world-wide sample found that more democratic countries have longer growth spells. However, we would not overemphasize the negative result for democracy as it is sensitive to controlling for other country characteristics, such as income inequality or formal institutions. Yet, a possible explanation is that the democracy-indicator, especially when used in a global sample, may pick up other differences between groups of countries than just their level of democracy, many of which could be expected to vary less within our exclusively sub-Saharan African sample. A legacy of pre-colonial or colonial history could be among these confounding factors.

If we extrapolate on the estimated coefficient under the assumption that the results reflect a causal relationship, starting at the sample mean, a one-standard deviation higher fraction of the population thinking that the government never treats their ethnic group unfair would be associated with a 7 percentage-point higher likelihood of being on a sustained growth path.

In the third to eighth columns, we add more control variables without qualitative effects on the key estimate. While we could use all 20 countries in the first column, data availability makes

Table 3. *Impartiality and sustained growth in sub-Saharan Africa*

|  | (1)               | (2)               | (3)               | (4)                | (5)               | (6)              | (7)              | (8)             |
|--|-------------------|-------------------|-------------------|--------------------|-------------------|------------------|------------------|-----------------|
|  | Pooled OLS        | Pooled OLS        | Pooled OLS        | Pooled OLS         | Pooled OLS        | Pooled OLS       | FE               | FE              |
| <i>Dependent variable: Sustained growth (At least 2.0% GDP per capita growth for at least 5 consecutive years)</i> |                   |                   |                   |                    |                   |                  |                  |                 |
| Log Impartiality index   | 0.18**<br>(0.09)  | 0.29**<br>(0.11)  | 0.26*<br>(0.13)   | 1.80***<br>(0.52)  | 0.35*<br>(0.17)   | 0.46*<br>(0.23)  | 0.46**<br>(0.19) |                 |
| Polity2  | -0.04**<br>(0.02) | -0.03<br>(0.02)   | -0.05*<br>(0.03)  | -0.03<br>(0.02)    | -0.05<br>(0.03)   | -0.06<br>(0.07)  | -0.08<br>(0.11)  | 0.05<br>(0.04)  |
| Log Gini   |                   | -0.70**<br>(0.31) | -0.63*<br>(0.35)  | -0.45<br>(0.38)    | -0.57<br>(0.58)   | 0.36<br>(2.02)   |                  |                 |
| Log Linguistic fractionalization   |                   | 0.14***<br>(0.04) | 0.13***<br>(0.04) | 0.17***<br>(0.04)  | 0.19***<br>(0.06) | 0.17*<br>(0.09)  |                  |                 |
| Log Ethnic fractionalization   |                   | -0.15<br>(0.14)   | -0.18<br>(0.18)   | -0.24<br>(0.15)    | 0.21<br>(0.36)    | -0.09<br>(0.95)  |                  |                 |
| Log Religious fractionalization  |                   | 0.26***<br>(0.08) | 0.26***<br>(0.09) | 0.32***<br>(0.10)  | 0.42***<br>(0.13) | 0.52**<br>(0.21) |                  |                 |
| Log National identity index  |                   |                   | 0.03<br>(0.19)    |                    |                   |                  |                  |                 |
| Log GDP per capita   |                   |                   |                   | -0.29***<br>(0.10) | 0.01<br>(0.09)    | -0.02<br>(0.19)  | 1.14<br>(1.00)   | 1.51*<br>(0.83) |
| Log Impartiality index * Log GDP per capita  |                   |                   |                   | -0.20***<br>(0.06) |                   |                  |                  |                 |
| Log Quality of Government  |                   |                   |                   |                    | -0.43<br>(0.41)   | -0.66<br>(0.59)  | -0.38<br>(0.82)  | -1.22<br>(0.73) |
| Log Internal conflict  |                   |                   |                   |                    | 0.72<br>(0.56)    | 0.97<br>(1.54)   |                  |                 |
| Future Log Impartiality  |                   |                   |                   |                    |                   |                  |                  | 0.14<br>(0.29)  |
| Additional control variables   | No                | No                | No                | No                 | No                | Yes              | Yes              | Yes             |
| Country and year fixed effects   | No                | No                | No                | No                 | No                | No               | Yes              | Yes             |
| Observations   | 62                | 57                | 47                | 57                 | 35                | 34               | 50               | 50              |
| Countries  | 20                | 18                | 18                | 18                 | 14                | 14               | 16               | 16              |
| R <sup>2</sup>   | 0.13              | 0.39              | 0.39              | 0.45               | 0.53              | 0.58             | 0.26             | 0.35            |

Notes: Estimated with OLS. Robust standard errors in parentheses, small sample adjusted in Columns 1 to 6, robust to arbitrary autocorrelation in Columns 1, 2, 4–6, and clustered by country using the wild bootstrap procedure (1,000 resamples) in Columns 7 and 8. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Time-varying explanatory variables are lagged one year. The additional control variables are Log Government consumption, Log Natural resource rents, Log Price level of investment, Inflation, Log Real effective exchange rate, and Log Population size.

the sample smaller as we add more control variables. Looking the length of growth spells, [Berg et al. \(2012\)](#) find no significant effect of fractionalization but a strong effect of income inequality. However, [Johnson et al. \(2010\)](#) point to societal fractionalization as a potential obstacle for sustained growth for African countries in general. From the correlation matrix, we see that respondents living in countries more fragmented in terms of language or religion more often also feel that the government is not acting impartially, while ethnic fragmentation does not seem to matter. Perceived impartiality is also slightly lower in countries with more income inequality. Given this, we consider indicators for income inequality as well as for fractionalization along linguistic, ethnic, and religious lines as control variables in the second column in [Table 2](#). We draw Gini from [World Bank \(2015\)](#), but since Gini is not reported for most years, we use the first available figure for each country after 1990. The fractionalization indices are all from [Alesina et al. \(2003\)](#). Holding these factors constant, the *Impartiality index* is significant at the five-percent level. Evidently, income inequality is a predictor of sustained growth, but contrary to the often-told tale of the perils of ethnolinguistic fragmentation, we find that more fragmented countries in terms of language and religion are more likely to acquire sustained growth. More central to the topic of this paper is that, even when we control for the possibly confounding effects of income inequality and societal fractionalization, it is clear that countries where people more seldom feel that their ethnic group is treated unfairly by the government are more likely to acquire sustained growth.

Though the results in the second column suggest that, for these African countries, time-invariant indicators of fragmentation may even be positively related to sustained growth, fragmentation could still be problematic if people not just belonged to different groups but also identified relatively more with their own group rather than with their country. If there was a strong effect of the salience of group identity, that should show up as a significant coefficient for a variable such as the *National identity index*, but it does not. We include the *National identity index* in the third column and it is both statistically and economically insignificant. When interacted with the *Impartiality index*, neither the main estimates nor the interaction term are significant (results not shown). The lack of significance for the *National identity index* could also be because most of these sub-Saharan African countries are by international comparison quite fragmented, and the real difference in this respect may not be within this group of countries but rather between these countries and other countries in the world. While it may not be possible to generalize to other regions, we conclude that fragmentation or the salience of group identities probably do not constitute important impediment to sustained growth for these countries.

The countries that have acquired sustained growth are on average poorer. Hence, an interesting question is whether the *Impartiality index* is more strongly related to sustained growth among relatively poor countries. The motivation for including an interaction term between government impartiality and the income level is that, though exceptions are not hard to find, as a general rule more developed countries have more robust formal institutions and stronger civil societies that enable citizens to demand equal treatment and that their rights are respected. We therefore expect negative effects stemming from low levels on the *Impartiality index* to be especially problematic in less developed countries. The results in the fourth column, where we include *GDP per capita* ([World Bank, 2015](#)) and interact it with the *Impartiality index*, are consistent

with this reasoning. Low levels of the index are thus more of a hindrance in initially poor countries.

The experience of and risk for internal violent conflict could be reflected both in less perceived impartiality and less ability to sustain growth once it emerges. We use an indicator from ICRG that combines assessments of the risks for civil war, coups, or civil disorder. On this indicator, *Internal Conflict*, a higher value means a lower risk. The data is drawn from [Teorell et al. \(2015\)](#). From the correlation matrix, we see that the perceived level of government impartiality is, as expected, higher where there is a lower risk for internal conflict. We add our two indicators from ICRG, *Internal Conflict* and *Quality of Government*, in the fifth column. Due to limited data availability the sample shrinks considerably, which could contribute to these two indicators not being significantly related to sustained growth. The lack of significance could also be caused by multicollinearity, but since we are interested primarily in the relationship between the *Impartiality index* and *Sustained growth*, multicollinearity among the other independent variables is of little importance in our context. In results not shown, we re-estimated the specification without the two indicators from ICRG but using the same sample as in the fifth column. The coefficient for the *Impartiality index* was hardly affected (Coeff: 0.38; S.E.: 0.17). This moderate effect clearly suggests that our indicator for government impartiality is not capturing the role of formal institutions, which one may otherwise have had good reason to expect. The *Impartiality index* may instead be seen as an indicator of the quality of a particular form of informal institutions.

In the sixth column, we add more variables that may be important in the African context. We admit the endogenous nature of the variables we add as controls here, as for those added in previous columns, but they serve to establish the robustness of the main results and additionally reveal interesting associations. [Berg et al. \(2012\)](#) find that external shocks can end growth spells, and it is then understandable that the risk falls with export sophistication and openness. We seek to pick the latter effect up by using the variable *Natural resource rents* as share of GDP ([World Bank, 2015](#)) to indicate lack of export diversification and the *Real effective exchange rate index* ([Darvas, 2012](#)) to measure openness or external competitiveness. The rate of consumer-price *Inflation* ([World Bank, 2015](#)) is a proxy for the soundness of macroeconomic policies, and the *Price level of investment* ([Feenstra, Inklaar, & Timmer, 2013](#)) captures the user cost of capital. Economic growth is in theory tightly linked to investments, but we include the price level of investment as it is less problematic in this setting than the investment rate as such, though it can still be endogenous. By expanding government consumption, governments could both appease unruly groups and create tensions between those that receive more and those that receive less. As a control, we therefore include *Government consumption* as a share of GDP, drawn from the Penn World Tables ([Feenstra et al., 2013](#)). The *Impartiality index* is negatively correlated with the size of the population, possibly because it is harder to please all segments of larger populations and that the perceived level of impartiality therefore will be lower in larger countries. Population size and growth could also be linked to the possibility of acquiring sustained growth, wherefore we include *Population size* ([World Bank, 2015](#)) as a control. Because of the limited size of our data set, we are constrained in terms of the number of control variables that can be included jointly. When we add both ICRG measures, the sample shrinks considerably. In order to retain sample size we drop *Internal Conflict* when we in the sixth column include

all these controls related to current economic conditions and economic structure of the economy. Importantly, the estimate of the *Impartiality index* is not weakened when we include these additional control variables, rather the opposite.

Also within-country variation in the impartiality of the government is related to sustained growth. The fixed effects specification in the seventh column shows that once time-invariant factors, which could include, e.g., matters related to history or geography, and here need only be invariant over period after 1999, are held constant, the *Impartiality index* is a still a positive correlate with *Sustained growth*. All our fixed effects specifications include year dummies, to deal with shocks common to all countries, and the standard errors are clustered at the country level. Since the number of clusters (countries) is on the low side, we use the wild bootstrap procedure to estimate the standard errors. The results suggest that if the impartiality of the government improves, so does the chance of obtaining reasonably high growth over a period of at least five years. Here, the imagined one-standard deviation increase government impartiality means a 19 percentage-points increase in probability of sustained growth.

Outside the controlled environment of a lab, one can never completely rule out the possibility of an omitted variables bias. However, considering that the qualitative result is the same also when country fixed effects are included, one can be reasonably certain that differences between the countries in our sample that are constant over the post-1999 sample period are not causing such a bias. That is, our results do not reflect the impact of factors such as geographical conditions, pre-colonial, colonial, or post-independence history, past or present structure of the population or the economy, deep formal or informal institutions, or a history of civil war. Since we include year fixed effects, neither common external shocks, such as global business cycles, are likely to cause an omitted variables bias. At the same time, to drive our results, the omitted factor must be such that it is not captured by indicators for formal aspects of democracy or the quality of formal institutions, nor by the level of income or by various macroeconomic indicators, such as government size, inflation, the costs of investment, real exchange rates, or natural resource rents. While we do not argue that there cannot be factors that have these properties, we are not aware of any obvious candidates.

Can we be reasonably certain that we are not capturing that sustained growth leads to respondents having positive assessments of their government? We believe so. In the last column, we include the first lead of the *Impartiality index* instead of the lagged value. This future value has no predictive power. The coefficient is close to zero, and the *p*-value is 0.68. In Table 6 in the Appendix, we even reversed the specification used in the seventh column in Table 3 and set the present value on the *Impartiality index* as the dependent variable and (lagged) values of *Sustained growth* as one of the explanatory variables. The estimate for *Sustained growth* switches from positive to negative depending on the number of years it is lagged, and is far from significant up to the sixth lag, where we get a negative coefficient significant at the 5% level. Thus, if anything, a history of *Sustained growth* is associated with lower levels of perceived impartiality, suggesting that our results may be biased downward. While we cannot determine the lag structure of the “true model,” we are therefore reasonably confident that impartiality has a positive impact on subsequent growth patterns rather than the reverse. That is, we are not capturing that sustained growth leads to higher levels of government impartiality but the opposite.

Overall, our empirical results demonstrate that a lack of government impartiality could be a real hindrance to sustained growth. As outlined in Section 2, we primarily envisage the theoretical link from government impartiality to sustained growth as going via less ethno-regional favoritism, less room for rent-seeking, and more stability in economic and political conditions. With the data at hand, we cannot identify the relative importance of these potential mechanisms. We can say with some certainty that the estimated coefficients for the *Impartiality index* are not capturing the role of objective levels of societal fractionalization or income inequality, the role of formal aspects of democracy or the quality of formal institutions, nor the level of income or various macroeconomic indicators. More research is needed to pinpoint the exact mechanisms and to cleanly separate the role of real *versus* perceived impartiality.

### (c) More robustness checks

In Table 4, we present results from a series of robustness checks. We have so far followed Berg *et al.* (2012) in using a

Table 4. *Impartiality and sustained growth*

| Dependent variable:            | (1)  | (2)             | (3)              | (4)              | (5)            | (6)                       |
|--------------------------------|--|-----------------|------------------|------------------|----------------|---------------------------|
|                                | <i>Sustained growth (At least ___% GDP per capita growth for at least ___ consecutive years)</i> |                 |                  |                  |                | <i>Annual growth rate</i> |
| Duration threshold (years)     | 5  | 4               | 6                | 5                | 5              |                           |
| Growth threshold (%)           | 2  | 2               | 2                | 1.5              | 2.5            |                           |
| Log Impartiality index         | 0.46**<br>(0.19)   | 0.55*<br>(0.32) | 0.71**<br>(0.32) | 0.75**<br>(0.34) | 0.40<br>(0.24) | 6.65<br>(5.31)            |
| Time-varying control variables | Yes  | Yes             | Yes              | Yes              | Yes            | Yes                       |
| Country and year fixed effects | Yes  | Yes             | Yes              | Yes              | Yes            | Yes                       |
| Observations                   | 50   | 50              | 35               | 50               | 50             | 50                        |
| Countries                      | 16   | 16              | 14               | 16               | 16             | 16                        |
| R <sup>2</sup>                 | 0.26   | 0.40            | 0.74             | 0.42             | 0.35           | 0.56                      |
| Sample year range              | [2000–09]  | [2000–09]       | [2000–07]        | [2000–09]        | [2000–09]      | [2000–09]                 |
| Positives [Fraction of sample] | 13 [0.26]  | 11 [0.22]       | 9 [0.26]         | 16 [0.32]        | 11 [0.22]      | NA                        |

Notes: Estimated with OLS. In parentheses are robust standard errors, clustered by country using the wild bootstrap procedure (1,000 resamples). \*\*\* *p* < 0.01, \*\* *p* < 0.05, \* *p* < 0.1. All explanatory variables are lagged one year. The time-varying control variables are Polity2, Log GDP per capita, Log Quality of government, Log Government consumption, Log Natural resource rents, Log Price level of investment, Inflation, Log Real effective exchange rate, Log Population size.

per capita growth of rate 2% as the growth threshold. Now we test alternative thresholds for what to code as sustained growth, and while the results do not falsify the overall conclusion that the *Impartiality index* is positively related to sustained growth, they indicate that the results are sensitive to which thresholds one chooses to use. We repeat our “benchmark” specification, from the seventh column in Table 3, in the first column in Table 4. In this sample, one in four observations has a growth rate of 2% or more that year and the following four years.

First, we change the number of years of growth at or above 2% that is required for it to be coded as sustained. Lowering the year threshold to four years gives us the same qualitative results, but the coefficient for the estimate of the *Impartiality index* is less statistically significant. Increasing the year threshold to six years can be done without damage to the statistical significance of the index. Second, we adjust the growth threshold. If we lower this threshold by half a percentage point, to one and a half percent, the share with sustained growth increases to one in three and the *Impartiality index* is still significant at the five-percent level. If the threshold is raised to two and a half percent, the coefficient for the *Impartiality index* is on the same order of magnitude, but no longer statistically significant. The results are thus robust to some changes to thresholds, but cannot be generalized to any thresholds. To further test the effect of government impartiality on economic growth, without considering whether it is sustained or not, we use annual growth in GDP per capita as the dependent in the last column. The *Impartiality index* is positive but not statistically significant. Our interpretation of these results is that, while more impartial governments can help countries stay on a path of moderately positive growth for a decent number of years, it is not a sufficient condition that ensures that the growth rate during those years is also at a consistently high level.

## 5. CONCLUDING REMARKS

The literature recognizes that a key problem for low-income countries is not only how to obtain high growth but how to sustain it over a period of several years. In this paper, we study sustained growth, which we define as a growth rate in GDP per capita of at least 2% for a period of at least five consecutive years, in a sample of 20 sub-Saharan African countries. Specifically, we ask whether the government’s impartiality and salience of group identities matter. We find that when the government is seen as impartial, there is greater prospect for sustained growth, but that the salience of group identity seems not to matter. A standard deviation increase in the population share that sees the government as treating their group fairly is associated with an increase in the probability of obtaining sustained growth in a range from about seven to 19 percentage points. While causality remains an issue, we believe that a reasonable policy conclusion is that also moderate improvements in the impartiality of the governments in these countries would be a vital step for ensuring lasting growth in Africa, and possibly elsewhere in the developing world.

We have focused in this paper on ethnic impartiality given the salience of the ethnic question. An interesting avenue for future work is to study the effect of other types of impartiality on sustained growth. For example, besides being impartial toward different ethnicities, it may also be important that African governments are impartial toward different religions or economic classes (e.g., the poor) if they want to facilitate sustained growth. From a policy perspective, it will be interesting to establish the absolute and relative effects of these different dimensions of impartiality.

## NOTES

1. The countries are Benin, Botswana, Burkina Faso, Cape Verde, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.

2. Alesina, Baqir, and Easterly (1999), Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003), and Montalvo and Reynal-Querol (2005) offer similar evidence for the negative economic and political consequences of ethnic fractionalization and/or polarization.

3. An example for such developments is Malaysia, where the economic success of the Chinese minority led to policies that explicitly advantaged the Malay majority. However, authors differ in their evaluation of the economic consequences of these policies (Jono, 2004). That is, Malaysia did relatively well economically despite pursuing potentially impartial policies. On the other hand, it is possible that it would have grown even

more with more partial policies. For example, its neighbor Singapore, which was careful to treat all national ethnicities equally, did better economically than Malaysia at similar levels of ethnic diversity.

4. Bhalla and Luo (2013) note that the Muslims in Jammu and Kashmir are poorer than the Hindus and that the Uighurs are poorer than the Han in China, suggesting that ethnic (religious) inequality might be possible explanations for the smoldering conflicts in these two regions.

5. We thank an anonymous reviewer for pointing us in the direction of investigating these aspects.

6. We thank a reviewer for making us aware of this potential shortcoming of the concept of impartiality.

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## APPENDIX A

Table 5. *The Impartiality index by country and year*

| Country      | Survey (Year) | Impartiality index | Country      | Survey (Year) | Impartiality index |
|--------------|---------------|--------------------|--------------|---------------|--------------------|
| Benin        | 2005          | 0.48               | Malawi       | 2005          | 0.32               |
| Benin        | 2008          | 0.53               | Malawi       | 2008          | 0.53               |
| Burkina Faso | 2008          | 0.60               | Namibia      | 1999          | 0.29               |
| Botswana     | 1999          | 0.52               | Namibia      | 2003          | 0.30               |
| Botswana     | 2003          | 0.34               | Namibia      | 2005          | 0.38               |
| Botswana     | 2005          | 0.72               | Namibia      | 2008          | 0.31               |
| Botswana     | 2008          | 0.76               | Nigeria      | 2000          | 0.22               |
| Cape Verde   | 2002          | 0.30               | Nigeria      | 2003          | 0.16               |
| Cape Verde   | 2005          | 0.54               | Nigeria      | 2005          | 0.18               |
| Cape Verde   | 2008          | 0.33               | Nigeria      | 2008          | 0.12               |
| Ghana        | 2002          | 0.58               | Senegal      | 2002          | 0.72               |
| Ghana        | 2005          | 0.52               | Senegal      | 2005          | 0.76               |
| Ghana        | 2008          | 0.47               | Senegal      | 2008          | 0.79               |
| Kenya        | 2003          | 0.15               | Tanzania     | 2001          | 0.46               |
| Kenya        | 2005          | 0.24               | Tanzania     | 2003          | 0.27               |
| Kenya        | 2008          | 0.27               | Tanzania     | 2005          | 0.54               |
| Liberia      | 2008          | 0.63               | Tanzania     | 2008          | 0.63               |
| Lesotho      | 2000          | 0.23               | Uganda       | 2000          | 0.21               |
| Lesotho      | 2003          | 0.20               | Uganda       | 2002          | 0.21               |
| Lesotho      | 2005          | 0.86               | Uganda       | 2005          | 0.34               |
| Lesotho      | 2008          | 0.67               | Uganda       | 2008          | 0.18               |
| Madagascar   | 2005          | 0.87               | South Africa | 2000          | 0.14               |
| Madagascar   | 2008          | 0.88               | South Africa | 2002          | 0.24               |
| Mali         | 2001          | 0.41               | South Africa | 2006          | 0.49               |
| Mali         | 2002          | 0.54               | South Africa | 2008          | 0.33               |
| Mali         | 2005          | 0.75               | Zambia       | 1999          | 0.16               |
| Mali         | 2008          | 0.69               | Zambia       | 2003          | 0.24               |
| Mozambique   | 2002          | 0.48               | Zambia       | 2005          | 0.45               |
| Mozambique   | 2005          | 0.71               | Zambia       | 2009          | 0.57               |
| Mozambique   | 2008          | 0.50               | Zimbabwe     | 1999          | 0.08               |
| Malawi       | 1999          | 0.39               | Zimbabwe     | 2004          | 0.35               |
| Malawi       | 2003          | 0.16               | Zimbabwe     | 2009          | 0.49               |

Notes: Countries and years for which the Impartiality index can be coded from the [Afrobarometer \(2013\)](#).

Table 6. *Testing for direct reversed causality*

| Number of years all explanatory variables are lagged: | (1)   | (2)                | (3)                | (4)             | (5)              | (6)                |
|---|---|--------------------|--------------------|-----------------|------------------|--------------------|
|   | 1   | 2                  | 3                  | 4               | 5                | 6                  |
|   | <i>Dependent variable: Log Impartiality index</i> |                    |                    |                 |                  |                    |
| Sustained Growth                                      | 0.16<br>(0.24)                                    | 0.26<br>(0.21)     | 0.34<br>(0.42)     | -0.21<br>(0.22) | -0.18<br>(0.16)  | -0.37**<br>(0.14)  |
| Polity2   | 0.08<br>(0.10)                                    | -0.03*<br>(0.02)   | -0.04***<br>(0.01) | -0.05<br>(0.03) | -0.03*<br>(0.01) | -0.04*<br>(0.02)   |
| Log GDP per capita                                    | -2.14*<br>(1.25)                                  | -2.51***<br>(0.87) | -2.57<br>(1.62)    | -1.77<br>(1.55) | -1.25<br>(0.90)  | -0.75*<br>(0.42)   |
| Log Quality of Government                             | 0.34<br>(0.56)                                    | 0.59<br>(0.53)     | 0.06<br>(0.42)     | 0.04<br>(1.97)  | 0.17<br>(0.58)   | 0.21<br>(0.20)     |
| Log Government consumption                            | -0.33<br>(0.45)                                   | -0.64<br>(0.44)    | -0.71<br>(0.64)    | -0.27<br>(0.34) | 0.15<br>(0.34)   | 0.55***<br>(0.00)  |
| Log Natural resource rents                            | -0.02<br>(0.09)                                   | 0.00<br>(0.25)     | 0.17<br>(0.11)     | -0.23<br>(0.26) | -0.02<br>(0.13)  | -0.11<br>(0.25)    |
| Log Price level of investment                         | 0.01<br>(0.54)                                    | -0.39<br>(0.44)    | -0.33<br>(0.68)    | -0.24<br>(0.37) | -0.41<br>(0.50)  | -0.35***<br>(0.12) |
| Inflation   | 0.02*<br>(0.01)                                   | -0.00<br>(0.01)    | 0.00<br>(0.01)     | 0.00<br>(0.01)  | 0.00<br>(0.01)   | -0.00<br>(0.00)    |
| Log Real effective exchange rate                      | -0.37<br>(0.55)                                   | 0.61<br>(0.44)     | 0.26<br>(0.40)     | 0.17<br>(0.44)  | 0.45<br>(0.38)   | 0.19<br>(0.65)     |

Table 6 (continued)

|   | (1)             | (2)             | (3)             | (4)             | (5)             | (6)             |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of years all explanatory variables are lagged: | 1               | 2               | 3               | 4               | 5               | 6               |
| Log Population size                                   | -3.37<br>(4.02) | -3.17<br>(3.20) | -2.64<br>(3.06) | -6.92<br>(8.56) | -3.21<br>(4.40) | -4.10<br>(3.66) |
| Observations  | 50              | 50              | 49              | 49              | 49              | 48              |
| Countries   | 16              | 16              | 16              | 16              | 16              | 15              |
| R <sup>2</sup>  | 0.46            | 0.33            | 0.48            | 0.50            | 0.62            | 0.75            |

Notes: Estimated with OLS. In parentheses are robust standard errors, clustered by country using the wild bootstrap procedure (1,000 resamples). \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ . Year and country fixed effects are included in all specifications.

### *Impartiality and national identity*

The *Impartiality index* is coded from the first four waves of the Afrobarometer surveys and the *National identity index* is coded from the second, third, and fourth wave.

#### *Fourth wave (2008–09)*

Question **Q79** is an open-ended question that asks “What is your tribe? You know, your ethnic or cultural group.”

Question **Q82** asks “How often are \_\_\_s [R’s Ethnic Group] treated unfairly by the government?” We give each respondent the value one if the answer is “Never”, and zero if the answer is “Sometimes,” “Often,” or “Always.” We use the sample weights of each respondent to calculate the *Impartiality index* as the share of the population that has a value of one.

Question **Q83** asks “Let us suppose that you had to choose between being a [Ghanaian/Kenyan/etc.] and being a [R’s Ethnic Group]. Which of the following best expresses your feelings?” We give each respondent the value one if the answer is “I feel only [Ghanaian/Kenyan/etc.]” or “I Feel More [Ghanaian/Kenyan/etc.] than (r’s groups)” and zero if the answer is “I Feel Only (r’s group),” “I Feel More (r’s group),” or “I feel equally [Ghanaian/Kenyan/etc.]” We use the sample weights of each respondent to calculate the *National identity index* as the share of the population that has a value of one.

#### *Third wave (2005–06)*

Question **Q79** is an open-ended question that asks “What is your tribe? You know, your ethnic or cultural group.”

Question **Q81** asks “How often are \_\_\_s [respondent’s identity group] treated unfairly by the government?” We give each respondent the value one if the answer is “Never”, and zero if the answer is “Sometimes,” “Often,” or “Always.” We use the sample weights of each respondent to calculate the *Impartiality index* as the share of the population that has a value of one.

Question **Q82** asks “Let us suppose that you had to choose between being a [Ghanaian/Kenyan/etc.] and being a [respondent’s identity group]. Which of these two groups do you feel most strongly attached to?” We give each respondent the value one if the answer is “I feel only [Ghanaian/Kenyan/etc.]” or “I

Feel More [Ghanaian/Kenyan/etc.] than (r’s groups)” and zero if the answer is “I Feel Only (r’s group),” “I Feel More (r’s group),” or “I feel equally [Ghanaian/Kenyan/etc.]” We use the sample weights of each respondent to calculate the *National identity index* as the share of the population that has a value of one.

#### *Second wave (2002–04)*

Question **Q54** is an open-ended question that asks “Besides being [national identity], which specific group do you feel you belong to first and foremost?”

Question **Q56** asks “How often are \_\_\_s [respondent’s identity group] treated unfairly by the government?” We give each respondent the value one if the answer is “Never”, and zero if the answer is “Sometimes,” “Often,” or “Always.” We use the sample weights of each respondent to calculate the *Impartiality index* as the share of the population that has a value of one.

Question **Q57** asks “Let us suppose that you had to choose between being a [national identity] and being a [respondent’s identity group]. Which of these two groups do you feel most strongly attached to?” We give each respondent the value one if the answer is “National identity” and zero if the answer is “Group identity.” We then use the sample weights of each respondent to calculate the *National identity index* as the share of the population that has a value of one.

#### *First wave (1999–2001)*

**Identity** is an open-ended question of which group, beside the nation, that the respondent feel that they belong to first and foremost.

**Pirfai.** While there are nuances, in most of the countries included in this wave it asks “To what extent are [members of your identity group] people treated unfairly by the government?” We give respondent the value one if the answer is “Never”, and zero if the answer is “Always”, “To a large extent/most of the time,” “To some extent/some of the time,” or “Hardly at all.” We use the sample weights of each respondent to calculate the *Impartiality index* as the share of the population that has a value of one.