THE PAYOFF: LONG-SERVING POLITICAL LEADERS AND FOREIGN INVESTORS[1]

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Abstract

Do political leaders who stay in power for longer periods attract more foreign investors? Opposing theoretical positions on this important question have been advanced but thus far have not been subjected to empirical scrutiny, especially in contexts characterized by weak political institutions. Using a novel dataset on the personal characteristics of African leaders spanning the period from 1960 to 2011, we find that political longevity increases foreign direct investment inflows. This effect is robust to controlling for leader unobserved heterogeneity using leader fixed effects. The magnitude of the effect does not change much when estimating a variety of dynamic models with or without external instrumental variables, and when using a model that explicitly accounts for the possible feedback effect of political longevity on foreign investment. Importantly, we find that the effect of political longevity is greater in more democratic regimes but that democracy itself does not have any effect when a leader is too new in power. Exploring the mechanism, we find that greater longevity of leaders promotes the rule of law, reduces corruption, and improves physical infrastructure.

Keywords: Political longevity, foreign investment, democracy, contagion, institutions

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1. Introduction

This paper assesses two opposing views about the impact of a leader's political longevity on economic development in countries characterized by weak institutions. More precisely, we examine whether leaders who stay longer in power are more able to attract foreign investors. From a theoretical standpoint, the effect of political longevity on foreign investment in a country is ambiguous. This effect depends on the ways in which and the extent to which longevity affects such factors as political stability, policy consistency, physical infrastructure, bureaucracy, the rule of law, corruption, and the protection of property rights, as several studies have shown that these factors have a determinative impact on foreign investment (Alesina & Perotti, 1996; Barro, 1999; Biglaiser & Staats, 2010; Asiedu, 2005). It has been argued that lower rates of leader turnover indicate both political stability and policy consistency (Alesina & Perotti, 1996; Huntington, 1973). Korschgen et al. (2011) also argue that long-serving leaders have enough time in which to adopt policies that improve the quality of institutions because significant changes in institutions typically cannot happen in one or two years. This view is underscored in the speech that Paul Biya, the long-serving president of Cameroon,[4] delivered at a recent economic forum in Italy in an attempt to gain the confidence of foreign investors. An extract of a key part of this speech is as follows:[5]

> … The country [Cameroon] is stable. It is rare to see a government that lasts 30 years. We have also set up institutions to combat the rather thorny issues of corruption and embezzlement of public funds, which plague the running of economies. … What else can I say except that the Italian businesspeople who have invested in Cameroon should place their full trust in us. In case of any problems, we are prepared to resolve them.

[4] Paul Biya has been in power for about 35 years, since 1982.
[5] https://www.prc.cm/en/news/speeches-of-the-president/2212-statement-by-h-e-paul-biya-to-the-italian-employers-federation

In addition, the stability enjoyed by long-serving leaders also helps to build long-term connections with foreign investors, and these connections in turn promote a climate favoring the development of mutual trust. Such leaders therefore might be more credible than short-term leaders in the eyes of investors.

Counterbalancing the above-stated arguments, however, is the view that long-serving leaders are more likely to be perceived as autocrats or dictators. This perception might limit inflows of foreign investment, especially given the fact that autocratic regimes often suffer from endemic corruption and an absence of the rule of law, all of which are viewed as high-risk factors by investors (Wei, 1997, 2000). Furthermore, a longer period in which a particular leader remains in power and a stronger perception by investors of the leader as a dictator tend to lead investors to infer a higher degree of expropriation in the host country. This is because autocratic regimes, in addition to almost invariably suffering from corruption and a lack of commitment to the rule of law, are characterized by unreliable legal mechanisms for ensuring the protection of property rights (Nieman & Thies, 2014). Due to their excessive hold on power, overly strong leaders may be tempted to adopt policies that allow them to expropriate foreign-owned properties or to force the renegotiation of investors' contracts in order to satisfy populist demands. In this sense, political longevity tends to deter foreign investment.

It follows from these opposing arguments that the impact of political longevity on foreign investment is ambiguous from a theoretical standpoint. This question therefore is best answered through the assessment of empirical evidence. In order to achieve this objective, we collected novel data on the characteristics of African leaders from 1960 to 2011. The analysis of this question in the African context is pertinent because Africa is the only region in which political longevity remains very high. Ruling leaders in this region have been found to wield excessive power over institutions, in many cases manipulating constitutional rules and bending laws to accommodate their

personal interests (Hodder-Williams, 1984; Braton & Van de Walle, 1997; Amutabi & Nasong'o, 2012). Our data reveal that the longevity of the average African leader is 18 years, which is more than four consecutive presidential terms in the United States.

We use a variety of empirical strategies to identify the causal effect of political longevity on foreign direct investment inflows. Ordinary least squares estimations show that an additional year in power increases foreign direct investment by about 0.20 billion U.S. dollars (average annual FDI is 2.53 billion U.S. dollars). These findings are robust to controlling for country characteristics including population size, the presence of natural resources, and the one-year lags of GDP growth and inflation. We also control for observable leader characteristics including age, affiliation to a majority ethnic group, whether he came to power through elections, and whether he was the president at the moment of independence. Moreover, we control for country and year fixed effects, and thus we account for a country's time-invariant characteristics that might simultaneously affect a leader's political longevity and FDI inflows, as well as for global factors (e.g., global economic prosperity) that might affect these two variables. The OLS estimates are remarkably robust to all of these controls.

There are two possible issues that interfere with the interpretation of the OLS effects as being causal, even after controlling for country and time fixed effects. First, the OLS estimates might suffer from omitted variables bias. For example, the ability or charisma of a leader might affect both his political longevity and his effectiveness in terms of attracting investors. Indeed, a leader who has the ability to attract popular support and to credibly commit to protecting property rights will increase simultaneously the length of his time in office and the number of multinational firms in his country. The second endogeneity issue is the reverse causality problem. Indeed, the economic growth resulting from foreign investment might help a leader increase his level of political popularity and

hence gain years in power. [6] Furthermore, multinational firms can also mobilize political support for the incumbent host leader by financially contributing to his re-election campaign.[7]

In order to address the potential issue resulting from an omitted variable bias, we control for leader fixed effects. Leader fixed effects indeed control for all of the time-invariant personal characteristics of a leader (including his inherent ability) that might be unobserved. We still find that an additional year in power has a positive and statistically significant effect on FDI inflows. Reassuringly, the magnitude of this effect is similar to that obtained when leader fixed effect is not controlled.

Controlling for leader fixed effects does not necessarily address the possible bias resulting from reverse causality or resulting from an omitted variable that changes over time. Given that a leader's political longevity in a given year is a stock variable and FDI is a flow variable, reverse causality is possible only if current FDI is correlated with past FDI. We therefore address this issue using the generalized methods of moments, with or without external instrumental variables. We first estimate the effect of longevity on FDI net inflows using the Blundell-Bond generalized method of moments, which generates internal instrumental variables based on the lags of FDI. We find that the effect of longevity is close in magnitude to the OLS effect, even after controlling for leader fixed effect along with other baseline controls.

For robustness checks, we also estimate the Arellano-Bond generalized method of moments with external instrumental variables for a leader's political longevity. Following Acemoglu et al. (2014), our instruments are based on the theories of institutional contagion and peer effects. They comprise

[6] Some macroeconomic studies that have found positive impacts of FDI on economic growth include Blomström, Lipsey and Zejan (1996), Balasubramanyam, Salisu and Sapsford (1996), and Borenstein, De Gregorio and Lee (1998).

[7] King (2000) cites Suharto, the second president of Indonesia, as an example of a leader who received financial contributions from two companies aimed at reinforcing the stability of his regime. Choi and Thum (2009) also argue that firms are often forced to support leaders while they are in office.

the average longevity of the leaders of a leader's neighboring countries, a variable measuring the extent to which a president is close in age to the neighboring leaders, and a variable measuring the extent to which a leader is close in age to the current leader of the former colonial power. Each of these instruments are justified in section 5.2.2.

Estimating the Arellano-Bond GMM using these external instrumental variables, we find that the effect of political longevity on FDI net inflows is very close in magnitude to that obtained using the Blundell-Bond GMM or OLS controlling for leader fixed effect. This stability in the magnitude of these effects is reassuring, and it seems to suggest that our external instruments are not really needed, or that any potential endogeneity issue arising from reverse causality or a time-variant omitted variable is minimal in our setting.

Further taking advantage of the panel structure of our dataset, we use the three-stage least squares (3SLS) estimation technique, which is a simultaneous equations model that explicitly models the two-way relationship between political longevity and FDI. We instrument political longevity using the external instruments described above. Again, we find that political longevity positively affects foreign investment, and that its effect is closer to the OLS estimate. Interestingly, we also find that FDI inflows positively affect political longevity, and this suggests that leaders derive political gains from attracting foreign investors.

Next, we identify certain particular conditions under which political longevity affects inflows of foreign investment. In fact, despite the fact that investors may view a leader who has lasted for a long time in power as guaranteeing political stability, there may be drawbacks – especially when the leader has been in power for too long. As already argued, the longer a leader stays in power, the more an investor will infer that he is a dictator and that there is a high degree of expropriation in the host country. Political longevity is therefore likely to positively affect FDI inflows only if the

regime is not perceived as being dictatorial. We test this hypothesis by estimating the interactive effect of political longevity and democracy. We find that, in general, political longevity has a larger effect on FDI inflows in more democratic regimes. This finding is robust to all of our identification strategies including OLS and GMM. Quite interestingly, in most specifications, democracy itself does not have any effect when a leader is too new in power. It positively affects FDI inflows only when political longevity is high enough, which suggests that foreign investors value democracy only when political stability or policy consistency is guaranteed.

Finally, we examine the mechanism by which political longevity positively affects inflows of foreign investment by analyzing the impacts of longevity on institutional variables that have been found to affect investors' decisions. We find that longevity positively affects the rule of law and the protection of property rights. It also reduces corruption, improves bureaucracy, and promotes the development of physical infrastructure. However, when we control for unobserved characteristics of leaders using leader fixed effects, the effect of political longevity remains statistically significant only for the rule of law, corruption, and physical infrastructure.

The remainder of this paper is organized as follows. Section 2 situates our paper within the extant literature on the institutional determinants of foreign investment. Section 3 explores the basic conceptual framework of the effect of longevity on FDI inflows. Section 4 describes the data and the model specifications used to test the relationship between political longevity and FDI. Section 5 presents the empirical results. Section 6 investigates the effect of the interaction between political longevity and democracy on FDI. Section 7 explores the mechanism through which the longevity of leaders affects FDI. In the final section we conclude.

2. Literature Review

A large literature examining the determinants of FDI emphasizes the importance of both macroeconomic and institutional factors. Nevertheless, in this section, we only focus on institutional factors, given our interest in the effect of political longevity. Recent studies have looked at the impact of democracy on FDI in developing countries, finding an ambiguous effect (Li & Resnick, 2003; Busse & Hefeker, 2007). Hayes (2009) and Hiscox (2002) argue that democratic leaders are less likely to offer preferential treatment to multinational companies that compete with domestic companies, as these leaders must satisfy domestic interests by implementing policies in favor of domestic firms. Similarly, Bueno de Mesquita et al. (2003) and Li (2006) suggest that democracies are constrained by political actors' large number of vetoes from making favorable entry arrangements and from offering tax incentives to multinational companies. Thus, democracy may discourage FDI. Counterbalancing this argument, some studies point out several advantages of democracy in terms of attracting FDI. Democracy includes institutions that help to protect property rights and the rule of law, which may increase FDI. A democratic leader may encourage policies that support FDI in order to increase wage competition between domestic and multinational firms since labor is the largest political constituency (Li & Resnick, 2003; Busse & Hefeker, 2007). Other studies suggest that the impact of democracy on FDI depends on natural resources, property rights, and corruption. In a democracy with more highly developed property rights, a lower level of corruption, and fewer natural resources, FDI has a tendency to increase over time; this contrasts with the tendency in authoritarian regimes (Asiedu & Lien, 2011; Nieman & Thies, 2014). Similarly, Li (2009) finds that the level of expropriation of FDI depends on political institutions and differs between democracies and autocracies. For example, in a host country with a higher executive brain drain and fewer political constraints, a democratic leader is more likely to expropriate than an autocratic leader who is subjected to fewer political constraints (Li, 2009). Our paper contributes to this strand of literature by using political longevity as an institutional variable.

Many studies have also looked at the effect of corruption on FDI. While some authors find a negative impact of corruption on FDI (Wei, 1997, 2000; Schudel, 2010), others find an insignificant relationship (Abed & Davoodi, 2002). Wei (2000) argues that an increase in the tax rate on multinational firms has the same negative effect on FDI as an increase in the level of corruption. Focusing on Africa, Asiedu (2005) analyzes the role of corruption, political instability, institutions, and government policy in FDI inflows. She finds that good government policy attracts FDI, whereas political instability and corruption tend to discourage foreign investors.

Our findings are consistent with those of Li and Resnick (2003) and Nieman and Thies (2014) who study the effect of the durability of regime types (democracy versus autocracy) on FDI. They find that regime durability is positively correlated with FDI. Our paper differs from these studies in several important respects. We study the effect of individual leaders' longevity in power, which is different from the longevity of a regime as several consecutive leaders might hold office within the same regime. We also examine the interactive effect of political longevity and democracy on the determination of FDI inflows, finding that democracy has no effect when a leader is too new in power. Its effect is positive only when the longevity of the current leader is sufficiency high, a finding that suggests that foreign investors value democracy only when political stability and policy consistency are guaranteed.

To the best our knowledge, our paper is the first investigation of the impact of leader longevity on FDI inflows. We find that long-serving leaders tend to attract foreign investment but that this effect is more pronounced under democratic regimes – though, as already noted, democracy itself has no impact in countries that are under a new leader. Our exploration of the channels through which political longevity affects FDI inflows yields findings that are interesting on their own right. We find that longevity in power gives leaders greater opportunity to promote the rule of law, reduce corruption, and improve physical infrastructure. On the other hand, longevity improves neither the

protection of property rights nor bureaucratic practices once leaders' unobserved heterogeneities are controlled for.

3. Conceptual Framework: In What Ways and to What Extent Does the Longevity of a Political Leader Matter to Foreign Investors?

Dunning (1988) suggests that foreign investors are motivated by three important factors: a firm's ownership-specific advantage; internalization advantage; and location advantage. Ownership-specific advantage is defined as a firm's intangible and intellectual assets as well as government productivity activities that cross national boundaries. Internalization advantage refers to the ability of a firm to exercise monopoly or oligopoly power. Finally, location-specific advantage includes country-specific political, social, and institutional environments that underpin a firm's ownership and internalization advantages. We argue that these advantages are more likely to be guaranteed when there are both political stability and policy consistency. To the extent that the political longevity of leaders translates into political and policy stability, longer-term leaders are more likely to attract foreign investment.

The longevity of host leaders not only might reduce the ability of leaders to adopt sweeping policy changes that could affect multinational companies, but also might enable them to commit to the protection of these companies. Host leaders who expect to spend a long time in power are indeed less likely to nationalize multinational firms because of the greater long-term expected gain associated with protecting these firms. If so, long-term leaders are more likely to inspire the confidence of investors over time. This view is consistent with the argument put forward by O'Donnell (1978) and Oneal (1994) that leaders in autocratic countries are more likely to encourage investors' confidence because they are not subject to competitive elections and because they possess a strong ability to discourage revolutionary activities in favor of market activities. Due to the greater

stability of economic policy in relation to foreign investors, there is more reason for investors to invest in these host countries because they have the opportunity to take advantage of this policy stability and thus to maximize their ownership, internalization, and location advantages.

Investors may also view the longevity of a ruling leader as a factor that facilitates the development of political connections with them. Political connections increase connected firms' performance and help them to gain such favors as regulatory advantages (including reduced tax rates), enhanced property-rights protection, and sometimes even monopolistic or quasi-monopolistic concessions (Faccio, 2006; Li, 2009). In this sense, leaders who remain in power for a longer period are more likely to attract foreign investors.

However, investors can also perceive the political longevity of host country leaders as increasing the risk of expropriation of multinational properties. In countries where leaders nationalize or are likely to nationalize private properties in order to satisfy populist demand, multinational investors are less likely to invest due to the fear that their assets will be expropriated (see, e.g., Biglaiser and Staats (2010)). For example, following President Kirchner's nationalization of the Argentinean assets of one of the largest multinational oil companies, Richard Basas wrote that "Argentinean President Kirchner returned investors to their worst dreams when she nationalized YPF…, Argentina's largest oil firm that was supported by Spanish giant Repsol."[8] Furthermore, in 1999 in Zimbabwe, the expropriation of foreign firms' land holdings by long-term President Robert Mugabe might have discouraged many foreign investors from investing in the country, thus leading to contributing to the country's most serious economic crisis. It follows from this latter example that,

[8] Repsol's Argentine Expropriation: Two Awfully Complicated Views
http://opeal.net/index.php?option=comk2&view=item&id=10923:repsol%25E2%2580%2599s-argentine-expropriation-two-awfully-complicated-views

if long-term leaders are so strong that they have the ability to expropriate foreign properties, they will be less able to attract foreign investors.

It follows that the political longevity of a country's leader potentially has both positive and negative impacts on foreign investment. In the sections that follow, we empirically assess this relationship as well as the mechanism through which it operates.

4. Data and model

We combine individual-level information on African leaders with data collected from various sources including the World Development Indicators of the World Bank, Polity IV, and others (see Appendix 2). The dataset consists of 206 leaders from 46 African countries over the period from 1960 to 2011. A leader is defined as an individual who attained a position of power with the ambition of remaining in that position, regardless of the duration of his (or her) actual tenure though subject to the condition that he (or she) actually remained in power for more than a bare minimum of six months. Based on this definition we exclude interim heads of state.[9] We treat leaders who reappeared after previously losing power as new leaders. Our dataset coincides with the Archigos dataset for African leaders. We collect information on the personal characteristics of each leader including his (or her) political longevity (the number of years spent in power for each year that he (or she) was or is in power), age, affiliation to a majority ethnic group, whether he (or she) gained power immediately after the achievement of independence, and whether he (or she) came to power through a competitive election. We also collect yearly information on the characteristics of each country including on its population size, GDP growth rate, inflation rate, level of democracy, and the presence of natural resources.

[9] For example, we do not include Abass Bonfoh as leader of the government of Togo because he came into power as the result of Gnassingbe Eyadema's death in 2005 and because the constitution did not allow him to stay or compete in the subsequent election to replace Eyadema.

4.1 Dependent variable

Our dependent variable is FDI net inflows, measured, as defined by the World Bank, as the value of inward investment to a host country made to acquire a lasting interest by a foreign firm principally operating outside the host country's economy. FDI net inflows are measured as the level of FDI net inflows each year into a country.

4.2 Independent variables

4.2.1 Longevity of a leader

The longevity of a leader is our main independent variable. It is measured as the length of time (specifically the number of years) in power since the leader's accession to his (or her) position of authority. The first year in which a new leader comes into power is coded as the baseline year and longevity takes the value of zero; for the next year, longevity increases by one unit, and so on. If a leader spends more than six months in the baseline year, longevity takes the value of one for this particular leader. The longevity of a country's leader is a variable for each leader in each country and is manually collected from various internet-based sources and from the Organization of African Unity member states. We do not take this variable from Polity IV because this source considers only regime change and because the leader of a country can change without the regime (whether democratic or autocratic) changing.

4.2.2 Other control variables

Based on the literature on the main determinants of FDI, we control for countries' principal characteristics including population size, one-year lags of economic growth rate and inflation rate, and natural resources.[10] These variables are collected from the World Bank Indicators. We also

[10] We control for variables that are clearly exogenous with respect to FDI net inflows. It is well known that FDI at

control for leaders' characteristics such as whether he belongs to a majority ethnic group, whether he was elected to office through a competitive electoral contest, and whether he was or is the first president[11] of the country. We also include age because it might predict longevity and the ability to attract investors (for instance, a president who is too tired because of his age might have a limited ability to attract investors). We also control for the average level of conflict in the neighboring countries of a country. The reason for this approach is that conflict in neighboring countries may induce foreign investors in those countries to move their investment into the host country if the latter is peaceful. The definitions of the different variables that we use in the analysis can be found in the appendix.[12]

4.3 Identification strategies

We use several identification strategies to estimate the causal effect of political longevity on FDI net inflows. Our baseline model is ordinary least-squares regressions (see Section 5.1 below). However, as discussed in the Introduction (see also Section 5.2 below), OLS regressions might suffer from potential endogeneity issues. In order to address this limitation, we use an instrumental variables approach (see Section 5.2). For robustness checks, we also use the Generalized Moments Methods (Section 5.3) and the 3SLS estimation technique (Section 5.4), fully accounting for any potential endogeneity between political longevity and FDI net inflows. Each of these estimation strategies and its resulting findings are presented in the following sections.

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time t might affect growth rate and inflation rate at time t. For this reason, we control for growth rate and inflation rate at time t-1.

[11] Throughout the paper, the terms "leader" and "president" are used interchangeably. Note that this use of terminology is not always entirely accurate as certain countries' head of government is not a president but a prime minister. By a leader, we mean a person who detains the executive power. Most countries that have a prime minister as head of government do have a president who is the head of state but who is mostly if not entirely ceremonial (or a monarch in the equivalent role). Examples include Israel and Germany.

[12] Remark that we do not control for regime type (democracy or autocracy). The reason for this approach is that this variable is likely to be endogenous to some of the exogenous control variables (e.g., natural resources). In Section 6, we control for regime type while addressing the potential endogeneity issue associated with this variable, and we examine how it interacts with political longevity to determine FDI inflows.

5. Methods and findings

5.1 OLS regressions

We estimate the linear regression model described below using panel data from the period 1960-2011:

$$FDI_{ilt} = \alpha DA_{ilt} + \beta C_{ilt} + \delta K_{ilt-1} + \gamma L_{ilt} + \pi_i + \mu_t + \theta_l + \varepsilon_{ilt} \qquad (1)$$

Where FDI_{ilt} denotes FDI net inflows into country i, under leader l, in year t; DA_{ilt} is the longevity of country i's leader l in year t, which measures the number of years that the leader has spent in power at time t. Our main parameter of interest is the coefficient α, which measures the amount of FDI inflows into country i caused by leader l spending an additional year in power. C_{ilt} denotes country i's characteristics at time t (population size, average level of conflicts in neighboring countries, and amount of natural resources) that we control, and K_{ilt-1} denote country i's characteristics at time t-1 (one-year lags of growth rate and inflation rate) that we control. L_{ilt} measures leader l's personal characteristics at time t (age and binary variables indicating affiliation with a majority ethnic group, whether the leader is the independence leader, and whether the leader came to power through an election) that may affect the decision of investors to invest in his country. π_i indicates a full set of country fixed effects; this control takes into account all other unobserved country-level time-invariant variables. μ_t represents a set of year fixed effects; this control captures any common shocks to the FDI inflows of all countries. θ_l captures unobserved leader-level variables that may affect FDI, such as a leader's ability to attract foreign investors into his country. Finally, ε_{ilt} is an error term that represents all other omitted variables.

We estimate equation 1 using ordinary least-squares regressions and report the results in Table 2. We present the results of three model specifications. Model 1 includes our core independent variable, which is political longevity. We also control for country population size. Model 2 includes

all of the control variables including country and leader characteristic variables, as well as leader fixed effects. This model therefore drops time-invariant variables such as whether a leader belongs to a majority ethnic group. Model 3 includes all of the controls except for leader fixed effects. As a result, time-invariant variables are included in the controls. In all of the models we control for year and country fixed effects.

We find in all of the models that the longevity of a host country leader is positively related to FDI inflows and that its effect is statistically significant. For example, according to Model 1, leaders who last one more year in power increase FDI inflows by 0.182 billion U.S. dollars. This estimate is 0.224 billion U.S. dollars in Model 2 and 0.199 billion U.S. dollars in Model 3. Thus, the estimated effect of political longevity is quite stable across all three models.

This result is consistent with the fact that political longevity is considered by foreign investors to signal political stability (defined as a lower probability of political turnover), policy consistency, the commitment of the leader to secure multinational firms' property rights, and greater ease of networking with members of the regime. This finding is consistent with the argument that leaders who expect a long period in power are less likely to expropriate foreign firms because the long-term benefit of having those foreign firms is higher than the short-term benefit of expropriation, and may encourage investors in host countries (Li, 2006). Finally, as we show later, the longevity of leaders promotes a high level of institutional quality, strong infrastructure, and the rule of law, all of which have been empirically shown to positively affect FDI.

The effects of other control variables are interesting in their own right. Population size has a positive and significant impact on FDI. This is consistent with Resmini (2000) and Bevan and Estrin (2000) who find that countries with large populations have higher FDI. We find that natural resources have a positive and significant impact on FDI, which suggests that multinational firms are more likely to

invest in a host country that has significant natural resources. We also find that both the status of being the first president of the country and his or her age have a negative and significant impact on FDI. However, we do not find that leaders' other characteristics, the one-year lag of growth rate, or the one-year lag of inflation rate have any effect.

5.2 Dynamic models

This section estimates the effect of political longevity on FDI net inflows using dynamic models. It is motivated by the fact that the ordinary least-squares estimations presented above may have several endogeneity problems. One possible issue is that of omitted variables bias. Such a bias may result from the unobserved ability of a leader to increase simultaneously both FDI inflows and his longevity in office. A higher-ability leader may be more likely to manipulate the people to stay in power. He may also exploit his ability to attract foreign investors. Not controlling for this unobserved variable (aptitude at persuasion) may lead to a downward bias in the OLS estimates. If we assume that ability is time-invariant, then it is controlled through leader fixed effects (as is done in Column (II) of Table 2). But, if ability is time-variant, then leader fixed effects do not help.

Another potential endogeneity issue that our OLS regressions do not deal with is the reverse causality problem. A leader might grant foreign investors special rights such as import licenses and exemptions from high taxes and entry barriers into the host market. Foreign investors in turn might feel that they have an obligation to this leader during elections by financially contributing to his campaign. Even in dictatorial regimes, leaders might receive money from foreign investors to stabilize their power. King (2000) cites Suharto, the second president of Indonesia, as an example of a leader who received financial contributions from two companies aimed at reinforcing the stability of his regime. Choi and Thum (2009) also argue that firms are often forced to support leaders while they are in office. Another way in which FDI might affect political longevity is

through the promotion of economic growth and the reduction of unemployment and poverty. This improvement in economic conditions during a leader's time in office will increase his popularity and hence his probability of remaining in power.

We address these endogeneity issues by using dynamic models. More specifically, we apply two different estimators: the two generalized methods of moment (GMM) estimators proposed by Arellano and Bond (1991) and by Blundell and Bond (1998), respectively. There are two justifications for the use of the GMM models. First, GMM models use the full information accessible in the data to estimate the link between the longevity of leaders and FDI by capturing the influence of lagged FDI inflows on current FDI inflows that the OLS regression above might not be capturing. These models also correct for potential endogeneity and for the reverse causality problem mentioned earlier, together with omitted variable issues. Finally, they correct for the correlation between unobserved heterogeneity (country fixed effects and leader fixed effects) and current FDI.

Both the Arellano-Bond and Blundell-Bond GMM models use the lags of the endogenous variables as instrumental variables. The Arellano-Bond method uses external instrumental variables as additional instruments. We describe these instruments in the next section of the paper.

5.2.1 Blundell-Bond GMM estimates

We estimate the Blundell-Bond GMM as described in the equations below:

$$\mathrm{FDI}_{\mathrm{ilt}} = \alpha \mathrm{DA}_{\mathrm{ilt}} + \beta \mathrm{C}_{\mathrm{ilt}} + \delta K_{\mathrm{ilt-1}} + \gamma \mathrm{L}_{\mathrm{ilt}} + \sum_{\mathrm{j=1}}^{\mathrm{q}} \phi_j \mathrm{FDI}_{\mathrm{il,t-j}} + \pi_{\mathrm{i}} + \mu_{\mathrm{t}} + \theta_{\mathrm{l}} + \varepsilon_{\mathrm{ilt}} \qquad (2)$$

The standard assumption of this dynamic model is:

Condition 2a: $\mathbb{E}(\varepsilon_{\mathrm{ilt}} | C_{ilt}, K_{\mathrm{ilt-1}}, \mathrm{L}_{\mathrm{ilt}}, \ \mathrm{ALNL}_{\mathrm{ilt}}, Z_{ilt}\ , P_{ilt}, FDI_{ilt-1,} \ldots\ldots, FDI_{ilt0}\ \pi_{\mathrm{i}}, \mu_{\mathrm{t}}, \theta_{\mathrm{l}}) = 0.$

This standard condition suggests that the longevity of leaders and previous FDI are uncorrelated with future FDI, and that the error term ε_{ilt} is not serially correlated. The control of the lags of FDI in the dynamic model allows us to remove the residual serial correlation in the error term of equation (2a).

Condition 2b: $\mathrm{Cov}(\mathrm{dFDI}, \pi_i) = 0$ or $\mathrm{Cov}(\mathrm{dFDI}, \theta_l) = 0$ and

$\mathrm{Cov}(\mathrm{dX}, \pi_i) = 0$ or $\mathrm{Cov}(\mathrm{dX}, \theta_l) = 0$, where the vector X represents all of the control variables.

Condition 2b is an additional condition of the Blundell-Bond GMM model. This condition implies that change in the FDI flowing into a country or in any of the control variables is uncorrelated with the characteristics of that country or its leader.

We report the results of the estimation of the Blundell-Bond GMM model in Table 3. The Arellano-Bond GMM estimates are close in magnitude to OLS estimates. We also report the test of over-identification and serial correlation, indicating respectively that there is absence of each

5.2.2 Arellano--Bond GMM with external instruments

For further robustness checks, we estimate the effect of political longevity on FDI net inflows using the Arellano-Bond GMM technique. While the OLS model does not capture the impact of lagged FDI inflows on current FDI inflows, the GMM estimator suggested by Arellano and Bond (1991) remedies this issue by taking first differences and by employing the lags of endogenous variables as instrumental variables in addition to our external instruments described below. However, for first differences, it has been shown by Arellano and Bover (1995) that the lags of endogenous variables are poor instruments. The Blundell-Bond method above solves the issue of poor instruments by adding more set of moment conditions than the Arellano-Bond method. For these reasons, the two methods are complementary.

We use three external instruments. These variables based on the theories of institutional contagion and of the imitation of peers (see, e.g., Leeson & Dean, 2009; Acemoglu et al., 2014). We argue that a leader, based upon his observation of the longevity of the leaders in the neighboring countries, may have an incentive to imitate them. One instrument is, therefore, the average political longevity of the neighboring countries' leaders. The second instrument is a variable measuring the extent to which a leader is close in age to the neighboring countries' leaders. The third instrument is a variable measuring the extent to which a leader is close in age to the leader of the former colonial power.

A) First instrument: The average longevity of neighboring countries' leaders (ALNL)

We construct the variable measuring the average longevity of neighboring countries' leaders as follows. Assume that a country has n neighbors. Then leader l of that country has n neighboring leaders at time t during his term in office. Thus, ALNL at time t is measured as follows:

$$\mathrm{ALNL}_{\mathrm{lt}} = \frac{1}{\mathrm{n}} \sum_{\mathrm{i}=0}^{\mathrm{n}} \mathrm{LNL}_{\mathrm{it}},$$

where $\mathrm{LNL}_{\mathrm{it}}$ is the longevity of neighboring leader i at time t.

We assume that the average longevity of neighboring leaders affects a leader's longevity but does not directly impact the decision of investors to invest in his country. For example, the longevity of Equatorial Guinea's President Teodoro Obiang Nguema Mbasogo will not affect the decision of foreign investors to invest in Gabon, though it might affect Gabon's President Ali Bongo's decision to prolong his period in power. A change of a country's constitution that allows its leader to remain in power might have a spillover effect, as it may give an incentive to the leaders of neighboring countries to do the same. As an illustration, Pierre Nkurunziza, the President of Burundi, in a conference with Radio France Internationale journalists, was asked whether he will run again for

president during the presidential election that will take place in 2020. One might think that this question is irrelevant since the current constitution does not allow him to seek another term. However, in responding to the question, he said the following:[13]

> You remember that I had announced that I would not represent myself in 2020. That's right I had announced it in accordance with a court decision. But the courts are not above the people or above the Constitution. If the people allow someone to represent themselves, if the people ask, then I will not betray their confidence. … In Cameroon, Paul Biya is in 50 years of presidency, and in neighboring Rwanda, the mandates are changed as desired. The question of the mandate is not the main problem of the Burundians. You, the people, can decide to change the Constitution, to blow up the lock of the two mandates. But if you decide that I do not have to start doing that, then I will not impose myself.

This response of Pierre Nkurunziza makes it evident that a leader's decision to prolong his period in power has a clear influence on the decisions of his neighbors. Similarly, revolutionary activity that brings down a leader may inspire the populations of neighboring countries to launch their own revolution, as evidenced by the 2011 Arab Spring. Leeson and Dean (2009) empirically study the democratic domino theory and find that an increase in democracy in one country tends to spread to the neighboring countries. Our approach to using the average longevity of neighboring leaders as an instrument for the longevity of a leader is similar to Acemoglu et al. (2014) who instrument the level of democracy within a country using the average level of democracy achieved by the other countries in the same region.

B) Second instrument: Age-proximity with neighboring leaders

[13] See http://lcclc.info/index.php/2017/01/02/burundi-pierre-nkurunziza-in-cameroon-paul-biya-is-at-50-years-of-presidency/

Our second instrument is a variable measuring how close a leader is in age to the neighboring leaders. The assumption behind this instrument is that age-related peers (or age-mates) are likely to copy one another and thus to have correlated behaviors. If proximity in age leads to more cooperation among neighboring leaders, then this could lead to these leaders increasing their longevity in power. On the other hand, proximity in age can also lead to more competition. Liu and Lafreniere (2014) find that individuals in the same age group are more likely to compete against one another for scarce resources. Therefore, to the extent that regional leadership qualifies as a scarce resource, age proximity among neighboring leaders can lead to more competition, which might negatively affect their longevity in power. We construct age-proximity as follows:

$$Z_{ilt} = 1 - \frac{|\text{age}_{ilt} - \text{Average age neighbor}_{ilt}|}{\text{age}_{ilt} + \text{Average age neighbor}_{ilt}}$$

where age_{ilt} is the age of country i's leader at time t and $\text{Average age neighbor}_{ilt}$ is the average age of country i's neighboring leaders (its calculation excludes the age of country i's leader). Notice that this construction takes into account the fact that two individuals tend to become socially closer with one another as they age, regardless of their respective ages. More specifically, if the age difference between two individuals is 10 years, these individuals may not be friends (or competitors) when one is one year old and the other is 11 years old, but the likelihood of them becoming friends (or competitors) will increase as they reach 50 and 60, respectively. Similarly, two neighboring leaders might not have any relationship at all when they newly come to power, but the likelihood of them developing a friendly or adversarial relationship is likely to increase as they spend more years in power. While we argue that proximity in age of a leader to neighboring leaders can positively or negatively affect the leader's longevity, our identifying assumption is that this does not affect FDI inflows into his country.

C) Third instrument: Age-proximity with the president of the former colonial power

Our third instrument is the extent to which a leader is close in age to the leader of the former colonial power. It is constructed as follows:

$$P_{ilt} = 1 - \frac{|age_{ilt} - \text{Colonizer age}_{ilt}|}{age_{ilt} + \text{Colonizer age}_{ilt}}$$

where age_{ilt} is the age of country i's leader at time t and $\text{colonizer age}_{ilt}$ is the age of the leader of the formal colonial power at time t. Here, we argue that such proximity can lead to more cooperation or to more competition; while friendship can develop naturally due to age proximity, an adversarial relationship arising, for instance, from the leader of the former colonial power trying to control the natural resources of the former colony can also develop.

Table A-1 in the appendix shows the effects of these instruments on political longevity. It shows that the average longevity of neighboring leaders positively affects a leader's longevity, which is consistent with the domino effect (Leeson & Dean, 2009; Acemoglu et al., 2014). We also find that age proximity with the leader of the former colonial power has a positive effect on longevity. On the other hand, age proximity with neighboring leaders has a negative effect on longevity, suggesting that competition dominates cooperation among leaders who are closed in age.

We report the results of the estimation of the Blundell-Bond GMM model in Table 4. The estimates are very similar to the estimates obtained using the Arellano-Bond GMM technique and they are also close to OLS estimates. This result perhaps suggests that the external instruments were not needed.

5.3 A simultaneous equations approach (3SLS)

We use the simultaneous equations approach to directly address the possibility of FDI inflows affecting the longevity of a leader. We estimate equations 3 and 4 as follows:

$$FDI_{ilt} = \alpha DA_{ilt} + \beta C_{ilt} + \delta K_{ilt-1} + \gamma L_{ilt} + \pi_i + \mu_t + \theta_l + \varepsilon_{ilt} \quad (3)$$

$$DA_{ilt} = \theta FDI_{ilt} + \vartheta C_{ilt} + \lambda K_{ilt-1} + \tau L_{ilt} + \varphi ALNL_{ilt} + \omega Z_{ilt} + \rho L_{ilt} + \eta_i + \zeta_t + \xi_l + \varrho_{ilt}. \quad (4)$$

Estimating these equations separately can cause inconsistency in our estimates due to potential cross-correlation in the residuals. We therefore estimate them simultaneously using the 3SLS method. We identify these equations using a seemingly unrelated regression (SUR); this latter model assumes that the only source of simultaneity between FDI and political longevity is captured by the unobserved error terms ε_{ilt} and ϱ_{ilt}.

In these two equations all variables are the same except for the addition of the average longevity of neighboring leaders ($ALNL_{ilt}$) and the variables measuring age proximity (Z_{ilt} and L_{ilt}) in equation 5. The coefficients α and θ account for any contemporaneous feedback between the longevity of a leader and FDI net inflows. Note that our main parameter of interest is α, which is the parameter that we firmly identify with the help of the same instrumental variables used in the 2SLS regressions.

The 3SLS (or SUR) results are presented in Table 5. In Columns (I) and (II) we control only for population while in Columns (III) and (IV) we include all control variables, as well as year and leader fixed effects. In columns (V) and (VI), we remove the leader fixed effect and add the country fixed effect. The results remain close to those found using OLS. Additionally, we find that FDI inflows positively affect political longevity, suggesting that leaders gain politically from the effect of FDI on the economy.

6. The interaction between political longevity and democracy

Does our finding that political longevity increases FDI inflows into African countries imply that a leader should remain in power indefinitely? In this section, we identify one condition under which political longevity positively affects FDI inflows. In particular, we examine whether the effect of longevity varies according to the nature (democratic versus autocratic) of the political regime. The level of democracy of political institutions varies widely across countries. Some countries have a well-functioning democratic system while other countries are autocratic. We estimate the effect of the interaction term between longevity and democracy, which captures the additional effect that political longevity has on FDI inflows in democratic countries. We estimate this effect OLS and the Arellano-Bond and Blundell-Bond GMM techniques. The results are reported in Table 6. For each estimation method, Column (I) only controls for longevity, democracy, and all of the other controls, and Column (II) controls for the interaction term between longevity and democracy in addition to all the controls in Column (I). Because we treat democracy and longevity as endogenous variables, their interaction term should also be endogenous. We use the GMM methods to deal with these endogeneity issues. Inspired by Leeson and Dean (2009) and by Acemoglu et al. (2014), we instrument democracy using the average level of democracy reached by neighboring countries. We instrument the interaction term between democracy and longevity using the interaction terms between each of the instrument of longevity and the instrument of democracy.

We find a positive and statistically significant effect of the interaction term between longevity and democracy on FDI. Longevity in power has a positive effect on FDI in non-democratic regimes, but this effect is generally statistically insignificant. A natural conclusion from these findings is that foreign investors are more likely to value political longevity in a country if the country is more democratic. These findings are consistent with our initial hypothesis that political longevity could have two opposite effects. A bit of longevity is positive because it provides stability, but too much of it is negative because it may lead to effective dictatorships. This explains the positive effect of

the interaction between longevity and democracy. In results not shown here, we reach a similar conclusion by estimating the effect of longevity while controlling for its quadratic term. But the two variables taken together are highly correlated, which leads to unstable coefficients.

Quite interestingly, all specifications in which democracy is interacted with political longevity show that democracy has very little effect on FDI inflows at very low levels of political longevity. This means that democracy does not matter for foreign investors when a leader is too new in power. This finding suggests that foreign investors value democracy only when political stability and policy consistency are guaranteed.

7. Mechanism

We show that the political longevity of leaders increases FDI inflows, especially in democratic regimes, and that democracy itself has no effect when a leader is too new in power. The question that then arises is why investors should care about leaders' longevity when making investment decisions. Possible answers to this question are discussed in our conceptual framework (Section 3). We argue that lower rates of leader turnover indicate not just political stability but also policy consistency. We also argue that a long-term leader might be more likely to commit to the protection of foreign assets. Such a leader therefore might be more credible in the eyes of foreign investors. It is also possible that political longevity positively affects FDI because it gives leaders the necessary time to improve physical infrastructure, institution quality, and political stability. These factors have been shown to positively affect FDI inflows (Biglaiser & Staats, 2010; Asiedu, 2005).

We test these possible channels in this section. We estimate the effect of political longevity on institutional variables as well as on physical infrastructure. The institutional variables that we analyze are the following: rule of law, corruption, property rights, and the level of bureaucracy. To measure physical infrastructure development, we use the number of fixed telephone lines per 100

people. We estimate the effect of political longevity on these variables using OLS regressions. The results are reported in Table 7. The country and year fixed effects and the leader fixed effect are controlled in even-number columns but we exclude the leader fixed effect in odd-number columns. We find that longevity improves the rule of law and the level of bureaucracy, reduces corruption, and promotes property rights when a leader's unobserved characteristics (such as his ability) are not controlled. But, when these characteristics are controlled using leader fixed effect, longevity only improves the rule of law and physical infrastructure and reduces corruption.

These results are consistent with Korschgen et al. (2011) who argue that significant changes in institutions do not happen in just one or two years. They find that the average duration required for a leader (not necessarily a political leader) to make a significant change in an institution is 13 years, which is roughly equal to the duration of two mandates in certain countries (as in France where, until the year 2000, the duration of a presidential term was seven years). Our data, however, shows that the average duration of leaders in Africa is 18 years, which is longer than 13 years. Korschgen et al. (2011) also argue that long-term leaders are more adept at confronting institutional problems and at making sound decisions. They have enough time in which to build a powerful leadership team and to develop strong relationships with legislators in order to bring their policies to fruition.

Conclusion

This paper analyzes the impact of political longevity on FDI inflows using a novel panel dataset on African leaders. Using a variety of estimation techniques, we show that one additional year in power of a country's leader increases FDI net inflows. The effect of political longevity is remarkably stable across the different estimation models, which perhaps suggests that the use of external instrumental variables is not necessary. Interestingly, the positive effect of political longevity is larger in regimes that are more democratic. Nevertheless, democracy has no independent effect on FDI inflows when a leader is too new in power. Its effect is positive only when the longevity of the extant leader is sufficiently high, which suggests that foreign investors value democracy only when political

stability and policy consistency are guaranteed. Our examination of the mechanism through which political longevity affects foreign investment reveals that longevity gives leaders the opportunity to improve both the rule of law and the quality of physical infrastructure and to fight corruption.

References

Abed, G. T., & Davoodi, H. (2002). *Corruption, structural reforms, and economic performance in the transition economies. governance, corruption, & economic performance*. Washington, D.C.: International Monetary Fund, Publication Services.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). *Institutions as fundamental cause of long-run growth. handbook of economic growth* (Vol. 1A). Amsterdam, The Netherlands: Elsevier.

Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, J. A. (2017). Democracy does cause growth. *Journal of Political Economy*, forthcoming.

Alesina, A., & Perotti, R. (1996). Income distribution, political instability, and investment. *European Economic Review, 40*(6), 1203–1228.

Amutabi, M. T., & Nasong'o, S. (2012). *Regime change and succession politics in Africa: Five decades of misrule*. New York: Routledge.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277–297.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics, 68*(1), 29–51.

Asiedu, E. (2005). Foreign Direct Investment in Africa: The role of natural resources, market size, government policy, institutions and political instability. *World Economy, 29*(1), 63–77.

Asiedu, E., & Lien, D. (2011). Democracy, foreign direct investment and natural resources. *Journal of International Economics, 84*(1), 99–111.

Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth in EP and IS countries. *The Economic Journal, 106*(434), 92–105.

Barro, R. J. (1996). *Inequality, growth, and investment*. National Bureau of Economic Research, w7038.

Bevan, A. A., & Estrin, S. (2000). *The determinants of foreign direct investment in transition economies* (Working Paper No. 342). Ann Arbor, MI: University of Michigan, William Davidson Institute.

Biglaiser, G., & Staats, J. L. (2010). Do political institutions affect foreign direct investment: A survey of U.S. corporations in Latin America. *Political Research Quarterly, 63*(3), 508–522.

Blomström, M., Lipsey, R., & Zejan, M. (1996). Is fixed investment the key to economic growth? *The Quarterly Journal of Economics, 111*(1), 269–276.

Blomström, M., & Kokko, A. (1998). Multinational corporations and spillovers. *Journal of Economic Surveys, 12*(3), 247–277.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87*(1), 115–143.

Borensztein, E., De Gregorio, J., & Lee, J.-W. (1998). How does foreign direct investment affect economic growth? *The Journal of International Economics, 45*(1), 115–135.

Braton, M. M., & Van de Walle, N. (1997). *Democratic experiments in Africa: Regime transition in comparative perspective*. London: UK: Cambridge University Press.

Bueno de Mesquita, B., Alastair, S., Randolph, S., & James, M. (2003). *The logic of political survival*. Cambridge, MA: MIT Press.

Busse, M., & Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy, 23*(2), 397–415.

Choi, J. P., & Thum, M. (2009). The economics of politically-connected firms. *International Tax Public Finance, 16*, 605–620.

Dunning, J. H. (1988). *Explaining international production*. London, UK: Unwin-Hyman.

Faccio, M. (2006). Politically connected firms. *The American Economic Review, 96*(1), 369–386.

Hayes, J. (2009). Identity and securitization in the democratic peace: The United States and the divergence of response to India and Iran's nuclear programs. *International Studies Quarterly, 53*(4), 977–999.

Hiscox, M. J. (2002). Commerce, coalitions, and factor Mobility: Evidence from Congressional votes on trade legislation. *American Political Science Review, 29*(3), 21–40.

Hodder-Williams, R. (1984). *An introduction to the politics of tropical Africa*. London, UK: George Allen and Unwin.

Huntington, S. P. (1973). *Political order in changing societies*. New Haven, CT: Yale University Press.

King, D. Y. (2000). Corruption in Indonesia a curable cancer? *Journal of International Affairs, 53*(2), 604–612.

Korschgen, A., Fuller, R., & Gardner, J. (2001). *The impact of presidential migration: Raising questions about presidential tenure in higher education*. AAHE Bulletin. Retrieved from http://www.aahea.org/articles/migration.htm

Leeson, P. T., & Dean, A. M. (2009). The democratic domino theory: An empirical investigation. *American Journal of Political Science, 53*(3), 533–551.

Li, Q. (2009). Democracy, autocracy, and expropriation of foreign direct investment. *Comparative Political Studies, 42*(8), 1098–1127.

Li, Q. (2006). Democracy, autocracy, and tax incentives to foreign direct investors: A cross national analysis. *Journal of Politics, 68*(1), 62–74.

Li, Q., & Resnick, A. (2003). Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries. *International Organization, 57*(1), 175–211.

Liu, C., & LaFreniere, P. (2014). The effects of age-mixing on peer cooperation and competition. *Human Ethology Bulletin, 29*(1), 4–17.

Nieman, M. D., & Thies, C. G. (2014). *Democracy, property rights, and foreign direct investment* (working paper). Iowa City, IA: University of Iowa.

O'Donnell, G. (1978). Reflections on the patterns of change in the bureaucratic authoritarian state. *Latin American Research Review, 13*(1), 3–38.

Oneal, J. R. (1994). The affinity of foreign investors for authoritarian regimes. *Political Research Quarterly, 47*(3), 567–588.

Resmini, L. (2000). The determinants of foreign direct investment into the CEECs: New evidence from sectoral patterns. *The Economics of Transition, 8*(3), 665–689.

Schudel, C. J. (2010). *Corruption and foreign direct investment: A dyadic analysis of source and host country effects*. Paper presented at the annual meeting of the Midwest Political Science Association 67th Annual National Conference. Retrieved from http://www.allacademic.com/meta/p362660 index.html

Wei, S. J. (1997). *Why is corruption so much more taxing than taxes? Arbitrariness kills*. National Bureau of Economic Research Working Paper, No. 6255.

Wei, S. J. (2000). How taxing is corruption on international investors? *Review of Economics and Statistics, 82*(1), 1–11.

Table 1: Descriptive statistics

Variables	N	Mean	Std. deviation
FDI (US$ billion)	1,157	2.535	9.693
Longevity	2,106	8.991	7.992
Population (millions)	2,251	17.6	18.19
Conflict in neighboring countries	2,392	0.0476	0.138
Age	2,106	55.54	12.78
Independence president	2,106	0.302	0.459
Majority ethnic group	2,037	0.577	0.494
Elected leader	2,392	0.994	0.0763
Democracy	2,392	0.204	0.403
Lag of growth	1,941	3.875	7.138
Lag of inflation	1,537	28.31	623.4
Natural resources	1,651	8.583	12.27
ALNL	2,190	8.345	5.803
Age-proximity to neighboring leaders	2,093	0.900	0.0900
Age-proximity to former colonial leader	2,101	0.128	0.0901

Country-level variables: FDI is the net inflows in current US$; population is the total number of people measured in millions; inflation is based on annual CPI; growth is annual GDP growth; natural resources is total natural resources per GDP; democracy is a binary variable indicating whether or not a country is democratic; and conflict in neighboring countries is the average level of conflict in the neighboring countries of a country (this variable is an index variable based on such conflicts as civil wars, international conflicts, religious conflicts, and ethnic conflicts).

Leader-level variables: The longevity of a leader is the number of years that the leader has spent in office (remark that the mean of this variable is 8.99 years, which is much smaller than the average longevity of 18 years in a cross-sectional dataset of all the African leaders); age is the age of leader; majority ethnic group indicates if a leader is from a majority ethnic group; independence president indicates if a leader is the first president of the country following its independence; ALNL is the average longevity of the leaders of the neighboring countries; age-proximity to neighboring leaders measures how close a leader's age is to that of the neighboring leaders; age-proximity to the leader of the former colonial power measures how close in age a leader is to the current leader of the former colonial power.

Table 2: The effect of political longevity on FDI

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
Longevity	0.182**	0.224**	0.199***
	(0.0708)	(0.0941)	(0.0667)
Population	0.725***	0.706***	0.778***
	(0.161)	(0.168)	(0.0974)
Conflict in neighboring countries		1.252	1.954*
		(0.981)	(1.063)
Majority ethnic group			0.247
			(1.269)
Elected leader			-1.744
			(1.423)
Age		-1.603	-0.0854*
		(1.449)	(0.0446)
Independence president			-2.620**
			(1.282)
Lag of growth		0.0256	0.0183
		(0.0283)	(0.0340)
Lag of inflation		-0.0113	-0.0181
		(0.0124)	(0.0112)
Natural resources		0.218***	0.187***
		(0.0679)	(0.0542)
Observations	1,138	906	897
Region FE	NO	YES	YES
Country FE	YES	YES	YES
Year FE	YES	YES	YES
Leader FE	YES	YES	NO

Notes: Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. The Newey-West robust standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent

Table 3: The Blundell-Bond estimation of the effect of longevity on FDI

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
Longevity	0.156*	0.177	0.211**
	(0.0904)	(0.109)	(0.0894)
Population	0.599***	0.579***	0.243***
	(0.200)	(0.169)	(0.0785)
Conflict in neighboring countries		0.941	1.317
		(0.932)	(1.116)
Majority ethnic group			1.523
			(1.176)
Elected leader			-0.886
			(1.881)
Age		2.403***	-0.143*
		(0.728)	(0.0795)
Independence president			-1.111
			(1.798)
Lag growth		0.0201	0.0781*
		(0.0258)	(0.0436)
Lag inflation		-0.00522	-0.0194
		(0.0164)	(0.0160)
Natural resources		0.180*	-0.107
		(0.0999)	(0.119)
Hansen J test (p-value)	0.460	0.560	0.367
Serial correlation test (p-value)	0.153	0.128	0.146
Observations	1,070	859	851
Regions FE	NO	YES	YES
Country FE	YES	YES	YES
Year FE	YES	YES	YES
Leaders FE	YES	YES	NO

Notes: Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. Robust standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.

Table 4: The Arellano-Bond estimation of the effect of longevity on FDI

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
Longevity	0.138	0.186*	0.220**
	(0.0930)	(0.106)	(0.103)
Population	0.600***	0.617***	0.556***
	(0.0902)	(0.227)	(0.143)
Conflict in neighboring countries		0.924	1.885
		(0.857)	(1.164)
Majority ethnic group			0.617
			(1.364)
Elected leader			-1.427
			(1.298)
Age		2.767***	-0.127
		(0.890)	(0.0907)
Independence president			-2.505*
			(1.326)
Lag growth		0.0216	0.0321
		(0.0230)	(0.0310)
Lag inflation		0.00102	-0.00486
		(0.0139)	(0.0129)
Natural resources		0.182*	0.123
		(0.104)	(0.0898)
Hansen test (p-value)	0.381	0.445	0.107
Serial correlation test (p-value)	0.097	0.07	0.08
Observations	1,005	801	795
Region FE	NO	YES	YES
Country FE	YES	YES	YES
Year FE	YES	YES	YES
Leaders FE	YES	YES	NO

Notes: Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. Robust standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.

Table 5: 3SLS (SUR) estimation of longevity of leaders on FDI

VARIABLES	(1) FDI	(2) Longevity	(3) FDI	(4) longevity	(5) FDI	(6) Longevity
Longevity	0.355***		0.431***		0.387***	
	(0.0735)		(0.0907)		(0.0518)	
FDI		0.0487***		0.0448***		0.148***
		(0.0117)		(0.0117)		(0.0207)
Population	0.763***	-0.270***	0.755***	-0.275***	0.795***	-0.185***
	(0.0691)	(0.0281)	(0.0805)	(0.0289)	(0.0558)	(0.0385)
Conflict in neighboring countries			1.461	-1.115	1.744	0.801
			(2.280)	(0.803)	(2.342)	(1.474)
Age			-0.556	-3.850**	-0.131***	0.220***
			(4.375)	(1.545)	(0.0417)	(0.0269)
Lag growth			0.0314	-0.0197	0.0248	-0.0416
			(0.0552)	(0.0195)	(0.0564)	(0.0353)
Lag inflation			-0.00972	-0.00214	-0.0191	0.0153
			(0.0237)	(0.00841)	(0.0222)	(0.0140)
Natural resources			0.223***	-0.0528**	0.199***	-0.106***
			(0.0660)	(0.0237)	(0.0619)	(0.0390)
Majority ethnic group					0.353	-0.115
					(0.859)	(0.548)
Elected leader					-3.134	7.775**
					(4.901)	(3.060)
Independence president					-4.787***	11.81***
					(1.674)	(0.999)
ALNL		0.118***		0.171***		0.151***
		(0.0219)		(0.0257)		(0.0406)
Age-proximity to neighboring leaders		-1.691		-5.988**		-4.986*
		(2.231)		(2.602)		(2.773)
Age-proximity to former colonial leader		5.396***		3.770**		-9.807***
		(1.627)		(1.815)		(2.843)
Observations	1,138	1,138	906	906	897	897
R-squared	0.536	0.909	0.523	0.917	0.449	0.694
Region FE	NO	NO	YES	YES	YES	YES
Country FE	NO	NO	NO	NO	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Leaders FE	YES	YES	YES	YES	NO	NO

Notes: The table reports the estimates of the longevity of leaders on FDI using 3SLS (seemingly unrelated regression estimator). 3SLS simultaneously estimates two equations. The first equation regresses FDI on longevity and the second equation regresses longevity on FDI. The instruments for longevity are ALNL (the average longevity of the leaders of neighboring countries), age-proximity to neighboring leaders, and age-proximity to the former colonial leader. Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. The standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.

Table 7: The effect of the interaction between democracy and longevity on FDI

VARIABLES	(1) OLS	(2) OLS	(5) Arellano-Bond	(6) Arellano-Bond	(7) Blundell-Bond	(8) Blundell-Bond
Longevity	0.198**	0.0984	0.171*	0.104	0.155	0.0744
	(0.0858)	(0.0840)	(0.0989)	(0.0899)	(0.0978)	(0.0900)
Democracy	2.157**	-1.390	1.730**	-1.042	1.845**	-0.278
	(1.026)	(1.063)	(0.836)	(1.167)	(0.864)	(1.399)
Longevity X Democracy		**0.254*** **		**0.202** **		**0.183** **
		(0.0720)		(0.0922)		(0.0837)
Hansen J test (p-value)			0.498	0.730	0.300	0.180
Serial correlation (p-value)			0.245	0.120	0.250	0.210
Observations	906	906	794	794	859	859
Leader characteristics controls	YES	YES	YES	YES	YES	YES
Country characteristics controls	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Leaders FE	YES	YES	YES	YES	YES	YES

Note: Leader characteristics controls include majority ethnic group, age, elected leader, and independence president; country characteristics controls include population, conflict in neighboring countries, lag of growth, lag of inflation, and natural resources. Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. Robust standard errors are in parentheses (standard errors for OLS are the Newey-West robust standard errors). *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.

Table 8: Mechanisms: OLS estimates of the impact of longevity on institutions and infrastructure

VARIABLES	(1) Rule of law	(2) Rule of law	(3) Corruption	(4) Corruption	(5) Property rights	(6) Property rights	(7) Bureaucracy	(8) Bureaucracy	(9) Log telephone	(10) Log telephone
Longevity	0.0258***	0.0206**	-0.0127***	-0.00805**	0.0149***	0.00349	0.00578***	0.00341	0.00822***	0.0102***
	(0.00432)	(0.00950)	(0.00380)	(0.00321)	(0.00495)	(0.00756)	(0.00221)	(0.00422)	(0.00185)	(0.00376)
Majority ethnic group	-0.0866		-0.378***		-0.425***		-0.0993***		-0.131***	
	(0.0645)		(0.0664)		(0.0801)		(0.0271)		(0.0393)	
Elected leader	0.462**		0.194		0.209		-0.129		0.0689	
	(0.196)		(0.193)		(0.273)		(0.158)		(0.108)	
Age	0.00223	0.0102	0.0125***	0.0548***	0.0135***	-0.0251	-0.00352*	-0.00598	-0.000762	-0.136*
	(0.00333)	(0.0243)	(0.00358)	(0.0108)	(0.00431)	(0.0240)	(0.00194)	(0.0104)	(0.00140)	(0.0703)
Independence president	-0.937***		-0.135		-0.892***		-0.0913		-0.0196	
	(0.154)		(0.137)		(0.179)		(0.0620)		(0.0529)	
Observations	902	949	902	949	899	944	902	949	1,542	1,597
Regions FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Leaders FE	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES

Notes: Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. The Newey-west robust standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.

Appendix 1: Definitions of the variables and sources

Country-level variables

FDI net inflows = foreign direct investment net inflows provided by World Bank Indicators
Growth = GDP growth rate provided by World Bank Indicators
Inflation rate = consumer price index provided by World Bank Indicators
Democracy = a dummy variable that takes on value 1 if the variable "democratic accountability," measured on a 6-point scale and provided by PRS/ICRG, is strictly greater than 3 and is otherwise value 0
Corruption = corruption accountability provided by World Bank Indicators
Population = the population size of the host country provided by World Bank Indicators
Natural resources provided by World Bank Indicators. Natural resources are measured in US dollars.
Conflict in neighboring countries = the average level of conflict in the neighboring countries of a country. The measure of conflict in a country is provided by the World Bank.

Leader-level variables

Longevity of a leader = the number of years that the leaders has spent in power; information on this variable has been collected from various websites.
Majority ethnic group = binary variable indicating if a leader is from a majority ethnic group; we collected data from various sources on the ethnic affiliation of each leader, and used this information in combination with information on the share of each ethnic group in the country to generate this variable.
Age = the age of a leader; information on this variable was collected from various online sources.
Elected leader = a binary variable for whether a leader came to power following a democratic election.
Independence President = a binary variable indicating whether a leader is the first leader of the country following its achievement of independence.
ALNL = The average longevity of the neighboring leaders of a leader is explained in the text.
Age-proximity to neighboring leaders = a measure of how close in age a leader is to his neighboring leaders; its computation is explained in the text.
Age-proximity to the former colonial leader = a measure of how close in age a leader is to the leader of the former colonizer of his country.

Table A-1: OLS estimates of the effects of the instruments on political longevity

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
ALNL	0.123***	0.177***	0.169***
	(0.0386)	(0.0513)	(0.0496)
Age-proximity to the neighboring leaders	-1.853	-6.243**	-5.706*
	(2.503)	(2.954)	(3.350)
Age-proximity to the former colonial leader	5.501***	3.896*	-10.182***
	(1.844)	(2.119)	(3.430)
Observations	1,121	892	897
Controls	YES	YES	YES
Region FE	NO	YES	YES
Country FE	YES	YES	YES
Year FE	YES	YES	YES
Leader FE	YES	YES	NO

Note: ALNL is the average longevity of the leaders of the neighboring countries; age-proximity to the neighboring leader measures how close a leader's age is to that of the neighboring leaders; age-proximity to the former colonial leader measures how close in age a leader is to the current leader of the former colonial power. Only population is controlled in Model 1. Model 2 controls for all the country-level variables as well as for leader and year fixed effects. Model 3 controls for all of the variables in Model 2 with the exception of the leader fixed effect. Region FE (fixed effect) includes dummies for West Africa, North Africa, Central Africa, and East Africa. Robust standard errors are in parentheses. *** significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.