

# The Return of the *Prodigy* Son: Do Return Migrants make Better Leaders ?

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May 15, 2013

## *Abstract*

This paper investigates the impact of political leaders' migration experiences on the quality of their leadership. We gather information on the personal background of 932 politicians who were at the head of the executive power in a developing country over the 1960-2004 period. We put forward a positive effect of the leader having studied abroad on the level of democracy in his country during his tenure. This effect is shown to be independent from the leader's education level, as well as from his profession. Moreover, it is mainly driven by countries with a poor initial level of democracy. These results are confirmed by various robustness tests. They thus propose a new channel through which migration may affect politics in the sending countries, namely the emergence of the elites.

Key words: political leaders, migration, democracy, developing countries.

*JEL codes:* O11, E02, F22, N40.

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I wish to thank Lisa Chauvet, Paul Collier, David de la Croix, Frédéric Docquier, Flore Gubert, Fabio Mariani, Florian Mayneris, Thierry Verdier and Ekaterina Zhuravskaya for very helpful comments.

# 1 Introduction

Recent as well as ancient history of the world has been marked by some individual personalities who played an important role either in major events (economic, political, cultural, etc.) or in the construction of ideologies and intellectual trends, or both. This in particular the case of certain political figures, such as Joseph Stalin, Felix Houphouët-Boigny or Indira Gandhi. When reaching the highest functions, political leaders become likely to shape the development path of their country, which may have long-run consequences.

Although they may be constrained in their actions through different national mechanisms, such as checks and balances or strong armies, leaders of the executive power undoubtedly play a potentially major role in the political and economic evolution of the country they are at the head of. Jones and Olken (2005) find that individual leaders have had a crucial impact on the growth pattern and policy outcomes of their countries since 1945. Leaders' effects are shown to be more important in autocratic settings, where their actions are less constrained. Thus, leaders have an individual impact on country-level economic and political outcomes. Following this result, one associated question emerges: which individual characteristics of the leaders affect the quality of their leadership, and thus the development outcomes of their country? Besley, Montalvo, and Reynal-Querol (2011) started investigating this issue by studying the impact of leaders' education, and emphasize a positive and significant impact of leaders' educational attainment on growth. In this paper, we take a different direction in two respects: first, we question the impact of leaders' characteristics on the quality of institutions in developing countries, an outcome that has never been directly tested by the literature to date. Second, we specifically document the impact of leaders' migration experience on their country's outcome.

The first contribution of this paper is to build a new database gathering information on the personal characteristics of 932 leaders who were at the head of a developing country between 1960 and 2004. In particular, the data set informs their migration history. Its second contribution is to provide original evidence about one specific channel through which migration may impact politics in the home country: namely, the emergence of political elites.

Anecdotal evidence clearly shows that a lot of leaders in the developing world had a migration experience before reaching power. It is much less clear whether these migration experiences affect the quality of their leadership, and in which direction. Some cases suggest that leaders who lived abroad in their past are prone to promote democracy. For instance, after having realized part of his studies in Russia, Punsalmaagiin Ochirbat led the Mongolian 1990 Democratic Revolution. During the seven following years that he spent in power, he accompanied his country toward the stabilization of democracy. On the contrary, history also

provides instances of autocrats with an experience abroad. This is the case of Saddam Hussein, President of Iraq between 1979 and 2003, who studied in Egypt, or of Bashar al-Assad, President of Syria since 2000, who was trained in ophthalmology in the United Kingdom.

Beyond anecdotal evidence, the literature does not provide a systematic quantitative analysis of the impact of leaders' migration history on the quality of the institutions they lead. This paper aims at filling this gap. Thanks to the data at hand, we assess the effect of different types of migration experiences of the leaders on democracy in their country. While migration *per se* is not found to affect the quality of political institutions, it appears that leaders who studied abroad are associated with higher levels of democracy. We implement various tests that confirm this result. In particular, we show that the positive correlation is not due to specific preferences of democracies which would privilege leaders who studied abroad.

The rest of the paper is organized as follows: next section briefly summarizes the related literature, both regarding the impact of leaders and regarding the effects of migration on politics in the sending country. Section 3 presents the data that were collected for this study. Benchmark results are displayed in Section 4. We investigate two main channels through which these benchmark results could be biased by endogeneity in Sections 5 and 6. Section 7 proposes an extension on the effect of democracy at destination. Robustness tests are presented in Section 8. Finally, Section 9 concludes.

## 2 Literature review

### 2.1 Do decision-makers matter?

The impact of individual decision-makers on aggregate outcomes is an important question in economics. The literature has already tackled this question, as well as the extent and personal determinants of individuals' influence, notably in the frames of firms and of central banks. Focusing on firm heads, Bertrand and Schoar (2003) build an original data set that allows them to track individual managers during their whole career across different firms. Thanks to these data, they are able to estimate the impact of manager fixed-effects on firm-level outcomes, controlling for year fixed-effects as well as firm fixed-effects and firm-level time-varying characteristics. They emphasize an important impact of individual managers on corporate practises and on firms performances. They also show that age and educational background partly explain the observed differences in the manager fixed effects. A few papers have also investigated the impact of central bankers' characteristics. In particular, Adolph (2004) shows that central bankers' career backgrounds affect different outcomes such as inflation or interest rates, as well as declared preferences. In a similar perspective,

Göhlmann and Vaubel (2007) find, in a panel setting, that central bankers have different levels of aversion to inflation depending on their educational and occupational backgrounds.

As well as the characteristics of individual decision-makers may affect aggregate outcomes at the firm and central bank levels, the characteristics of political leaders may shape aggregate outcomes at the country level. This hypothesis is the basis of our paper, and has already been tackled by the economic literature. In a seminal paper, Jones and Olken (2005) examine the change in national leaders as an explanation of growth shifts. They rely on a data set gathering 130 countries over the 1945-2004 period, which represents 1,108 different national leaders for 1,294 distinct leadership periods. Investigating the impact of individual leaders on growth is challenging since it is reasonably arguable that switches in leadership are not random. Growth may in particular be an important determinant of the probability of leader change: for example, in democratic settings, incumbents have been shown to be much more likely to be reelected during economic booms (Fair (1978)). Jones and Olken (2005) rely on an original strategy to assess the causal effect of leadership changes on growth: they identify leaders who died unexpectedly during their tenure, either because of a natural cause or because of an accident, and thus exogenously left power. These cases of leader transitions provide natural experiments to study the impact of leadership changes on economic outcomes: in such cases, the timing of variation in the leadership is argued to be unrelated to underlying economic conditions. Thanks to this identification strategy, they find robust evidence that leaders matter for growth, especially in autocratic settings. Moreover, they push the analysis further by investigating which policies are affected by individual leaders. Their results provide strong evidence that leaders have an impact on monetary policy, while fiscal, trade and security policies do not appear to be clearly affected. Putting forward a causative influence of leaders on economic outcomes, in particular in non democratic settings, this paper paved the way for further investigation on the role of leaders.

Logically following Jones and Olken (2005) results, as well as the literature documenting the impact of firm managers and central bankers, the question of the individual characteristics that affect the quality of leadership emerges. Besley, Montalvo, and Reynal-Querol (2011) go one step further in this direction by investigating the impact of leaders' education. They expand the data set used by Jones and Olken (2005) to 1848, and collect information on education for a core sample of 1,654 leaders in 197 countries. They rely on the same identification strategy as Jones and Olken (2005), and allow leaders' effects to have an heterogeneous impact on growth depending on educational attainment. This allows them to put forward a significant impact of leaders' education on growth: the more educated is the leader who leaves power unexpectedly, the larger is the negative impact on economic growth. In a companion paper, Besley and Reynal-Querol (2011) also

question the process of choice of the leader by investigating the differences in educational attainment between leaders who are selected in democracies and leaders who are selected in autocracies. They find an interesting result: democracies are shown to be more likely to select a highly educated leader. Taken together, these two papers suggest that, on the one hand, democracies select leaders differently regarding their educational background, and on the other hand, this educational background of the leaders drives their ability to affect growth. Education of the leaders is also put under study, together with professional background, by Dreher et al. (2009). This paper employs a panel data set over the 1970-2002 period, which gathers information on more than 500 political leaders from 73 countries, to investigate the impact of leaders' education and occupation on the implementation of market-liberalizing reforms. They find that former entrepreneurs and scientists tend to enhance reforms (measured by the Economic Freedom index from Gwartney, Lawson, and Norton (2008)), while former unionists have the opposite effect. The effect of profession is also shown to depend on the time spent in office: economists seem to be more reform-oriented only after a certain time. To our knowledge, these papers are the only existing statistical studies on the individual characteristics that determine leaders' influence on country-level outcomes, either growth or liberalization reforms.

Focusing on local leaders, Chattopadhyay and Duflo (2004) investigate the impact women's leadership on policy decisions. They rely on a randomized policy experiment which consisted in the reservation of one third of the Indian Village Council head positions for women. They investigate how this random treatment affected the provision and choices of local public goods. They find that political reservation for women in Indian local village councils has induced a better access to public goods which are closely linked to women's concerns, like drinking water. Local leaders' gender thus appears to affect their political choices in this setting. Related to this paper, in a recent work, Persson and Zhuravskaya (2011) study the impact of the personal characteristics of provincial leaders on the provision of local public goods and on rent extraction in China. They build a panel data set for 30 provinces of China over the 1986-2005 period, gathering information on the backgrounds and careers of provincial party secretaries. In particular, they collect information on the different places where provincial leaders worked before reaching this position, which allows them to identify party secretaries who have close ties to the local elites (*local* party secretaries). They show that those *local* party secretaries behave differently in terms of policy choices: namely, they reallocate public expenditure in education and health rather than in investment, provide more local public goods, and tend to extract less rent. Lastly, Franck and Rainer (2012) investigate the impact of leaders' ethnicity on infant mortality and education. Relying on individual data on a panel of 18 African countries, they show that being the coethnic of the political leader is strongly positively correlated with literacy and negatively with infant mortality.

They thus provide new evidence of ethnic favoritism through the individual identity of the leader.

We build on this recent and promising literature on the personal characteristics of decision-makers. Thanks to the collection of original data, we investigate the impact of leaders' migration experiences on the quality of leadership in the developing world over the 1960-2004 period. A second strand of the literature, which assesses the impact of migration on politics in the origin country, justifies asking this question.

## 2.2 The impact of migration on the origin country

The economic literature on migration and politics in the sending country suggests an important interaction between them. Two main approaches developed, respectively on the macro and micro nexus between the different dimensions of migration and political outcomes. On the macro side first, and closely related to the problematic of this paper, Spilimbergo (2009) questions the impact of foreign education on democracy in the home country. Using a panel data set on foreign students starting in the 1950s, he finds that individuals educated abroad have a fostering effect on democracy in their home country, if this education is acquired in democratic countries. The author proposes five potential mechanisms through which education in a more democratic country can positively affect democracy in the origin country.

*“First, foreign-educated “technocrats” [...] can impose their own preferences in favor of democratic regimes. Second, foreign-educated leaders seem to be extremely motivated to keep up with the more developed countries where they studied [...]. Third, foreign-educated individuals make it more difficult for dictatorial regimes to maintain repression, because they foster the dissemination of new ideas at home. Fourth, foreign-educated individuals can make repressive activities more costly for a dictatorial regime, since they have easier access to external media. [...] Fifth, education abroad may inculcate a sense of common identity with the international democratic community.”*

In this paper, we specifically investigate the second suggested channel, by focusing on leaders who lived (and, in certain cases, studied) abroad before reaching power. Still in this macro perspective, Docquier et al. (2011) document the effect of emigration on the home countries institutions. In a panel setting, they investigate the impact of emigration rates, both total and skilled, on different indexes of the quality of institutions in the home country (namely, the Political Rights and Civil Liberties indexes from Freedom House data set, the Polity index from Polity IV data set, and the Economic Freedom of the World index). Their empirical results show a positive effect of total emigration rate on the quality of political institutions in the sending country. The impact of skilled emigration is found to be ambiguous. They complement this econometric analysis by simulations thanks to which they put forward a generally positive impact of skilled

emigration in the long run, once the impact of emigration prospect on human capital formation in the sending country is taken into account. In the same vein, Lodigiani and Salomone (2012) find that international migration to countries with higher female political empowerment significantly increases the parliamentary share of females in the origin countries. Thus, on the macro side, the recent literature suggests a positive impact of emigration on the quality of political institutions, through total and skilled migration as well as through migration for studies. Nevertheless, the specific “leader” channel has never been investigated yet.

Recent micro evidence on migration and political behaviors is consistent with the macro results. Batista and Vicente (2011) rebuild the conditions of a referendum about political accountability and governance in Cape Verde. While conducting a household survey focusing on perceived corruption in the public sector, they offered respondents the possibility to anonymously send back a postcard asking for the disclosure of the survey’s results by the media. They show that the proportion of international migrants (current and past) in the locality of the respondents is positively associated with their probability to send back this postcard. Thus emigration in general, and the presence of returnees in particular, are found to positively affect people’s demand for political accountability. Moreover, the characteristics of the destination country seem to matter: the impact of migration on the demand for political accountability is higher when the destination country has better levels of governance. In a similar perspective, Pfütze (2012) investigates the impact of migration on the probability that a party in opposition to the former state party in Mexico wins a municipal election. He finds a positive impact of migration intensity on the electoral success of opposition parties. Omar Mahmoud et al. (2012) study the impact of migration on the support for the Communist party in the parliamentary elections in Moldova. They show that this support is lower in localities with more migration toward Western countries. They complement their locality-level analysis with an individual-level exit poll, which reveals that the probability that a non-migrant votes for the Communist party is negatively correlated with the prevalence of westward migration in his locality. Their results are very consistent with Chauvet and Mercier (2012), who study the impact of return migration on electoral behaviors in Mali. They show that localities with a higher share of return migrants coming back from non-African countries exhibit higher participation rates to the local elections, as well as a more important level of electoral competitiveness. They also put forward a diffusion effect from returnees to non-migrants, who adopt different electoral norms when they live in more return migration intensive localities.

Both at the macro and at the micro level, these studies emphasize an important impact of migration intensity on politics in the home country, through more democratic institutions on the one hand, and through different individual behaviors and preferences on the other hand. This second strand of the literature thus

supports the hypothesis that is under test in this paper, and encourages to ask whether leaders' migration experiences affect the quality of their leadership.

### 3 A new database on the characteristics of the leaders

#### 3.1 Data collection

We collected original data on the characteristics of a sample of leaders. We rely on the Archigos data base of political leaders from Goemans, Gleditsch, and Chiozza (2009), which identifies the primary ruler in each country and year over the 1875-2004 period. Starting from this data set, we selected the sample that is here under study, namely all the leaders at the head of a developing country between 1960 and 2004. For each of these leaders, we then collected information on his personal and familial background, education, profession, military experience, and finally, migration experience. In particular, we code the duration, destination and objective of each migration period. Four objectives are distinguished: migration for studies, migration for diplomatic reasons, migration for military reasons other than war (such as military training), and exile. To gather these information, we relied on a range of web sources: the online *Encyclopedia Universalis*, the biographies of political leaders published by the Barcelona Centre for International Affairs (*CIDOB - Centro de Estudios y Documentación Internacionales de Barcelona*), Wikipedia, the websites of the national Parliaments and political parties, etc. Our final data base provides information on 932 leaders who headed 136 developing countries during 1,042 leadership periods between 1960 and 2004. For the empirical analysis that follows, we restrained this sample to leaders who stayed at least one year in power, so as to match the leader-level information with country-level data available on a yearly basis. This restriction make us end up with 679 leaders who headed 134 developing countries during 742 distinct leadership periods. Information on migration history is available for 610 of these leaders.

#### 3.2 Who are the leaders?

Table 1 presents the main average characteristics of the leaders. Most of the 932 leaders in the developing world over the 1960-2004 period (97%) are men. In average, they arrive in power aged 51, and their tenure lasts five years and a half. Half of the leaders are highly educated. Following Besley and Reynal-Querol (2011), we define high education as having at least a master's degree (or equivalent). In their data set, less than 30% of the leaders are classified as educated. The difference with the proportion we observe in our sample is in line with the global spreading of education observed over the last century: while we concentrate



on leaders post 1960, their data start in 1848. Our database also contains information on leaders' profession. Ten categories are documented: army, law, economics, health, administration, academics, business, priests, scientists and workers. Military professionals are the most represented category (28% of the leaders), followed by lawyers (19%). Academics gather 14% of the leaders and scientists and professionals of administration 9.5% each. Then, economists are around 8% of the leaders. The four last categories are less represented: health professionals represent 5% of the leaders, businessmen 4%, workers 3%, and priests 1%.

Table 1: Descriptive statistics

	Average	Standard Deviation	Observations
Woman	0.03	0.16	932
Age at arrival	51	11	926 <sup>a</sup>
Tenure Duration (days)	2012	2687	932
High Education	0.51	0.50	775
Military	0.28	0.45	792
Law	0.19	0.39	792
Eco	0.08	0.27	792
Health	0.05	0.22	792
Admin	0.09	0.28	792
Academics	0.14	0.34	792
Worker	0.03	0.18	792
Religious	0.01	0.12	792
Scientist	0.09	0.28	792
Business	0.04	0.21	792
Migration	0.68	0.47	786
Mig - Diplomacy	0.13	0.33	786
Mig - Study	0.41	0.49	786
Mig - Exile	0.14	0.34	786
Mig - Military	0.18	0.38	786
Migration Duration (years)	7	8	373

<sup>a</sup>The date of birth of six leaders of the sample are not available.

The information on migration experience is available for 786 of the 932 leaders.<sup>1</sup> Data on leaders' migration show that it has been a very usual phenomenon within leaders in the developing world over the 1960-2004 period. Indeed, 68% of them had a migration experience before reaching power. Migration is very common within African (81%), Latin American (72%) and Asian (64%) leaders. It is less the case regarding European leaders: 41% of them did live abroad before reaching power. We also have information on the type of migration. 13% of the leaders migrated for diplomatic reasons and 41% of them for studying. 14% of the leaders experienced an exile abroad. Finally, 18% of them lived abroad for military reasons. Taken together, those migration experiences lasted in average seven years. Finally, we can identify the destinations of those

<sup>1</sup>This attrition may bias our results. We investigate this question in the next subsection.

migration experiences. The first destination is Europe, where 25% of the leaders migrated. 11% of them have lived in North America before reaching power, and 7% in Africa. Asia and South America have been the destination of 6% and 5% of the leaders respectively. Less than 1% migrated to Oceania. Not surprisingly, the distribution of migration experiences across destinations varies according to the country of origin of the leaders. Notably, we observe important flows of “nearby migration”: 25% of the African leaders migrated within Africa, which is the case of only 2% of the Asian leaders and less than 1% of the European and South American leaders. Symmetrically, 17% of the South American leaders migrated within their continent, while less than 1% of the African, European and Asian leaders went to Latin America. Migration toward North America is also much more common within South American leaders (23% of them experienced it) than within the leaders from other regions (respectively 9%, 5% and 2% of the Asian, African and European leaders lived in North America). Finally, migration toward Europe is less discriminant: it concerned 37% of the African leaders, 24% of the Asian leaders, 23% of the European leaders and 19% of the Latin American leaders.

### **3.3 Sample**

Compared to the entire sample of 932 leaders, we perform our econometric estimations on a sub-sample that is restricted regarding two dimensions: first, we focus on the 679 “long-term” leaders, namely those who stayed in power at least one year, and second we do not have information on migration experience for 69 of those 679 leaders. The final sample is thus composed of 610 leaders, representing 668 leadership periods.

#### **3.3.1 Short-term vs. long-term leaders**

We restrict the sample to leaders who stayed at least one year in power for two reasons. First, from a practical point of view, this allows us to match our leader-level data to country-level data that are typically observed on a yearly basis. Second, from a theoretical point of view, leaders who spent a very short time span in power probably did not have time to implement structural reforms that are necessary to the improvement of institutional quality. Excluding them from the sample thus diminishes the sources of noise in our estimations.

However, those leaders may be different to those who spent less than one year in power. Annex A presents the tests for the significance in the differences of leaders’ characteristics between the group of short-tenure leaders (excluded from the empirical analysis) and the group of leaders who stayed at least one year in power. There is no significant differences between leaders who stayed more or less than one year in power regarding gender and regarding most of the professional backgrounds considered. Leaders who stay more than one year in power are found to reach power slightly younger (aged 51 in average) and, by construction, to stay longer

(a bit more than seven years in average). Leaders who stay more than one year in power are in average less often highly educated. They do not have a significantly different probability to have migrated before reaching power, neither a significantly different average migration duration. However, compared to those who stayed less than one year in power, they more often experienced an exile, and less often migrated for diplomatic reasons. These characteristics of the sample have to be kept in mind when analyzing the empirical results.

### 3.3.2 Attrition issue

Information on leaders' migration experience is available for 610 of the 679 leaders who stayed more than one year in power. Those 610 represent the core sample on which our results are based. We thus face an attrition issue. This attrition is less pronounced for the restricted sample of long-term leaders (attrition of 69 leaders, i.e. 11% of the sample) than for the whole sample (attrition of 146 leaders over 932, i.e. 16% of the sample). This is due to the fact that information on the characteristics of short-term leaders are less easily findable. Still, attrition remains a concern.

Table 2: Attrition issue

	Difference	( <i>t</i> statistics)	Observations
<hr/> Leader-level variables <hr/>			
Woman	-0.0246	(1.32)	679
Year of arrival	-1.510	(0.77)	679
Tenure Duration	-1759.5***	(4.93)	679
Age at arrival	-0.572	(0.42)	678
<hr/> Country-level variables <hr/>			
Africa	-0.116**	(2.05)	679
Asia	0.00297	(-0.05)	679
South America	0.0541	(-0.92)	679
Europe	0.0510	(-1.20)	679
Polity IV average	-1.556 *	(-1.80)	627
Polity IV delta	-0.344	(-0.68)	619
Polity IV at arrival	-1.610 *	(-1.82)	615

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

To have a better view on the potential consequences of this attrition, Table 2 presents the test of the significance in the differences between leaders who stayed more than one year in power for whom we have and do not have information on migration experience, regarding leader-level and country-level variables. As expected, leaders for whom we do not find information on migration stayed in average less time in power. They are also relatively less located in Africa. Three political outcomes are tested: the average Polity IV score during the leader's tenure, the change in the Polity IV index between the year of arrival and the year of departure of the leader, and the level of the Polity IV score when the leader reached power. It appears

that leaders for whom we lack data on migration leded countries with a slightly lower level of democracy, both measured the year of their arrival and measured in average. However, no significant difference appears in the change of the Polity IV score during the leadership between leaders for whom we have or do not have information on their migration experience. Though this attrition issue should be kept in mind, we are thus rather confident in the fact that it may not drive our empirical results, in particular when we will check the robustness of our findings on the Polity IV Delta variable. Moreover, in Annex B, we implement a specific test accounting for this attrition bias.

## 4 Benchmark results

To assess the impact of the leader’s migration experience on democracy, we estimate Equation (1):

$$PolityScore_{i,j,t} = \alpha + \delta Migration_j + \gamma X_j + \tau_t + \eta_i + \varepsilon_{i,j,t} \quad (1)$$

The dependent variable is the average Polity IV score in country  $i$  during the period in power of leader  $j$ , who reached power in year  $t$ . Polity IV (Marshall and Jaggers (2002)) is an index of democracy provided by the Integrated Network for Societal Conflict Research (INSCR) of the Center for Systemic Peace. It assigns to each country an annual score in the autocracy-democracy spectrum, ranging from -10 (autocracy) to 10 (full democracy). We are interested in the impact on this score of democracy of the migration experience of leader  $j$ ,  $Migration_j$ . We introduce time dummies  $\tau_t$  as well as country fixed effects  $\eta_i$ . Thus, we are able to control for all the time-invariant unobservable characteristics of the countries, and for all the country-invariant time trends. Moreover, we cluster standard errors at the country level, to account for the potential correlation of error terms within the same country.

We include a vector  $X_j$  of leader-level controls, composed of three variables: the duration of the tenure of leader  $j$  (in days), a dummy equaling one if  $j$  is a women, and an indicator of his education level. Following Besley, Montalvo, and Reynal-Querol (2011), we focus on a simple dichotomous variable to capture high versus non-high education. This dummy equals one when leader  $j$  has at least a master’s degree (or equivalent), and zero otherwise.

Column 1 of Table 3 presents the results of the estimation of Equation (1). As expected, the duration of the tenure is strongly negatively correlated with the quality of political institutions. On the contrary, we find positive coefficients of the *Woman* and *High Education* dummies. Turning to our variable of interest, the *Migration* dummy does not appear to be significantly correlated to democracy. In a second step,

we distinguish four types of migration: migration for studying, for military reasons (other than war), for diplomacy, and exile. Column 2 of Table 3 presents the estimation of Equation (2):

$$\begin{aligned}
 PolityScore_{i,j,t} = & \alpha + \delta_1 MigStudy_j + \delta_2 MigExile_j + \delta_3 MigDiplomacy_j \\
 & + \delta_4 MigMilitary_j + \gamma X_j + \tau_t + \eta_i + \varepsilon_{i,j,t}
 \end{aligned}$$

When we split the migration variable in function of these four motives of migration, the quality of political institutions appears to be positively and significantly associated with the leader having studied abroad, while high education turns out to be non significant. Exile of the leader is also positively associated with Polity IV. The coefficients for migration for diplomatic motives is not significant. Finally, leaders who lived abroad for military reasons before reaching power are strongly negatively correlated with democracy in their countries. With this split of the *Migration* variable, the coefficients for the gender and education dummies decrease both in size and significance, and the coefficient for the duration of the tenure remains very stable.

If migration *per se* is not significantly correlated with political outcomes, migrating for studying thus appears to be positively correlated with democracy, even controlling for high education, while migrating in a military context has the opposite effect. Finally, the experience of exile abroad seems to be positively correlated with democracy. Exile, migration for studies or for military activities of the leader could however be correlated with other country-level characteristics that themselves affect the quality of political institutions. Introducing country fixed effects allows us to rule out all such time-invariant country characteristics. Still, time-varying characteristics may matter. In Column 3, we add three country-level control variables. We introduce the GDP per capita growth observed in country  $i$  during leader  $j$ 's tenure (using data from the Penn World Tables), which may affect democratization. We also control for total and skilled emigration rates, in average during the leader's tenure (using data from Defoort (2008)). Since the probability of having a leader with a migration experience must be higher, all else equal, in countries that are characterized by a higher migration intensity, and since migration intensity may also directly affect democracy as suggested by Docquier et al. (2011), controlling for emigration rate is theoretically important. As shown in Column 3, none of these three variables are significant, while the coefficients associated with the four migration variables are larger and more significant in this specification.

Table 3: Benchmark estimations

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Tenure duration	-0.000483*** (0.000107)	-0.000514*** (0.000101)	-0.000417** (0.000162)	-0.000441** (0.000171)
Woman	2.831*** (0.829)	1.623** (0.727)	1.536** (0.588)	1.969** (0.817)
High Education	1.927*** (0.516)	0.823 (0.511)	0.142 (0.483)	-0.0889 (0.667)
Migration	-0.460 (0.493)			
Mig - Study		0.906* (0.491)	1.537*** (0.491)	1.150** (0.514)
Mig - Exile		1.057** (0.496)	1.341*** (0.483)	0.551 (0.581)
Mig - Diplomacy		-0.768 (0.695)	-0.653 (0.839)	-0.574 (0.836)
Mig - Military		-2.824*** (0.719)	-3.764*** (0.820)	0.434 (1.270)
GDP pc growth (tenure)			-0.0820 (0.104)	0.0538 (0.117)
Emig			24.72 (15.05)	29.32* (15.50)
Skilled Emig			0.0481 (5.599)	-2.632 (6.080)
Military				-5.375*** (1.366)
Law				0.378 (0.765)
Eco				-0.105 (0.946)
Health				-1.379 (1.324)
Admin				-0.386 (1.075)
Academics				-0.471 (0.695)
Business				0.0864 (1.034)
Religious				-0.669 (2.019)
Scientist				-0.135 (1.070)
Worker				0.0170 (1.519)
Constant	0.855 (1.282)	-1.346 (1.302)	-6.801*** (1.893)	3.762 (2.544)
Observations	525	525	383	361
R-squared	0.533	0.578	0.652	0.678
Number of id	124	124	113	109
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Joint t-test ( <i>Profession dummies</i> )				0.016

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Finally, migration of the leader could be correlated with other characteristics of the leader that may affect the quality of political institutions. This could in particular be the case of leaders' professions, which are indeed correlated with migration experiences as shown in Annex C. In Column 4 of Table 3, we add as supplementary control variables ten different dummy variables for the profession of the leader. This is our preferred specification. Precisely, we introduce the following categories of profession: army, law, economics, health, administration, academics, business, religion, science, and workers. Indeed, one could wonder if the exile or education (resp. military activity) abroad effects are driven by the occupational categories of the leaders. The results show that having studied abroad remains positively significant, while the coefficient associated to exile turns out to be non significant, as well as the negative impact of military activities abroad. We present the joint t-test of the ten profession variables at the bottom of the column. It shows that the different professions have indeed significant different impacts on the Polity IV index. In particular, the coefficient for being a professional military appears to be negative and significant.

Studies abroad are positively correlated with democratization during the tenure. This correlation can reveal that future leaders who study abroad become more democratic. But it can also be driven by something else, and two main routes of endogeneity are identified: first, democratic countries may prefer to select leaders with a migration background. Second, future leaders who migrate may have specific characteristics that make them more prone to democracy, and that would also have made them more prone to democracy had they not migrated. The two next sections are dedicated to the investigation of these two mechanisms.

## 5 Do democracies prefer return migrants?

The benchmark results suggest that studies abroad are positively correlated with democracy, even when controlling for leader-level and country-level variables. An important endogeneity issue arises at that stage: the positive correlation may reflect the fact that countries with more democratic institutions prefer and tend to select leaders who studied abroad. In this case, the positive coefficient would not reveal a better quality of the leadership, but different tastes in the selection of the leaders depending on the level of democracy of the country. This issue is particularly relevant given the results emphasized by Besley and Reynal-Querol (2011) regarding the education of leaders. Indeed, they show that democratic countries tend to select more educated leaders. Symmetrically, one could imagine that democracies have a higher propensity to choose leaders who studied abroad.

To test for this selection issue, we introduce in our preferred specification (Column 4 of Table 3) the

interactions between each of the four types of migration and a dummy indicating if the country was initially an autocracy, *Initially Autocratic*. This variable is measured the first year of the leader’s tenure. It equals one if the country had then a Polity IV score inferior or equal to zero, and zero otherwise. We also directly introduce this dummy within the explanatory variables. Table 4 presents the results. Not surprisingly, the *Initially Autocratic* dummy appears to be significantly positive in all four specifications: countries in which the tenure started in an autocratic setting tend to have a lower average level of democracy during the tenure. In Column 1, the *Migration* dummy is found to be unrelated to democracy, whether or not the leader started his tenure in an autocratic context. In the three last columns, we split the *Migration* dummy in the four categories of migration experience, and successively add the different groups of control variables (leader-level controls - the duration of the tenure, gender and education of the leader -, country-level controls - GDP per capita growth, emigration and skilled emigration rates - and finally the ten profession dummies). In those three estimations, the coefficient for *Mig - Study* is still positive, but smaller than in the benchmark estimations, and turns out to be non significant. Its interaction with *Initially Autocratic* is positive, significant, and larger than the benchmark estimate of the coefficient associated with *Mig - Study* (Table 3). These results are exactly the opposite to what the “democracies’ preferences bias” suggests: the positive correlation between studies abroad and democracy is not due to the fact that democracies select return migrants but on the contrary, it is driven by countries in which the tenure started with a negative level of Polity IV score, in other words by relatively autocratic countries.

In Columns 2 and 3, migration for military reasons is significantly and negatively correlated to democracy, but only when the leader started his tenure in an autocratic country. Having a leader with a military migration background is not significantly correlated with the quality of institutions during the leadership when the leader reached power in a democratic setting. As soon as we introduce the leaders’ profession dummies, *Mig - Military* becomes insignificant, both in initially autocratic and initially democratic countries.

Exile is not significantly correlated with democracy, neither in initially autocratic nor in initially democratic settings, except in the third specification: in Column 3, the interaction between exile and the *Initially Autocratic* dummy turns out to be positive and slightly significant. This could suggest a different source of endogeneity, namely the fact that future leaders come back from migration when the quality of institutions is starting to improve in their country. This type of endogeneity could also affect the *Mig - Study* variable. We will investigate it in Table 5. Finally, migration for diplomatic reasons is never significantly correlated with democracy, whatever the specification and the initial level of democracy when the leader reached power.



Table 4: Do democracies prefer return migrants?

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Initially Autocratic	-9.001*** (0.829)	-9.201*** (0.782)	-9.092*** (0.919)	-9.053*** (0.951)
Migration	-0.347 (0.401)			
Initially Autocratic x Migration	1.045 (0.766)			
Mig - Study		0.127 (0.365)	0.261 (0.416)	0.285 (0.456)
Initially Autocratic x Mig - Study		1.647** (0.685)	2.462*** (0.886)	2.454*** (0.900)
Mig - Exile		-0.479 (0.575)	-0.172 (0.601)	-0.199 (0.673)
Initially Autocratic x Mig - Exile		1.170 (0.913)	2.133* (1.113)	2.077 (1.253)
Mig - Diplomacy		-0.720 (0.662)	-0.219 (0.850)	-0.639 (0.913)
Initially Autocratic x Mig - Diplomacy		0.924 (1.032)	0.499 (1.185)	1.061 (1.326)
Mig - Military		-1.509*** (0.543)	-1.701*** (0.513)	-0.756 (0.944)
Initially Autocratic x Mig - Military		1.400* (0.769)	0.859 (0.872)	0.998 (0.849)
Constant	6.278*** (1.018)	6.333*** (1.072)	-0.0311 (1.387)	9.202*** (2.023)
Observations	525	525	383	361
R-squared	0.812	0.821	0.847	0.850
Number of id	124	124	113	109
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

Table 4 thus shows that the positive correlation between studies abroad and democracy is not due to the fact that democracies select return migrants as leaders. However, it raises a second channel of endogeneity that could bias the results, namely the fact that migrants, among which future leaders, may come back to their country of origin when it starts democratizing (this is in particular what suggests the positive and significant coefficient associated with the exile of the leader in initially autocratic settings). To try to capture this effect, we re-iterate the estimations of Table 4, adding as a supplementary control variable the average level of the Polity IV score observed during the previous leader's tenure. Results are shown in Table 5.

Table 5: Controlling for past democracy

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Lagged Polity IV	0.0926*** (0.0351)	0.0850** (0.0359)	0.0661 (0.0411)	0.0758 (0.0473)
Initially Autocratic	-8.529*** (0.907)	-8.777*** (0.867)	-9.111*** (1.045)	-8.817*** (1.097)
Migration	-0.149 (0.421)			
Initially Autocratic x Migration	0.725 (0.784)			
Mig - Study		0.128 (0.393)	-0.00862 (0.432)	0.124 (0.438)
Initially Autocratic x Mig - Study		1.491* (0.871)	2.192** (1.007)	1.718* (0.978)
Mig - Exile		-0.124 (0.571)	0.0393 (0.656)	-0.0981 (0.640)
Initially Autocratic x Mig - Exile		0.625 (0.838)	1.397 (0.879)	1.133 (1.087)
Mig - Diplomacy		-0.784 (0.610)	-0.0583 (0.714)	-0.396 (0.725)
Initially Autocratic x Mig - Diplomacy		0.604 (0.970)	0.655 (1.115)	1.296 (1.192)
Mig - Military		-1.344** (0.595)	-1.322** (0.582)	0.0496 (0.952)
Initially Autocratic x Mig - Military		1.286* (0.736)	0.472 (1.020)	0.424 (0.958)
Constant	3.957** (1.555)	5.934*** (1.019)	1.743 (2.207)	0.0306 (1.779)
Observations	453	453	347	330
R-squared	0.854	0.861	0.877	0.885
Number of id	114	114	108	105
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

The level of democracy during the previous leader's tenure is found to be positively associated with the average democracy during the current leader's tenure. In the four specifications, the results are very close to those observed in Table 4. In particular, studies abroad remain significantly and positively associated with democracy for leaders who started their tenure in an autocratic setting, with a slightly smaller coefficient. The interaction between exile and the *Initially Autocratic* variable is now non significant in all three specifications.

Introducing the previous level of democracy in Table 5 allows to be more confident regarding the fact that the positive correlation between studies abroad and democracy is not due to migrants, among which future leaders, coming back when the institutional quality improves in their home country. However, it generates a bias associated to the dynamic panel form of these estimations: the lagged value of the Polity IV score is mechanically correlated with the error term, yielding not consistent estimates. To take into account this econometric issue, we reproduce the same estimations using the Generalized Method-of-Moments Estimator proposed by Arellano and Bond (1991). This methodology relies on the first-differentiation of the estimated equation (which eliminates the country fixed effects), and instrumentation of the first-difference of the lagged Polity IV score by all its available further lags.

Results are shown in Table 6. When we implement this methodology, the coefficient for *Migration* turns out to be significantly negative, while its interaction with the dummy for initial autocracy is significantly positive. We also observe a negative correlation between migration for diplomatic reasons which is specifically driven by countries with an initial positive Polity IV score, but not robust to the inclusion of the professions dummies. Finally, the coefficients estimated for *Mig - Study* and *Initially Autocratic x Mig - Study* are remarkably stable, as compared to the fixed effect estimations.

## 6 The selection into migration

The previous section provides evidence that the positive correlation between studies abroad and democracy is not driven by the potential preference of democratic countries for return migrants. It rather suggests that leaders who studied abroad before reaching power have a democratizing effect in countries with an initial low quality of political institutions. We also provide evidence that this effect is not driven by future leaders coming back to their country once democratization starts.

Table 6: GMM estimations

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Lagged Polity IV	0.0591 (0.0432)	0.0483 (0.0460)	0.0406 (0.0376)	0.0602 (0.0552)
Initially Autocratic	-12.50*** (1.042)	-11.43*** (1.100)	-11.47*** (1.182)	-11.47*** (1.364)
Migration	-0.837** (0.399)			
Initially Autocratic x Migration	3.310*** (0.913)			
Mig - Study		-0.650* (0.343)	-0.348 (0.335)	-0.169 (0.362)
Initially Autocratic x Mig - Study		2.832*** (0.857)	2.649*** (0.975)	2.679*** (0.944)
Mig - Exile		-0.140 (0.404)	-0.341 (0.524)	-0.288 (0.627)
Initially Autocratic x Mig - Exile		0.0944 (0.878)	1.231 (0.860)	1.256 (0.966)
Mig - Diplomacy		-0.894* (0.525)	-1.418* (0.739)	-1.184 (0.820)
Initially Autocratic x Mig - Diplomacy		0.806 (1.108)	1.427 (1.155)	1.319 (1.254)
Mig - Military		-0.939 (0.611)	-0.816 (0.753)	-0.895 (1.139)
Initially Autocratic x Mig - Military		1.612* (0.972)	1.124 (1.066)	1.369 (1.161)
Observations	290	290	213	195
Number of id	86	86	77	74
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
AR(1) Test	0.001	0.002	0.018	0.075
AR(2) Test	0.495	0.747	0.987	0.921
Sargan Test	0.713	0.606	0.332	0.036
Hansen Test	0.989	0.996	0.999	0.975
Number of instruments	72	78	79	89

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.  
 Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

This section aims at dealing with the second major source of potential endogeneity in the migration of the leader - democracy nexus, namely the selection into migration at the individual level. It is clear that migrants are self-selected. In this perspective, they may have specific characteristics that both make them more likely to choose to study abroad, and more likely to be democrat. It is hardly feasible to control directly for all these characteristics, many of them being unobservable or difficult to measure (e.g. open-mindedness,

taste for democracy, etc.). Alternatively, we propose here a simple test aiming at isolating the choice of migration, which may be correlated to these individual characteristics, and the impact of the migration experience. This is done by running the benchmark estimations (Table 3) on the sub-sample of leaders who migrated before being 15 years old. In these cases, the choice of migrating, in all likelihood, was not made by the future leader himself but rather by his parents. Results of this tests are shown in Table 7.

Table 7: Early migration experiences

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)	(5)
Migration	-1.188 (1.628)				
Mig - Study		5.798 (4.719)	8.448** (3.214)	7.326* (4.205)	33.54*** (12.55)
Mig - Exile		3.664 (3.934)	0.248 (5.603)	-4.695 (6.753)	13.73* (7.910)
Mig - Diplomacy		-0.472 (12.72)			
Mig - Military		-10.21*** (2.713)	-11.43*** (2.964)	-3.893 (6.650)	-6.559*** (1.716)
Father profession					5.382** (2.571)
Constant	-3.818 (3.987)	0.753 (5.603)	2.670 (6.739)	4.861 (13.02)	-14.86 (10.56)
Observations	177	177	128	124	107
R-squared	0.800	0.836	0.899	0.942	0.984
Number of id	84	84	71	68	64
Leader level controls	Yes	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes	No
Profession dummies	No	No	No	Yes	No
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

When we look at leaders who migrated aged 14 or earlier, migration is still not significantly associated with democracy, while the coefficient associated with *Mig - Study* remains positive and significant. Studies abroad is thus positively associated with democratization, even when we restrict the sample to leaders who probably did not choose themselves to migrate, which mitigates the selection into migration bias.

Moreover, in Column 5, we introduce as additional control variable a dummy equaling one if the profession of the leader's father is skilled. This aims at capturing the unobserved characteristics of the leader that may be inherited from his family. It appears that leaders whose fathers had a skilled occupation are indeed

characterized by a higher average of Polity IV.<sup>2</sup> Lastly, the coefficient for *Mig - Study* remains stable: it positively and significantly affects the level of democracy, even when controlling for the father's (potentially heritable) skill background.

## 7 Democracy at destination

Foreign education of political leaders appears to be positively associated with democratization in their country. Is this effect varying across the characteristics of the destination country? In particular, we could expect the impact of studies abroad on democracy to be all the more important as leaders studied in a democratic country. We test for this assumption in Table 8, distinguishing migration experiences in democratic and autocratic destination countries (i.e., in countries with a Polity IV score greater than 0, or inferior or equal to 0, the year when the future leader migrated in).

In Columns 1 and 2, we differentiate migration and migration in a democratic context, running the estimation respectively on the whole sample and on the sample of leaders who migrated before the age of 15. In both cases, migration and migration in a democracy are not significantly correlated with the quality of political institutions during the tenure. In Columns 3 and 4, we split migration into our four categories and distinguish studies abroad and studies abroad in a democracy, running the estimation respectively on the whole sample and on the sample of leaders who migrated before the age of 15. No specific effect of studying in a democratic country appears in these specifications. Lastly, we re-estimate the two same regressions in Columns 5 and 6, but adding the country-level control variables and the profession dummies as explanatory variables. In the last estimation, focusing on leaders who migrated at 14 years old or earlier, we still observe a positive and significant coefficient associated with *Mig - Study*, but also a positive and significant coefficient associated with *Mig - Study in a democracy*. This suggests a cumulative effect, the impact of foreign education being all the more important as the leader studied in a democratic country before reaching power. However, the coefficients are not significant on the whole sample (Column 5), urging us to remain cautious regarding this last result.

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<sup>2</sup>Unfortunately, the relatively small number of leaders for whom information on the father's occupation is available does not allow us to control simultaneously for the country-level variables and profession dummies.

Table 8: Democracy at destination

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)	(5)	(6)
Migration	-0.690 (0.785)	1.023 (1.890)				
Migration in a democracy	-0.564 (0.701)	-2.371 (2.367)				
Mig - Study			-0.0579 (0.956)	7.350** (3.271)	0.265 (0.931)	8.574** (3.936)
Mig - Study in a democracy			0.374 (1.084)	-1.191 (3.188)	0.00810 (1.114)	23.67*** (4.585)
Mig - Exile			1.764*** (0.555)	7.224* (4.169)	0.726 (0.766)	-16.96** (7.220)
Mig - Diplomacy			-0.959 (0.863)	-4.608 (14.16)	-0.365 (1.082)	
Mig - Military			-3.320*** (0.835)	-13.25*** (3.107)	0.0400 (1.412)	9.620 (6.702)
Constant	-7.043*** (1.038)	-2.219 (5.484)	-5.830*** (1.025)	-5.413 (5.808)	4.098 (3.088)	35.07*** (11.37)
Observations	400	172	410	173	286	122
R-squared	0.588	0.799	0.631	0.841	0.749	0.947
Number of id	120	82	117	82	102	66
Leader level controls	Yes	Yes	Yes	Yes	Yes	Yes
Country level controls	No	No	No	No	Yes	Yes
Profession Dummies	No	No	No	No	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.  
 Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

## 8 Robustness tests

The fact that the leader studied abroad is positively and significantly associated with democratization during his tenure, and this does not seem to be driven by different preferences in the selection of the leaders in democracies, nor by the selection into migration. In this section, we provide three extensions to investigate further this result.

### 8.1 Alternative outcomes

First, one could wonder if we are here measuring the effective impact of a leader on democracy or rather capturing a larger trend of democratization in the country, independent from individual leaders. Controlling for the average Polity IV score during the previous leader's tenure (Tables 5 and 6, Section 5) was a first way

to address this concern. To go further in the investigation of this question, we also replicate the estimations on two alternative dependent variables:

- The change in the Polity IV index between the year of arrival and the year of departure of the leader (*Polity IV Delta*), which was notably shown not to be affected by the attrition issue (Table 2),
- The level of the Polity IV index in the last year of the leader's tenure (*Polity IV Last*).

In these estimations, we also add as a supplementary control variable the change in the Polity IV score observed during the previous leader's tenure, *Lagged Polity IV Delta*. Columns 1 - 4 of Table 9 display the results concerning the first alternative outcome, *Polity IV Delta*. The *Lagged Polity IV Delta* has a negative and significant coefficient, suggesting a catch-up effect: countries in which the index of democracy has changed more during the previous leadership tend to see their level of democracy changing less during the following leadership. In other words, after a transition, the countries of our sample tended to stabilize in average. Moreover, countries which started with an initial autocratic setting exhibit a more important change in their level of democracy. In Columns 5 - 8 of Table 9, the considered dependent variable is the level of democracy measured during the last year of the leader's tenure, *Polity IV Last*. In this case, the *Lagged Polity IV Delta* also has a negative and significant coefficient, suggesting that leaders who follow a period of more important variation in the quality of institutions leave power at a relatively lower level of democracy. Not surprisingly, countries which started with an initial autocratic setting exhibit a lower level of democracy at the end of the leader's tenure.

Turning to the variables of interest, for both dependent variables, migration is still non significant neither in initially democratic nor in initially autocratic countries. For both dependant variables, we also observe that *Mig - Study* is positively correlated to the outcome when the tenure started in an autocratic environment, consistent with our main results. The other types of migration experiences are not significantly correlated with the final level of democracy, *Polity IV Last*. Finally, it appears in Columns 3 and 4 that leaders who experienced an exile tend to positively affect the *Polity IV Delta* when they reached power in a relatively democratic country, and negatively when they reached power in a relatively autocratic setting.



Table 9: Alternative outcomes

	Polity IV Delta			Polity IV Last				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged Polity IV	-0.231*** (0.0535)	-0.227*** (0.0542)	-0.237*** (0.0572)	-0.248*** (0.0702)	-0.123** (0.0587)	-0.134** (0.0585)	-0.151** (0.0632)	-0.158** (0.0744)
Delta	2.817** (1.173)	2.387** (1.097)	3.384** (1.320)	2.987** (1.450)	-7.247*** (1.485)	-7.779*** (1.363)	-7.206*** (1.727)	-6.984*** (1.879)
Initially Autocratic	0.111 (0.593)				-0.359 (0.695)			
Migration	0.519 (1.031)				1.304 (1.278)			
Initially Autocratic x Migration								
Mig - Study								
Initially Autocratic x Mig - Study								
Mig - Exile								
Initially Autocratic x Mig - Exile								
Mig - Diplomacy								
Initially Autocratic x Mig - Diplomacy								
Mig - Military								
Initially Autocratic x Mig - Military								
Constant	2.929* (1.589)	4.951*** (1.615)	-3.525 (2.757)	-10.68*** (3.787)	6.963*** (1.627)	7.901*** (1.685)	1.170 (3.089)	-3.694 (3.576)
Observations	443	443	346	329	445	445	346	329
R-squared	0.416	0.432	0.540	0.577	0.608	0.619	0.633	0.655
Number of id	114	114	107	104	114	114	107	104
Leader level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes	No	No	Yes	Yes
Profession dummies	No	No	No	Yes	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.  
 Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

## 8.2 Falsification test

If the effect that is at play here is that studies abroad make leaders more likely to promote democracy in their country, we should not observe any significant correlation between the *Mig - Study* variable and the level of democracy of the country observed in the year of the leader’s arrival in power (*Initial Polity IV*). Indeed, democratization implies structural reforms that require enough time to translate into an increase of the Polity IV index. This falsification exercise also provides an alternative test for the “democracies’ preferences bias” tackled in Section 5. If a process of selection is at play in the positive coefficient observed for studies abroad, we would expect a similar coefficient when using the initial level of democracy as dependant variable. Such a result would suggest that democracies have a higher propensity to select leaders who studied abroad, symmetrically to Besley and Reynal-Querol (2011) who find a higher propensity of democracies to select educated leaders.

This test is displayed in Table 10. As expected, the coefficient associated with migration, as well as the coefficients associated with foreign studies, migration for diplomatic reasons, and exile, are not significant. Leaders who migrated for their studies are found to positively affect the level of democracy in their country during the period when they are in power, but the causation is not working the other way round: democracies do not tend to select leaders with an education experience abroad. On the contrary, there is a negative significant correlation between the leader’s military background (either regarding migration or regarding profession) and the level of democracy in the year of his arrival, suggesting that democratic countries have a lower preference for militaries. This falsification test reinforces the confidence in the main finding that leaders who studied abroad are more prone to democratize their country.

## 8.3 Year-level panel

All the results presented above emanate from a panel data set built at the leader level: each line in the database corresponds to one leader in one country. One could suspect that this organization of the data leads to a bias in the estimated coefficients, given that leaders who stay in power longer are given the same weight as leaders who stayed shortly, by construction. To ensure that our results are not driven by this, we re-build our data set making each line corresponding to one year. In this case, leaders are observed as many times as the number of years they spent in power. Annex D reiterates the benchmark estimations of Table 3 on this alternative database. It confirms our previous results: leaders who studied abroad appear to be positively correlated with the level of democracy.

Table 10: Falsification test

<i>Dependent: Lagged Polity Score</i>	(1)	(2)	(3)	(4)
Migration	-1.151 (0.790)			
Mig - Study		-0.0398 (0.707)	-0.749 (0.782)	-1.262 (0.843)
Mig - Exile		-0.970 (0.671)	-0.527 (0.653)	-0.835 (0.788)
Mig - Diplomacy		-0.814 (0.974)	-0.122 (1.014)	-0.218 (1.090)
Mig - Military		-2.223** (0.888)	-2.490** (1.038)	-1.503 (1.498)
Constant	1.823 (1.364)	6.944*** (2.232)	4.376** (1.879)	1.068 (2.689)
Observations	459	459	353	335
R-squared	0.378	0.391	0.457	0.517
Number of id	114	114	110	108
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

## 9 Conclusion

Thanks to new data on the characteristics of leaders in developing countries over the 1960-2004 period, we put forward in this paper a positive impact of the fact that the leader studied abroad on the quality of political institutions in the country he's at the head of. This effect is independent from the level of education reached.

We show that the effect of the leader having studied abroad on political institutions is driven by countries which start from a low level of democracy. This is inconsistent with the view that the positive correlation between education abroad and democracy may be due to a higher propensity of democratic countries to choose return migrants as leaders. We also check that our main result is not driven by the fact that future leaders come back to their country of origin when it starts democratizing. Moreover, we provide a test for the self-selection in migration issue, showing that the impact of education abroad remains significant for leaders who did not choose themselves to migrate. Finally, it seems that education in a democratic country

has a cumulative positive impact on the level of democracy during the leader's tenure.

The main result of this paper is confirmed by various robustness checks. This finding complements the literature on the impact of political leaders' individual characteristics, focused on education and occupation. It is also in line with the literature regarding the impact of migration on politics in the origin country, which suggests important diffusion effects of the political preferences. Our results thus propose a new channel - the political elites - through which these diffusion effects may occur, and through which migration may be a tool of soft power in the perspective of democratization in developing countries.

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## 10 Appendices

Annex A: Differences between leaders who stayed more or less than one year in power

Table A

	Difference	( <i>t</i> statistics)	Observations
Woman	-0.0123	(1.06)	932
Age at arrival	-2.224***	(2.74)	926 <sup>a</sup>
Tenure Duration	2590.7***	(-14.63)	932
High Education	- 0.0728*	(1.73)	775
Military	-0.0821**	(2.24)	792
Law	-0.00819	(0.25)	792
Eco	-0.00450	(0.20)	792
Health	-0.00700	(0.40)	792
Admin	0.0106	(-0.46)	792
Academics	0.0302	(-1.08)	792
Worker	0.0325**	(-2.20)	792
Religious	-0.00129	(0.14)	792
Scientist	0.00893	(-0.39)	792
Business	0.0211	(-1.24)	792
Migration	0.0437	(-1.11)	786
Mig - Diplomacy	- 0.0544 *	(1.93)	786
Mig - Study	0.0359	(-0.86)	786
Mig - Exile	0.0484 *	(-1.67)	786
Mig - Military	-0.00582	(0.18)	786
Migration Duration	0.747	(-0.65)	373

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

<sup>a</sup>The date of birth of six leaders of the sample are not available.

Annex B: Attrition issue

Among the sample of 679 leaders (who stayed more than one year in power), we do not have information on migration for 69 of them. In the following table, we re-iterate the benchmark estimations presented in Table 3 by treating these 69 leaders as non-migrants. Indeed, it is more plausible that those missing values equal 0, given that we rarely can directly read in a leader's biography that "*he never migrated*".

Table B.1

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Migration	-0.420 (0.484)			
Mig - Study		0.902* (0.463)	1.459*** (0.484)	1.071** (0.512)
Mig - Exile		1.038** (0.493)	1.382*** (0.474)	0.643 (0.563)
Mig - Diplomacy		-0.695 (0.680)	-0.573 (0.782)	-0.537 (0.787)
Mig - Military		-2.759*** (0.706)	-3.648*** (0.771)	0.451 (1.113)
Constant	0.942 (1.284)	-1.261 (1.289)	-7.932*** (1.934)	3.782 (2.530)
Observations	550	550	397	374
R-squared	0.514	0.557	0.642	0.680
Number of id	124	124	113	109
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.



We then reproduce the same test, this time treating the 69 leaders as migrants.

Table B.2

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Migration	-0.254 (0.440)			
Mig - Study		1.062** (0.472)	1.401*** (0.476)	0.955* (0.506)
Mig - Exile		1.340*** (0.489)	1.370*** (0.489)	0.472 (0.567)
Mig - Diplomacy		-0.393 (0.681)	-0.685 (0.733)	-0.898 (0.739)
Mig - Military		-2.530*** (0.637)	-3.768*** (0.739)	-0.0558 (0.997)
Constant	0.866 (1.286)	-1.164 (1.265)	-7.511*** (1.694)	3.868 (2.571)
Observations	550	550	397	374
R-squared	0.513	0.556	0.645	0.678
Number of id	124	124	113	109
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: GDP pc growth (tenure), Emig and Skilled Emig.

Annex C: Correlation table between migration experiences and professional background

Table C

	Migration	Mig - Study	Mig - Exile	Mig - Diplomacy	Mig - Military
Mig - Study	0.622***				
Mig - Exile	0.295***	0.126***			
Mig - Diplomacy	0.263***	-0.093**	-0.067*		
Mig - Military	0.330***	-0.110***	-0.052	0.058	
Military	0.152***	-0.248***	-0.116***	0.098**	0.730***
Law	-0.134***	-0.027	0.054	-0.050	-0.216***
Eco	0.031	0.141***	-0.062	-0.028	-0.126***
Health	0.087**	0.152***	-0.015	-0.029	-0.085**
Admin	0.010	0.034	-0.005	0.114***	-0.125***
Acad	0.014	0.140***	0.003	-0.057	-0.172***
Business	-0.045	0.015	0.051	-0.060	-0.069
Religious	-0.010	-0.014	0.084**	-0.045	-0.058
Scientist	0.003	0.113***	0.072*	-0.041	-0.089**
Worker	-0.159***	-0.116***	0.030	-0.044	-0.096**

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Annex D: Year-level panel

We re-iterate here the benchmark estimations presented in Table 3 on the alternative database where each line corresponds to a *country-year* pair (versus each line corresponding to a *country-leader* pair in the initial data).

Table D

<i>Dependent: Polity Score</i>	(1)	(2)	(3)	(4)
Migration	-0.223 (0.479)			
Mig - Study		0.923** (0.448)	1.341** (0.545)	1.136** (0.571)
Mig - Exile		0.590 (0.527)	1.112** (0.489)	0.455 (0.558)
Mig - Diplomacy		-0.503 (0.664)	-0.399 (0.825)	-0.401 (0.700)
Mig - Military		-2.608*** (0.632)	-3.677*** (0.702)	-0.517 (1.053)
Constant	-0.423 (3.020)	-0.510 (2.398)	4.640*** (0.895)	3.279*** (1.203)
Observations	4,386	4,386	2,675	2,479
R-squared	0.431	0.471	0.557	0.577
Number of id	125	125	119	115
Leader level controls	Yes	Yes	Yes	Yes
Country level controls	No	No	Yes	Yes
Profession dummies	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses, clustered at the country level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Leader level controls refer to: Tenure duration, Woman, High Education. Country level controls refer to: Annual GDP pc growth, Emig and Skilled Emig.