

Migration, Political Institutions, and Social Networks^{*}

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Abstract

What is the role of migrants and, more specifically, of migrant networks in shaping the quality of political institutions in migrant sending countries? Our theory proposes that migration might change individual social identities, while it may also improve knowledge about better quality political institutions. Hence, international migration might increase the demand for political improvements both by migrants and by other individuals in their networks. To test this hypothesis, this paper uses a measure of actual voter turnout and, most innovatively, a behavioral measure obtained by having survey respondents participate in a simple behavioral experiment, supplemented with detailed household survey data. These data were purposely collected around the time of the 2009 elections in Mozambique. The empirical results show that the number of migrants a voter is in close contact through regular chatting within a village increases the demand for political accountability by residents in that village. Furthermore, we find our results to be robust to the endogeneity of migration flows.

Keywords: International migration, political participation, effects of emigration in origin countries, behavioral measure, sub-Saharan Africa.

JEL Codes: D72; F22; O15.

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1. Introduction

The economic importance of international migration has been increasing steadily in the recent decades. It is not only that the number of labor migrants has increased massively, but also that the financial flows generated by these migrants have been rising rapidly, often surpassing the national budgets of many developing countries. As a result, the strand of economics literature that examines the potentially positive effects of emigration on the economic development of origin countries has been growing. Positive effects of emigration on economic development may happen as a result of a number of mechanisms such as overcoming liquidity constraints, promoting human capital accumulation and entrepreneurship, and increasing foreign direct investment and international trade.⁵ One area that has deserved relatively less attention is the relationship between migration and the quality of political institutions in migrant countries of origin.

The importance of good political institutions for economic development is by now well established, as influentially described by Acemoglu, Johnson, and Robinson (2005). However, empirical evidence on the impact of emigration on the quality of political institutions in origin countries is scarce, and there are only a few recent contributions. The main objective of this paper is to examine in detail different types of migrant networks, and analyze their role in the diffusion of political attitudes that promote the improvement of institutions.

⁵ Edwards and Ureta (2003) or Yang (2008) described that remittances may provide the financial resources to overcome credit constraints in sending countries. Furthermore, return migration may bring not only financial resources, but also human capital, which can promote entrepreneurship and economic growth, as in Mesnard and Ravallion (2006) and Batista, McIndoe-Calder, and Vicente (2016). Migrant networks may also foster increased Foreign Direct Investment (FDI) and international trade, as found by Gould (1994), Rauch and Trindade (2002), Kugler and Rapoport (2007) or Javorcik et al. (2011). An additional possibility empirically examined and supported by Beine, Docquier, and Rapoport (2008) and Batista, Lacuesta, and Vicente (2012) is the “brain gain” hypothesis according to which the prospect of emigration can actually promote human capital accumulation in migrant origin countries.

The hypothesis under examination is that international migration may change individuals' identities and improve voters' information about political processes in origin countries through exposure to better democratic political values and norms. Through changing the social category an individual belongs to, the set of behavior-defining prescriptions associated with each social category is altered. This will in turn directly affect an individual's decision to vote. We assume that this effect will not only influence migrants themselves, but also trigger peer effects - thus impacting the social network of current and return migrants in their country of origin.

To test our hypothesis that migration may foster political participation, and examine the importance of different types of migrant networks, we exploit data from a representative household survey conducted during the 2009 national elections in Mozambique. Our econometric model allows us to capture if an individual who is connected to one or more migrants is affected differently depending on the characteristics of these connections. Specifically, we test if information and values are transmitted through family members, regular chatting partners, or geographical neighbors by examining whether the effect on political participation is larger for more connected individuals.

Using detailed household survey data, a proxy for actual voter turnout, and a behavioral measure of political participation, we estimate the effect of social and geographical networks of migrants on the quality of political institutions in their home country, Mozambique. Our dataset contains information on the characteristics of migrants and home country residents, on the political attitudes and political participation of these residents, and detailed data on the existence of connections and different types of relationships between households. Distinguishing between types of networks (i.e. distinguishing between kinship ties, frequent chatting, and geographical proximity), and

using individual characteristics of home country residents and migrants, we can include heterogeneous effects on migratory experience in our estimations.

To test our hypotheses we make use of three different sources of data: self-reported voting behavior; actual voter turnout; and a behavioral measure reflecting respondents' political participation. This behavioral measure was obtained by asking respondents to send a cell phone text message (SMS) suggesting policy priorities for the president-elect's mandate to an independent newspaper that publicized these suggestions. Each message implied a small cost that allows us to interpret sending a text message as an incentive-compatible measure of political participation.

To evaluate in detail the different diffusion mechanisms of political attitudes through migrant networks, we use different migrant network measures. We begin by simply looking at whether each respondent reports at least one household member with migration experience. Second, we examine the degree of connectedness between the respondent and migrants within the respondents' network. We distinguish between *migrant geographical networks*, i.e. how many households with at least one migrant in the family exist in the respondent's village; *migrant kinship networks*, i.e. the number of family members with migration experience within this network; and *migrant chatting networks*, i.e. the number of migrant households the respondent regularly chats with.

We estimate a linear probability model, controlling for individual, household, and location characteristics. Because the formation of migrant networks may potentially be correlated with political attitudes via unobserved factors that cannot be controlled for in our regressions, we also conduct two stage least squares regressions that exploit 'quasi-natural experiments' given by the history of natural catastrophes that may plausibly have exogenously created migration flows.

This paper is closely linked to two strands of literature: the consequences of migration on the quality of home country institutions, and the diffusion of political values through social networks.

Spilimbergo (2009) conducted one of the first studies on the effects of migration on democratization by examining the impact of foreign education acquired in democratic countries on fostering democracy in student origin countries. He showed that migration may promote democracy, but left the question unanswered as to which specific mechanisms underlie this effect. Docquier et al. (2011) present cross-country evidence of the positive impact of unskilled emigration from developing countries to OECD countries on the institutional quality of origin countries by using aggregate measures of democracy and economic freedom. The authors find significant institutional gains from the “brain drain” over the long run after considering incentive effects on human capital formation. They attribute these effects to an increase in the exposure of home country population to democratic values and norms. These earlier empirical contributions use aggregate macroeconomic data and explore cross-country variation. Hence, they cannot distinguish between supply and demand forces, nor capture in detail the mechanisms underlying the effects they identify.

Differently, Batista and Vicente (2011) use individual-level variation from a tailored household survey, and behavioral data for Cape Verde. This allows them to discriminate between the impact of return and current migrants on individual-level political attitudes, as well as to emphasize how the improved quality of institutions in different host countries (namely the United States relative to Portugal) positively influenced the magnitude of the migratory impact on political attitudes. While this approach is innovative in the sense that it employs micro data, and points towards return migration from countries with better quality institutions as the driving force for the effect of migration on political attitudes, it would be

interesting to learn more precisely about how individual-level relationships with migrants affect the demand for better political institutions. Barsbai et al. (2016) contribute to this question by exploiting community and individual-level data from Moldova, as well as migration patterns to countries with different political regimes. In particular, they test whether exposure to Western democratic values and norms promoted political change in municipalities with a higher number of emigrants. They find large effects on electoral preferences and outcomes, but also cannot explain how information is transmitted, and what role different social networks play in this process.

In a different related strand of literature, the diffusion of political values through social networks has been previously investigated by Fafchamps, Vaz, and Vicente (2017), who showed that increasing the political literacy of experiment participants changed individual electoral behavior for those participants with more network connections, even if they were not targeted directly by the literacy campaign. Giné and Mansuri (2011) relate closely to this idea as they find positive spillover effects of an awareness campaign in Pakistan on female voter turnout. Similarly, Nickerson (2008) finds that about 60% of the propensity to vote is passed on to another household member in a randomized controlled trial in the United States. These findings suggest that norms about political participation are adopted and passed on to peers.

Our results confirm the findings by Batista and Vicente (2011) in the sense that stronger links with migrants are correlated with a higher likelihood of political participation. These effects seem to be strongly driven by chatting relations with migrants. Our findings are robust to using instrumental variable estimations to control for self-selection into migration.

The remainder of the paper is organized as follows. Section 2 presents a theoretical framework to model how migratory experiences may influence political behavior. Section 3 presents the country context under which the empirical part of this study was carried out.

Next, section 4 proposes an econometric model and estimation strategy for the effects of interest. Section 5 follows with an introduction to the dataset and its descriptive statistics. Finally, section 6 presents the empirical results of the LPM and 2SLS estimations and robustness tests, and section 8 concludes.

2. Theoretical Framework

Political participation is traditionally modeled as the outcome of an expected cost-benefit analysis.⁶ An individual's benefit from political participation is defined as the expected utility derived from the outcome of a political process, and from an individual's intrinsic motivation. The cost of casting a vote can be broadly thought of as including the opportunity cost of going to the local polling station or the cost to obtain the necessary information about election candidates. An individual j can thus be thought of as maximizing the following expected utility function

$$\max_{x_j} E_{\Omega_j} U \left(G(x_j, x_{-j}), I_j(x_j; \mathbf{P}_{c_j}) \right) - cost(x_j) \quad (2.1.)$$

where the outcome of a political process is described by the function $G(x_j, x_{-j})$, x_j is the action vector of individual j , and x_{-j} reflects the combined action of all individuals other than j ; I_j is individual j 's intrinsic motivation; \mathbf{P}_{c_j} is individual j 's prescribed behavior given his assignment to social category c_j ; Ω_j is the information set available to individual j ; and $cost(x_j)$ is the cost for individual j of taking action x_j . Note that in this model own actions and actions taken by others do not enter the utility function directly as, for example, casting a vote might not necessarily directly impact one's utility. The individual maximizes its net expected utility of taking a certain action given the actions of everybody else.

⁶ See Dillon and Peralta (2002) for a detailed description.

We define intrinsic motivation through an individual's identity, following Akerlof and Kranton (2000). For this purpose, let there be a set of social categories \mathbf{C} .⁷ An individual j assigns himself to one of these categories, c_j , given his characteristics, ε_j . The determining characteristics that we take as drivers of political behavior through identity, and are thus relevant in the context of this paper, are an individual's gender, age, income, and most importantly for our case the society (which can be summarized by the geographical location) this individual lives in. Note that individual self-assignment may be unconscious, and differ from the social category others might assign an individual to. Each individual furthermore has a notion about the social categories of all other individuals, c_{-j} .⁸

Whether or not an individual derives utility gains or losses from intrinsic motivation is determined by the individual's actions, x_j , and whether or not these actions are according to the prescriptions \mathbf{P}_{c_j} associated with the individual's social category c_j . We can think of these prescriptions as widely accepted norms that individuals follow to maintain their self-image. In the context of political participation the impact of intrinsic motivation can be illustrated by the following example: in a society where casting a vote is the social norm, an individual might decide to vote despite no direct expected net benefits from it, as he derives intrinsic motivation utility gains by acting according with the social norms.

In this context the set of prescriptions \mathbf{P}_{c_j} can be described as:

$$\mathbf{P}_{c_j} = \mathbf{P}(x_{-j}; c_j(\varepsilon_j))$$

where prescriptions \mathbf{P}_{c_j} that determine an individual's behavior firstly depend on the social category c_j an individual attributes himself to. Belonging to this social category itself depends on characteristics ε_j of individual j , such as his geographical location. Prescriptions

⁷ A social category could be gender or ethnic group, though our model allows for more complex or narrower definitions of a social category.

⁸ Being able to classify others in a social category (or box) helps an individual to interpret the behavior of others as appropriate or not, and copy behavioral patterns of peers belonging to the same social category.

also depend on the actions of others, x_{-j} , to the extent that they reflect the behavior of other individuals perceived as belonging to the same social category and in this way establish the prescribed standard of social norms.

The solution to the expected utility maximization problem (2.1.) yields that the individual's expected marginal payoff from political participation has to be at least as high as the marginal cost of action.

$$E_{\Omega_j} U'_{x_j} \left(G(x_j, x_{-j}), I_j(x_j; \mathbf{P}_{c_j}) \right) = cost'_{x_j}(x_j) \quad (2.2.)$$

The theoretical framework just described allows us to examine two distinct channels through which migration may affect political behavior: a change in an individual's identity and thereby intrinsic motivation for political action, and a learning mechanism based on increased knowledge about political processes.

An individual that emigrates becomes exposed to a different environment. This change in surroundings affects the migrant's social category self-assignment, as it depends on the individual location. As the prescribed behavior \mathbf{P}_{c_j} depends on individual j 's social category, the individual faces different prescriptions after emigration. To avoid net utility losses, the individual migrant should update her political behavior x_j accordingly. This direct impact of migration on x_j may be thought of as what happens when an individual migrates and adopts different standards of political behavior – while he is still abroad or upon return to the home country.

A second more indirect effect of migration on political behavior may happen through the actions of others, independently of own migratory experiences. This effect may happen if peers in individual j 's network have migratory experience and their changed behavior is relevant to define \mathbf{P}_{c_j} . As prescriptions are influenced by peers' actions, our model predicts that migration can in this way change the behavior of non-migrants indirectly. This is the

case if the opinion of peers, mirrored in their actions, has enough weight within a social category to influence existing prescriptions.

The second channel through which migration may affect political behavior is through learning about political processes. If migration changes the information set available to an individual, Ω_j , for example by learning about the quality of the democratic process in the origin country and thereby increasing the value of political participation, the net marginal benefit of voting may increase and lead to more active political participation. The same effect may take place through the migratory experiences of peers that are a part of individual j 's social network, and which can contribute to enlarging this individual's information set Ω_j , and in this way contribute to changing political participation of individual j residing in the country of origin.

3. Country Context: Mozambique

This study examines migration between Mozambique, and (to a large extent) its neighboring African countries such as South Africa, Malawi, and Tanzania. Mozambique is considered to be one of the poorest countries in the world with a GNI per capita of only 1.140\$PPP in 2014. Despite its high growth rates of 7.14% on average between 2000 and 2014, Mozambique is still ranked 178 out of 187 countries in the Human Development Index. For many years, Mozambique has been an aid-dependent country that, in 2013, received official development assistance of almost 15% of its GNI (US\$2.3b).⁹ The majority of the Mozambican population, around 81%¹⁰, is directly dependent on agriculture. Climate change is a major threat to these livelihoods as Mozambique is exposed to extreme weather events that are expected to become more frequent and intense in the future. In January 2013, the

⁹ World Development Indicators (2015), World Bank.

¹⁰ CIA World Factbook (2015).

worst flood since 2000 hit the southern province of Gaza, displacing more than 175.000 people.¹¹

As a consequence, Mozambique has been an emigration country for a long time. Large migratory movements from Mozambique were traditionally labor-driven mainly from the southern Mozambican provinces to South African mines and commercial farms.¹² In 2013, (formal) remittances flows contributed towards GDP with 1.4%, having inflows of approximately US\$217 million. Migration from and to Mozambique has furthermore been related to conflict and political unrest: After its independence from Portugal in 1975, as a result of ten years of war, Mozambique was led by the independence movement FRELIMO (Frente de Libertação de Moçambique) under a single-party, socialist regime. Only two years after independence had been negotiated, the country began suffering a civil war between FRELIMO and RENAMO (Resistência Nacional Moçambicana) that evoked large refugee movements to neighboring countries. With the end of the cold war, and the collapse of apartheid, FRELIMO and RENAMO started negotiations that resulted in a new constitution allowing for a multi-party system, and a peace treaty signed in 1992. The newly established peace encouraged many of the refugees to return to their homes in Mozambique. In the following, presidential and parliamentary elections were held in 1994, 1999, 2004, 2009, and 2014. FRELIMO won these elections by far and increased its vote share consistently. Across all national elections, electoral irregularities (mainly claimed by RENAMO but also confirmed by international observers) had significant consequences for the overall results. The 2009 elections, the time around which our data has been collected, are considered to have followed international standards, despite small irregularities. Both Armando Guebuza, the Mozambican president from 2005 until 2015, and FRELIMO were elected unambiguously by 75% in 2009. Freedom House considers Mozambique a ‘partly-free’

¹¹ Red Cross Mozambique (2013).

¹² This is reflected in our data as around 75% of migrants emigrated to South Africa as shown in Table 2.

country,¹³ and Mozambican citizens generally show difficulties in grasping the importance of democracy.

More recently, return migration to Mozambique has been determined by the onset of violence against foreign immigrants in South Africa – the most important destination country for Mozambican emigrants. In 2008, xenophobic attacks resulted in the death of several people. As a consequence, several thousands of Mozambicans flew back to their home country.

4. Estimation Strategy

To test our hypotheses, we build an econometric model based on the theoretical framework described in Section 2. The relationship between emigration and political behavior is estimated for different outcome variables that reflect a respondent's political participation. Political participation can be estimated using the following latent variable model:

$$V_i = 1(V_i^* \geq 0) \quad (4.1)$$

$$V_i^* = \alpha + \beta \sum Network_{ij} * mig_HH_j + \delta X_i + \varepsilon_i \quad (4.2)$$

According to this model, the respondent will vote (or be politically active) if the net expected benefit from voting, V_i^* , is non-negative. This net expected benefit is influenced by the links with migrants in the respondent's network, $\sum Network_{ij} * mig_HH_j$, as well as by a vector of individual and geographic characteristics X_i . The number of links with migrants in an individual's social network is computed as the interaction between the directed link from individual i to individual j , and a dummy for the migration experience of household j . Note that we consider a household to be linked to itself. The variable $Network_{ij}$ indicates whether or not two respondents live in the same village, have a kinship relation, or regularly chat with

¹³ Freedom House (2013).

each other, depending on the specific network type under evaluation – either the geographical, kinship or chatting network.

In addition, a vector of individual, household, and locality specific controls, X_i , determines the costs and benefits of political participation. This vector includes demographic controls that determine the identity of an individual such as gender, and age. To capture effects arising from a greater information set, this vector furthermore includes the levels of schooling completed, as well as the access to information provision (such as radio, television, or internet access). We also include province fixed effects in all our specifications. We estimate our model by using a linear probability model.¹⁴ Standard errors are clustered at the village level.

4.1 Two Stage Least Squares Estimation

This paper aims at determining the differential impact of different types of network links with migrants on political behavior. The main threat to identification we are concerned about is that migration might be correlated with individual political attitudes through unobservable factors that cannot be controlled for in our econometric analysis so far. This would imply a correlation between our explanatory variable and the regression error term. We might face an omitted variable bias if individuals that are less (or more) politically active opt to emigrate to another country more often than people that participate in politics more (less) often. In the case of Mozambique, the ongoing political instability, high corruption, and subpar working of democracy might affect people in their decision to leave the country.

To tackle this issue, we use a Two Stage Least Squares (2SLS) estimation approach. We exploit the exogenous variation in the occurrence of natural catastrophes affecting harvests or cattle as sources of emigration. We make use of detailed data on catastrophes in Mozambique at the district level, allowing for large variation between EAs. In particular, we

¹⁴ Probit regressions were also run and yielded similar results.

interact the occurrence of droughts in the district of a respondent's village with her birthyear and sum over the total number of catastrophes that occurred in the three years prior to the respective year.¹⁵ Especially in rural areas (the context of our study), harvests and cattle are often the livelihood of families, as there are almost no income sources from salaried work. We therefore expect the occurrence of a natural disaster to be highly correlated with an individual's decision to migrate in order to provide for her family. Our instrumental variable is highly correlated with household migration as droughts indeed significantly increase the pressure to emigrate in order to provide for the family back home. The reported F-statistics as shown in Tables 4 to 6 confirm our reasoning. In the Mozambican context, weather shocks are unlikely to be correlated with political attitudes and behavior other than through migration. Government responses to natural catastrophes in Mozambique are basically non-existent – and oftentimes the government neglects the severeness of natural catastrophes despite their recognition by the international aid community. We thus argue that our exclusion restriction fulfills the two necessary criteria to be used as a valid instrumental variable.

We estimate the following 2SLS model:

$$y_i = \alpha + \beta \sum \widehat{Network}_{ij} * mig_HH_j + \delta X_i + \varepsilon_i$$

$$\sum \widehat{Network}_{ij} * mig_HH_j = \alpha + \theta_2 \sum Network_{ij} * Exposure\ to\ Droughts_j + \delta X_i + \varepsilon_i$$

This specification takes the endogenous decision to migrate into account by replacing it with predicted migration behavior based on our proposed exclusion restriction. The vector X_i contains individual and geographic controls as stated before.

¹⁵ Our results are robust to the use of similar IVs constructed with different types of weather shocks as well as different age thresholds and time spans. The data used are from the UNDP (2013) DesInventar database.

5. Data and Descriptive Statistics

The household survey data used in this paper was collected in Mozambique from mid-September until mid-October 2009 by the CSAE at the University of Oxford. The four provinces covered by the survey are Cabo Delgado, Zambézia, Gaza, and Maputo-Province. The survey's sampling framework was based on the 2004 electoral map of the country and conducted in two stages – first on provinces, then on enumeration areas. The interviews targeted the household head or her spouse, and were conditional on ‘having access to a cell phone’ to receive or send text messages (this included having access to a neighbor's or family member's phone). This condition was necessary for the construction of the behavioral measure on the expression of political objectives via a text message.¹⁶ Households in each location were selected following standard procedures for household representativeness, i.e. starting from the center of each enumeration area, the n^{th} household was interviewed.

5.1 Descriptive Statistics

The importance and magnitude of migration in Mozambique is reflected in Table 1, which illustrates the percentage of households with migrants in our sample. It shows that almost 33% of all households report having at least one migrant, and only 17.5% of households live in villages where no geographical neighbors ever migrated. Approximately 41% of households have a family member that is currently or has been living abroad. This number increases slightly to around 48% of households that indicate to be regularly chatting with migrant households. The migratory experiences in our dataset are mainly determined by emigration to South Africa, which accounts for about 75% of all destination countries – a detailed description of the frequency of different destination countries can be found in Table 2. Almost half of our sample is composed of women with an average age of approximately 37

¹⁶ For a detailed description of this measure see below.

years. The education a respondent received is rather limited with approximately six years of schooling on average (primary education).

5.2 Description of Variables of Interest

Our main outcome variable of interest is the respondents' political participation - measured through a measure of actual voting during the 2009 national elections. We furthermore complement our analysis by examining self-reported voter turnout, and an alternative behavioral measure reflecting the experimental subjects' desire to communicate policy priorities.

Actual Voting Measure

To obtain a measure more closely related to actual voting behavior, as opposed to simply limiting ourselves to analyzing self-reported voting behavior from the survey, we followed individuals through the 2009 elections and asked them to show us the finger that was inked after having voted. If the interviewer observed a correctly inked finger (i.e. respondents correctly identified the finger that was inked after having voted), we interpret this proxy as the respondent having actually voted. Table 3 shows that almost 85% of household heads voted in the 2009 elections as proxied by this outcome measure.

Survey Measures

We also use a standard survey question on whether the respondent reported having voted. Almost 91% of the respondents in our sample claimed to have voted during the 2009 elections. The contrast with our actual voting measure suggests a possible conformity bias where respondents report to have voted without having done so.

Behavioral Measure of Political Participation

To evaluate whether actual voting behavior can be proxied in a more reliable and efficient way than through survey outcomes, we conducted a simple behavioral experiment

with our survey respondents: We proposed respondents the option to send cell phone text messages suggesting policy priorities for the president-elect's mandate. These suggestions would be forwarded to an independent Mozambican newspaper that would in turn publicize these suggestions, namely to the president-elect himself. This promise was made credible by the public official support of the newspaper to this initiative. Note that since sending a SMS message entails a small direct cost,¹⁷ our measure is a costly action, which we interpret as an incentive-compatible measure of political participation.

We were able to identify the individual survey respondents that sent messages through cell-number matching. This matching was easy to achieve since participation in this study was conditional on having access to a cellphone as discussed above.

International Migrant Networks

A household is considered an international migrant household if at least one of the household members is currently or has ever lived outside of Mozambique for at least six months. To obtain to how many migrants an individual is connected through her social network, we interact this migration variable with the network links across all households within one enumeration area. Our migrant network variables allow us to distinguish between network effects according to the social proximity of two respondents. This means that we not only evaluate the overall number of links with migrants in an individual's geographical network (i.e. within the same EA) but most innovatively, the number of migrants in an individual's chatting and kinship network. A chatting link between two individuals is recorded if a respondent indicates to regularly talk with another respondent. We allow for this link to be directed, i.e. a one-sided existence of a link is sufficient, as our theoretical framework suggests that the conception of social categories is subjective, and need not be consistent across individuals. We calculate kinship links in the same way if an individual

¹⁷ The cost of sending a text message is small in the sense that it is not high enough to imply financial constraints to political participation for respondents. There is also the time cost of taking the action itself.

reports to be related to another respondent. The degree of connectedness with migrants is then calculated according to this classification as the total number of migrants the household is connected to.

6. Empirical Results

In this section, the main empirical results are summarized. We first present the relationship between geographical proximity to migrants and voting behavior. The subsequent subsections discuss the role of kinship and chatting relations with migrants.

6.1 Geographical Proximity

The existing evidence on the role of migration in shaping political institutions and behavior, including our own theoretical framework, suggests that a higher number of migrants within a village increases the political participation of others living in the same village. Under our hypothesis that migration increases the benefits of political participation and creates positive spillover effects, we would expect a positive effect of geographical migrant networks on voting behavior. This positive effect would be the result of Mozambican migrant destinations being mainly to countries with a higher democracy index,¹⁸ and higher political participation. In this way, migrants firstly learn about the importance of elections, and secondly adapt to an environment abroad where democracy is more valued, thus changing their identity.

As shown in column (1) and (2) of Table 4a, our empirical estimates are in line with our theoretical predictions. We obtain a positive and highly significant increase of between 1.1 pp and 1.2 pp in the probability of actual voting (proxied by being shown the inked finger) per additional migrant residing in a given village. Column (3) of the same table

¹⁸ According to different sources such as data from the Democracy Index by the Economist Intelligence Unit, for example.

reports the effect on voting behavior after controlling for the endogenous decision to migrate. As discussed in detail in the section above, we use the cumulative incidence of droughts in a village as an instrument for the number of migrant households in that village. The 2SLS estimates confirm the LPM results, and somewhat increase the magnitude of the estimated coefficient: one more migrant household in a village now increases the likelihood to vote of residents in that village by 3.4 pp.

We find that this positive result does not hold when analyzing self-reported voting behavior under the LPM specification, as shown in columns (1) – (2) of Table 4b. Although the estimated coefficients are positive, this positive relationship between migration and self-reported voting behavior cannot be precisely estimated. This may indicate that the self-reported survey measure is too noisy a proxy for actual voting behavior. In contrast our 2SLS estimates do confirm the effects as found above. Consistent with the existing literature, households in villages with more migrants, are found to be more politically active although migrants seem to have a smaller effect on self-reported than actual voting. This difference can be explained by the over-reporting of voting behavior discussed above.

Our behavioral measure of political engagement confirms the findings obtained using data on actual voting behavior after accounting for the potential simultaneity bias of migration and political behavior. Although the effect of geographical migrant networks is not statistically significant when using a LPM as shown in columns (1) and (2) of Table 4c, the 2SLS estimates in column (3) of the same table show that one more migrant household in a village increases political participation of its residents by 3.7 pp. The effect as estimated through our experimental measure is thus similar in size to actual voting behavior pointing towards an even more important role of migrants in changing actual political behavior and expression of democratic preferences, in contrast to political attitudes only.

In the following two sub-sections, we will examine what type of personal relationships is driving this effect as both, kinship and chatting networks, are sub-networks of the geographical network above.

6.2 Kinship Networks

We now turn to examining the role of kinship relations with migrant households in shaping political behavior of the left behind. A kinship relation between two households exists, if a respondent indicated to have family ties to the household head of another household in our sample within the respective EA. Since households were randomly sampled within each EA, we can expect the observed network links with migrants to be representative in magnitude to the overall kinship connectedness with migrant households of the respondent.

Our results in columns (1) and (2) of Table 5a suggest that kinship relations with migrant households are positively correlated with actual voter turnout. Indeed, we estimate positive effects of 2.7 pp per additional migrant in the kinship network when controlling for individual and household characteristics. Column (3) of Table 5a reports the 2SLS estimates of the effects of migration on actual voter turnout controlling for self-selection into migration. Our estimates point to a substantial 4.2 pp effect.

Similarly, kinship ties with migrants significantly increase self-reported voting behavior up to 3pp even after controlling for unobservable self-selection in migration decisions as is shown in columns (1) - (3) of Table 5b.

In contrast to these results on actual political behavior, our behavioral measure of political participation is not significantly affected by kinship ties with migrant households. Neither the LPM, nor the 2SLS specifications yield any statistically significant estimation results. These results suggest that being related to more migrant households changes attitudes towards politics, but this effect is not necessarily strong enough to actually induce a change in behavior.

6.3 Chatting Networks

We are therefore interested in understanding how friendship – and in particular friendship with international migrants – may affect political behavior. Friendship is a complex concept and implies subjective definitions especially in a country context such as Mozambique, where there exist many local languages whose usage in rural areas dominates the official language Portuguese. We proxy friendship by asking respondents with whom in the sampled village households they regularly chat.

Chatting with migrants seems to significantly change attitudes that ultimately lead to a change in behavior. As is shown in columns (1) to (3) of Table 6a, chatting with one more migrant has a positive and significant effect on actual voting behavior of 4.4 pp.

Table 6b shows the effect of regularly speaking with migrant households on an individual's likelihood to self-report having voted. As before we obtain highly significant positive effects of up to 1.8pp in the probability to report voting per additional migrant household in the chatting network. This estimate is robust to controlling for self-selection of migrants.

The estimation results displayed in Table 6c show that the effect of migrant chatting networks is also positive and significant on our behavioral measure of political participation after controlling for possible endogeneity concerns. As reported in column (3) of Table 6c, the positive effect of talking to one more migrant household increases the likelihood of sending a text message by 2.7pp when accounting for migrant self-selection.

7. Concluding Remarks

This paper aims at providing insights on how international migration may affect political participation via social networks. For this purpose, we use two original individual-

level behavioral measures of political participation, as well as self-reported political participation and detailed household survey data.

Despite a few existing macroeconomic studies on this topic, the mechanisms underlying the diffusion of democratic values and political behavior are still unclear. We develop a theoretical model allowing us to analyze the different mechanisms through which migration might affect political behavior. In the subsequent sections of this paper we test the hypotheses drawn from the theoretical model for the case of Mozambique – a low-income country characterized by weak political institutions and large migratory flows.

Our results suggest that political participation can be learned and valued more highly when people migrate to other countries with better quality political institutions, and that the newly obtained political values might be passed on to peers. We confirm existing results on positive effects of geographically close migrant households on political participation – for example, Batista and Vicente (2011) for Cape Verde. We furthermore find that increased political participation during elections seems to be mainly driven through intense contact with migrants through regular chatting. In line with former contributions, we also find that the effect of migration on political participation is most strongly reflected in actual voting behavior. This behavior is reproduced in a relatively simple behavioral experiment based on sending a text message. Self-reported voting behavior however seems to be a less reliable source to measure the impact of migration on political behavior in the context of this study as it seems to underestimate the positive effects of migration on political participation. This finding may be informative for the design of future studies that rely on survey measures of political attitudes and participation in the context of the economics of migration.

Our results suggest that migration policies whereby the best governed migration host countries open their doors to migrants from countries with poor accountability records might be an effective way to promote political participation in the migrant countries of origin. To

the extent that better institutions contribute to economic development, enacting ‘brain circulation’ policies such as scholarship schemes in developed countries might be a successful development aid tool.

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TABLES

Table 1: Migration - Household Characteristics. All Households (%)

All Households		
	Number of Links	Migration Experience
Households with <i>at least one migrant</i>		32.41
Migrant households in <i>geographical network</i>	0	17.50
	1	15.63
	2	10.48
	3	8.10
	4	11.10
	5	13.02
	6	6.85
	7	5.55
	8	4.25
	9	5.66
	10	1.87
<i>Kinship relations</i> with migrant households	0	58.28
	1	24.28
	2	7.89
	3	4.34
	4	2.34
	5	1.04
	6	1.47
	7	0.09
	8	0.09
	9	0.17
<i>Chatting relations</i> with migrant households	0	51.78
	1	23.59
	2	8.76
	3	5.55
	4	4.42
	5	2.43
	6	1.91
	7	0.69
	8	0.52
	9	0.35

Table 2: Destination Countries of All Migrants (%)

Destination Countries	
South Africa	75.32
Tanzania	7.68
Malawi	5.12
Germany	2.38
Swaziland	2.19
Zimbabwe	1.83
Other European	1.83
Portugal	1.46
Cuba	1.46
Other African	0.91
Other	0.73

Table 3: Summary Statistics. All Households.

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Inked Finger Indicator	1121	0.85	0.36	0	1
Self-Reported Voter Turnout	1121	0.91	0.28	0	1
Sending Text Message	1147	0.18	0.38	0	1
HH Head Gender	1766	0.45	0.5	0	1
HH Head Age	1750	37.6	13.6	15	88
HH Maximum Level of Schooling	1763	2.45	1.72	0	8
Total Access to TV, Radio or Computer	1764	1.14	0.86	0	3

Table 4: Effects of International Migrant Geographical NetworkTable 4a: **Actual Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrants within locality	0.011*** (0.004)	0.012*** (0.004)	0.034*** (0.010)
Individual Controls Included	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	32.75
Observations	1121	1111	1111

Table 4b: **Self-Reported Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrants within locality	0.004 (0.003)	0.004 (0.003)	0.018** (0.007)
Individual Controls Included	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	32.75
Observations	1121	1111	1111

Table 4c: **Sending Text Message**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrants within locality	-0.002 (0.008)	-0.001 (0.008)	0.037** (0.015)
Individual Controls Included	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	33.52
Observations	1147	1137	1137

Table Notes:

Individual Controls include gender of household head (male), age of household head (years), highest education level completed by the household head, and access to radio, television and computers. Province fixed effects are included in all specifications. Instrumental Variable is a measure of the cumulative exposure to droughts experienced by each household. Please see text for details on the construction of the IV. Kleibergen-Paap Wald F-statistics are reported. Standard errors in parentheses, clustered at enumeration area level, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Effects of International Migrant Kinship NetworkTable 5a: **Actual Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrant Kinship Network	0.027*** (0.007)	0.027*** (0.007)	0.042*** (0.014)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	46.83
Observations	1121	1111	1111

Table 5b: **Self-Reported Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrant Kinship Network	0.015*** (0.005)	0.014*** (0.005)	0.030*** (0.007)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	46.83
Observations	1121	1111	1111

Table 5c: **Sending Text Message**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrant Kinship Network	0.004 (0.012)	0.010 (0.012)	0.022 (0.022)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	47.47
Observations	1147	1137	1137

Table Notes:

Individual Controls include gender of household head (male), age of household head (years), highest education level completed by the household head, and access to radio, television and computers. Province fixed effects are included in all specifications. Instrumental Variable is a measure of the cumulative exposure to droughts experienced by each household. Please see text for details on the construction of the IV. Kleibergen-Paap Wald F-statistics are reported. Standard errors in parentheses, clustered at enumeration area level, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Effects of International Migrant Chatting NetworksTable 6a: **Actual Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrant Chatting Network	0.027*** (0.006)	0.027*** (0.006)	0.044*** (0.009)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	36.83
Observations	1121	1111	1111

Table 6b: **Self-Reported Voting**

	LPM	LPM	2SLS
	(1)	(2)	(3)
International Migrant Chatting Network	0.015*** (0.004)	0.014*** (0.004)	0.018** (0.007)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	35.53
Observations	1121	1111	1111

Table 6c: **Sending Text Message**

	LPM	LPM	2SLS
	(1)	(3)	(4)
International Migrant Chatting Network	0.007 (0.009)	0.011 (0.009)	0.027** (0.014)
Individual Controls	NO	YES	YES
Kleibergen-Paap Wald F-Statistic	-	-	38
Observations	1147	1137	1137

Table Notes:

Individual Controls include gender of household head (male), age of household head (years), highest education level completed by the household head, and access to radio, television and computers. Province fixed effects are included in all specifications. Instrumental Variable is a measure of the cumulative exposure to droughts experienced by each household. Please see text for details on the construction of the IV. Kleibergen-Paap Wald F-statistics are reported. Standard errors in parentheses, clustered at enumeration area level, * p<0.10, ** p<0.05, *** p<0.01.