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Governance quality and net migration flows

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ABSTRACT

This paper shows that governance quality promotes positive *net* inflows of high-skilled migrants. Home and foreign institutions influence both inflows and outflows, thus determining the net flows of college graduate migrants. Therefore, institutions can affect human capital through migration flows. Our empirical strategy is based on a random utility model from which we derive the net balance of migrants and an exclusion restriction to control for the selection of migrants. We test the predictions of the model using comprehensive matrices of migration by education level and a synthetic indicator of governance quality. We account for endogeneity concerns by means of an instrumental strategy and we disentangle the effect of the quality of domestic and foreign institutions on both inflows and outflows.

1. Introduction

In an era when human capital is crucial for economic growth, factors attracting foreign workers are as important as those refraining natives from emigrating. Both immigration and emigration shape net migration flows and affect the human capital accumulation process.

In this paper, we investigate the effect of governance quality on *net* flows of human capital defined as differences between inflows and outflows of migrants by education level.[1] We find that the quality of institutions has a positive effect on the net inflow of college-educated migrants. In particular, college graduates are more willing to migrate to countries with good institutional quality, and they tend to emigrate more from countries with low governance quality despite potentially greater migration costs. The results for the less educated have a slightly different pattern. More precisely, the low-skilled are also more likely to leave countries with low institutional quality, but we find no effect of the quality of foreign institutions on their migration choices. Therefore, the difference in institutional quality between the home country and the destination country seems to be less important to explain the net migration flows of low-skilled migrants compared to high-skilled migrants.

The analysis of the paper proceeds in three steps. First, we develop a theoretical framework and use a random utility model of migration that delivers migration balances as a function of bilateral differences in country characteristics. The model predicts that net migration flows are a function of asymmetries in the quality of institutions, wages, population size, and diasporas. The main advantage of focusing on net migration flows rather than on unilateral emigration or immigration flows separately is that all symmetric factors (observed or unobserved) affecting both immigration and emigration cancel each other out. Therefore, the model itself provides a rationale for an exclusion restriction to control for the selection of migrants. In addition, focusing on net flows reduces the scope of omitted variable problems. Any unobserved bilateral factor that influences immigration and emigration symmetrically, such as cultural proximity, does not affect net flows.

In the second step, we provide descriptive evidence of the model by correlating net flows derived from comprehensive matrices of migration (Artuc et al., 2015) and a synthetic indicator of governance quality derived from the six governance measures provided by Kaufmann et al. (2009). We deal with selection on inflows and outflows by following the strategy of Helpman et al. (2008) and, as predicted by the model, we use the symmetric bilateral components of migration costs as exclusion restrictions. The results show a positive correlation between governance quality and net migration flows and provide descriptive evidence for the predictions of

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[1] In the analysis, we take into account the possible imperfect substitutability between emigrants and immigrants.

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the model. However, these regressions can suffer both from an omitted variable and a reverse causality problem. The first can result from unobserved asymmetric factors that influence both net migration flows and the quality of institutions. The second can be due to: i) immigrants directly influencing the institutions of the host country by voicing their opinion and voting (Hirschman, 1970); ii) emigration rates increasing the incentives for the elite to improve the quality of institutions (Docquier and Rapoport, 2003); and iii) emigrants voicing their opinion from abroad (Docquier et al., 2016; Li and Hale, 2005; Spilimbergo, 2009).[2] Thus, a sound instrumental strategy is needed to capture the causal effect. We instrument the distance in the quality of governance between two countries with the distance in the Scrabble index of their name. Language traits influence the set of norms and values which constitute institutions in a country (Tabellini, 2008). We show that the quality of institutions is negatively correlated with the complexity of a country's name. Therefore, countries with more complex languages – and thus more complex names – tend to have worse institutions.[3] At the same time, we show that migrants do not take into account the complexity of a country's name when migrating. Therefore, the instrument is correlated with the endogenous variable and is orthogonal to migration flows. Both the first and second stages of our 2SLS strategy perform as expected and allow us to identify the positive and significant impact of governance quality on migration balances for college graduates.

Finally, in the third step, we disentangle the positive effect of the quality of institutions on net migration flows by looking separately at inflows and outflows and by separating the effect of home and foreign institutions. We find that college graduates take into account both home and foreign institutional quality when choosing where to migrate, while the low-skilled only consider home institutional quality. This can be the result of the low-skilled having more trouble acquiring and/or processing information on foreign countries. The insignificant elasticity of the low-skilled with respect to foreign institutions helps explain why the difference in institutional quality between home and foreign countries is less important for low-skilled than for high-skilled net migration flows.

This paper contributes to an increasing segment of the literature on the determinants of international migration. Previous work studied the determinants of bilateral migration stocks and flows (e.g. Belot and Hatton, 2012; Mayda, 2010; Grogger and Hanson, 2011; Beine et al., 2011; Bertoli and Fernández-Huertas Moraga, 2013, 2015), or aggregate immigration and emigration flows (e.g. Pedersen et al., 2008; Docquier et al., 2007). Our contribution to this literature is twofold. First, we focus on the determinants of the size and skill structure of *net* migration flows (i.e. differences between inflows and outflows by education level). Second, while previous studies analyzed the role of income (Belot and Hatton, 2012; Grogger and Hanson, 2011), migrants' networks (Beine et al., 2011), or migration policies (Bertoli and Fernández-Huertas Moraga, 2013), we focus on the role of governance quality. However, in comparative growth studies, the quality of institutions has been considered by some influential economists as a major explanation of cross-country inequality (e.g. Hall and Jones, 1999; Acemoglu et al., 2005a,b; Shleifer et al., 2008). Hence, it is worth investigating whether the effect of institutions on growth is partly channelled through the mobility of highly educated workers and less educated ones.

The remainder of the paper is organized as follows. Section 2 explains the micro-foundations of our empirical strategy. The data are described in Section 3. Section 4 presents the empirical results. Finally, Section 5 concludes.

2. Empirical strategy

Our empirical strategy is based on a random utility model of migration, which provides a rationale for an exclusion restriction to control for the selection of migrants.

2.1. Random utility model

Individuals born in an origin country i ($i = 1,\ldots,I$) decide whether to stay in their home country or emigrate to another country j ($j = 1,\ldots,J$). For simplicity, we abstract from skill heterogeneity, but our micro-foundations could be made specific to a particular skill, age, or gender group. The indirect utility of an individual is linear in income (as in Grogger and Hanson, 2011), in the quality of institutions, and includes possible migration costs.

In a given group, the utility of an individual born in country i and staying in country i is given by $u_{ii} = \alpha w_i + \beta G_i + \varepsilon_{ii} \equiv \bar{u}_{ii} + \varepsilon_{ii}$ where w_i denotes the expected labor income in location i, G_i denotes the quality of governance and institutions, ε_{ii} is a spatially uncorrelated individual-specific iid random term;[4] we assume ε_{ii} follows a type-I extreme-value distribution. Coefficient α measures the marginal utility of income; and β denotes the preference for staying in a country with good institutions. The utility obtained when the same person migrates to location j is given by $u_{ij} = \alpha w_j + \beta G_j - C_{ij} + \varepsilon_{ij} \equiv \bar{u}_{ij} + \varepsilon_{ij}$ where w_j, G_j and ε_{ij} denote the same variables as above, and C_{ij} captures moving and assimilation costs that are borne by the migrant. Here, coefficient β captures the preference for the quality of institutions at destination. When the random term follows an iid extreme-value distribution, we can apply the results of McFadden (1984) and write the log ratio of emigrants in country j to residents of i as:

$$\ln\left[\frac{M_{ij}}{M_{ii}}\right] = \alpha[w_j - w_i] + \beta[G_j - G_i] - C_{ij} \tag{1}$$

Migration costs are not observable. In line with the rest of the literature, we assume they increase with the distance d_{ij} between the two countries (i.e. geographical, cultural, and linguistic distances), decrease with the size of the established migration network or diaspora N_{ij}, decrease with the size of the native population in the host country M_{jj} (a country's capacity to host migrants increases with the size of the native population), and decrease with the quality of institutions at origin G_i. These effects are likely to vary across groups. Using the logarithmic, we write

$$C_{ij} = \delta \ln d_{ij} - \epsilon \ln N_{ij} - \rho \ln M_{jj} - \lambda G_i \tag{2}$$

where coefficient λ captures the fact that bad institutions and low government effectiveness at origin can be responsible for greater

[2] Li and Hale (2005) were the first to provide a cross-country investigation of the impact of skilled labor migration on a sending country's institutional development. Spilimbergo (2009) found that foreign-trained students promote democracy in their home countries only if the foreign education was acquired in a democratic country. More recently, Docquier et al. (2016) found a robust and positive effect of emigration on the quality of institutions in a panel setting.

[3] Tabellini (2008) argues that language can influence the culture traits at the basis of institutions and their quality, such as the general morality of the people living in a country, defined as *"the universal applicability of rules of just conduct"*. At the same time, Chen (2013) shows that linguistic traits affect both economic and non-economic attitudes. On the one hand, a more complex language might have led to more difficulties in coordination and comprehension, thus limiting the development of institutions. On the other hand, it might have contributed to developing more complex and thus less efficient institutions (Room, 2015).

[4] See Bertoli and Fernández-Huertas Moraga (2013) for a relaxation of this hypothesis.