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Abstract This paper examines the relationship between immigration and host countries' institutional quality, using international migration data, and two composite metrics, encompassing multiple dimensions of governance. Moreover, we construct indicators of cultural diversity, such as fractionalization and polarization, to capture potential effects from multiculturalism. To reduce endogeneity concerns, we employ pseudo gravity-based instruments in a 2SLS setting. Overall, our findings suggest that counties with higher immigrant concentrations and cultural polarization display lower levels of institutional quality. Notably, however, the impact on countries with healthy institutions appear to be negligible.

Keywords Immigration · Diversity · Institutions

JEL Classification J15 · O15 · O43

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1 Introduction

There is much agreement among scholars that migrants contribute to the host economies by adding their hard work, talents and ideas to the pool of skills (see, e.g., Felbermayr et al., 2010; Ortega and Peri, 2014; Alesina et al., 2016; Bove and Elia, 2017).[1] Nevertheless, a recent, bourgeoning area of research suggests that natives in many Western countries turn to right-wing extremists in response to immigration from abroad (see, e.g., Mendez and Cutillas, 2014; Barone et al., 2016; Halla et al., 2017; Brunner and Kuhn, 2018; Mayda et al., 2018; Edo et al., 2019; Roupakias and Chletsos, 2020). As summarized by Hainmueller and Hopkins (2014), existing research on native attitudes toward migrants suggests that anti-immigration sentiments are mainly fueled by sociotropic concerns about the potential impacts on a nation's cultural homogeneity rather by economic considerations.[2]

There is, however, one open question, concerning the effects of migrants on the quality of institutions, which has long been recognized by economists that is amongst the most crucial determinants of economic development (see, e.g., Olson, 1982; North, 1990; Knack and Keefer, 1995; Hall and Jones, 1999; Acemoglu et al., 2001; Rodrik et al., 2004).[3] Some prominent scholars, such as Collier (2013) and Borjas (2015), appear to be pessimistic, raising concerns that migrants might import "bad" institutions into the receiving countries. Yet, the few existing empirical studies have documented mixed results on some indicators related to the quality of governance, such as economic freedom, corruption and political stability (see, Mavisakalyan and Gebremedhin, 2013; Clark et al., 2015; Dimant et al., 2015; Powell et al., 2017; Padilla and Cachanosky, 2018; Bologna Pavlik et al., 2019). The main message conveyed by these studies is that immigration is strongly associated with higher levels of economic freedom across countries,[4] whereas it induces political instability.

[1] Banerjee and Duflo (2019) offer a nice discussion of the literature on the economic impacts of migration.

[2] Sides and Citrin (2007) also argue that native attitudes reflect misperceptions about the true size of immigrant population and stereotypes, rather than economic concerns.

[3] However, note that not all economists agree that healthy political institutions induce economic prosperity. For instance, Clark (2005) argues that the establishment of a stable democracy after the 1688-1669 Glorious Revolution in the UK, did not coincide with economic growth. See, also the objections raised by the institutional economist, Chang (2011), related to identification issues surrounding the empirical literature based on observational data.

[4] Padilla and Cachanosky (2018), employing state-level data for the USA find a weak negative association between immigration and economic freedom.

On the other hand, the evidence is mixed concerning the impact of immigration on corruption. For instance, Dimant et al. (2015) have suggested that migration exhibits a positive association with corruption in OECD countries,[5] whereas Bologna Pavlik et al. (2019) have argued that the effect is negligible.[6]

The aim of this paper is to shine new light on these debates, by systematically examining the nexus between immigration and institutional quality, as proxied by the mean value of the World Governance Indicators (WGI) for six dimensions of governance, namely voice and accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2010). We also perform robustness checks by employing an alternative synthetic metric in the fashion of Jones and Tarp (2016), combining data from the Freedom House, the Database of Political Institutions, the CIRI Human Rights Dataset, the Polity IV project, and Wood and Gibney's (2010) dataset. We are unaware of any similar attempt to assess whether migration is associated with the quality of governance, as measured by the composite indicators employed in this study. What is more, given the strong association between institutions and economic development, having greater insight into the connection between migration and institutions would yield useful information about the impact of migrants on economic development as well.

A secondary objective of this study is to assess the role of multiculturalism, measured along two dimensions, namely fractionalization and polarization (see, e.g., Montalvo and Reynal-Querol, 2005).[7] The relevant indicators are constructed using data from the World Bank's Global Bilateral Migration Matrices, and are intended to capture the effects of immigration induced heterogeneity, as opposed to the immigrant share which reflects the scale of the migration phenomenon. Lastly, our study also contributes to the literature analyzing the determinants of institutions (see e.g., Alesina et al., 1999; Acemoglu et al., 2001; Easterly and Levine, 2003; Nunn and Puga, 2012; Alesina and Giuliano, 2015; Rubin, 2017; Ang et al., 2018).[8]

[5] More precisely, these authors find that the effects stem from migrants originating from countries which display high levels of corruption and not from general immigration per se.

[6] It is worth noting, that a number of related studies have been undertaken to explore the nexus between the current institutional development and the pre-modern migrations (see, for instance, Putterman and Weill, 2010; Ang, 2013).

[7] Concerning the economic impact of multiculturalism, the literature, as summarized in Montalvo and Reynal-Querol (2020), reveals negative effects at low levels of aggregation (i.e., at the country level), while the opposite holds true at high levels of aggregation (i.e., at cities within a single country).

[8] For instance, Acemoglu et al.'s (2001) influential paper puts emphasis on disease environment, which

However, the fact that the allocation of migrants across countries is unlikely to be random (i.e., migrants tend to cluster into states, which display higher levels of economic and institutional development) is a well-known identification issue in the literature. To mitigate endogeneity concerns, we build instruments relying on a pseudo-gravity model of bilateral migrations, recently popularized by Mayda (2010) and Grogger and Hanson (2011). Several empirical studies have thereafter adopted this approach, in order to mitigate endogeneity concerns (see, e.g., Felbermayr et al., 2010; Mavisakalyan, 2011; Gebremedhin and Mavisakalyan, 2013; Ortega and Peri, 2014; Aleksynska and Tritah, 2015; Alesina et al., 2016). The rationale behind this approach is straightforward. The resulting fitted values from the gravity type regressions serve as a source of exogenous variation for the observed immigrant shares, since they are evaluated on the basis of geographic variables.

Overall, our findings corroborate with the idea that immigration is negatively associated with institutions. More precisely, our IV estimates suggest that a standard deviation increase in the immigrant share reduces our institutional proxies by about 0.35 and 0.7 standard deviations, respectively. Notably, however, our analysis indicates that the effects are mainly driven by non-OECD countries. By contrast, the institutional consequences of immigration appear to be negligible for the case of OECD member countries.

The rest of the paper is organized as follows. Section 2 discusses potential underlying theoretical mechanisms through which immigration may affect institutions. In Section 3 we present the data and the empirical model used to identify the relationship between the variables under scrutiny. Section 4 presents the empirical findings, focusing on the 2SLS estimates; and performs a battery of robustness checks. Finally, Section 5 concludes.

2 Channels

In principle, the association between immigration and host countries' institutional quality is a priori indeterminate, since there are multiple mechanisms which work at opposite directions. The simplest one is the direct diffusion of source country institutions at destinations, as suggested by Collier (2013); Borjas (2015); Dimant et

encouraged Europeans to establish extractive institutions into colonies which were displaying high settlement mortality.

al. (2015). The effect (if any) could be either positive or negative, depending on the level of institutional development prevailing at both source and host countries. That is, not only immigrant characteristics, but also destination country's characteristics play a crucial role in determining whether institutions are affected by the presence of foreigners (Pavlik et al., 2019). However, one would expect a diminishing effect on institutions as time goes by, insofar as immigrants become accustomed to the receiving country's social norms and values. Dimant et al. (2015), employing data from OECD member countries over the period 1984-2008, suggest that there is a positive association between migrants (mainly from source countries which display high levels of corruption) and perceived corruption in the host countries. By contrast, Pavlik et al. (2019), adopting a long-run perspective, find no evidence that immigration increases corruption, using a sample of 110 countries. Instead, the author provides some evidence that immigrants make advanced countries better off in terms of corruption.

A second potential mechanism pertains to perceptions and stereotypes about populations stemming from different countries and their effects on social trust. Several scholars have suggested that increased ethnic heterogeneity may reduce both inter- and intra- groups social trust (see e.g., Alesina and La Ferrara, 2002; Costa and Kahn, 2007; Putnam, 2007). In turn, social trust has been consistently shown that displays strong positive association with several political economy outcomes (see e.g., Putnam, 2007; Bjørnskov, 2010). Hence, immigration may undermine the overall quality of governance through the social trust channel. Immigration is also argued to affect institutions through its impact on the size of government, [9] which according to Alesina and Angeletos (2005) is associated with higher levels of corruption and rent-seeking. On the other hand, as suggested by the empirical findings reported in Kotera et al. (2012), the nexus between the size of government and the quality of governance depends on the stage of democratic development.

Immigration could also affect institutions through its impact on the election outcomes. For instance, in many Western states, there is much evidence that natives express their fears about immigration in the ballot box, by voting populist and far-

[9] Empirical studies usually report a negative effect of immigration on the size of government through its impact on preferences for redistribution and the provision of public goods (see e.g., Alesina et al., 2001; Razin et al., 2002; Alesina and Glaeser, 2004). A notable exception is Gerdes (2011), who, using data from Danish municipalities over the 1995-2001 period, finds no evidence that ethnic heterogeneity reduces the size of the public sector.

right parties (see e.g., Mendez and Cutillas, 2014; Barone et al., 2016; Halla et al., 2017; Brunner and Kuhn, 2018; Edo et al., 2019; Roupakias and Chletsos, 2020), which, in turn, could severely damage both economic and political institutions. In addition, some other studies report direct evidence, consistent with the idea that immigration and diversity induce political instability (see, for instance, Montalvo and Reynal-Querol, 2005; Gebremedhin and Mavisakalyan, 2013).

Based on the above theoretical considerations, the following testable hypotheses can be formulated:

H1: Immigration impacts institutions; however, the sign pattern of the coefficient on the immigrant share variable is ambiguous.

H2: There is no significant correlation between immigration and institutions.

3 Model and Data

Following common practice in the related immigration literature (see, e.g., Ortega and Peri, 2014; Gebremedhin and Mavisakalyan, 2013; Clark et al., 2015; Alesina et al., 2016), we analyze the connection between immigration and the quality of institutions, relying on a cross-sectional design, regressing institutions, averaged over the 2006-2015 period, on migrations and other covariates, averaged over the 1990-2000 period. Such a design may be also beneficial insofar as it eliminates contemporaneous correlation between the variables under scrutiny.[10] To mitigate omitted bias concerns, we add to our empirical specification a rich set of covariates (which we discuss analytically at the end of this section), following closely the model put forward by Jones and Tarp (2016).[11] Hence, our empirical specification can be stated formally as follows:

$$INSTQ_i = \alpha + \beta IMM_i + \gamma' Z_i + \varepsilon_i \quad (1)$$

[10] What is more, as discussed in Gebremedhin and Mavisakalyan (2013), identification through an instrumental variables panel-data setting is infeasible, since gravity-based instruments display limited variation over time. As a consequence, a 2SLS approach can mostly be used with cross-sectional data.

[11] Please, notice, that we consider the additional controls as a means to improve identification concerning our key independent variable, and generally we abstain from interpreting their estimates due to potential reverse causality issues.

where *INSTQ* stands for our metrics (described below in this section) used to evaluate the institutional performance of the countries analyzed in this study, *IMM* stands for our key independent variable of interest, namely the immigrant share, and *Z* is the matrix of further covariates.

However, as it is well-known in the literature, analyzing correlations between immigration and several host countries' indicators could be problematic mainly for three reasons. First, migrant's location decisions are usually endogenous, since migrants tend to settle into areas displaying high levels of development. We cannot also rule out the possibility of severe measurement errors due to undocumented immigration, which is related to the so-called attenuation bias (see, e.g., Aydemir and Borjas, 2011). Third, cross-country correlations might be spurious, as long as there are unobserved confounders which are associated simultaneously with both the dependent variable and the main regressor of interest. To minimize the risks of obtaining spurious correlations, we pursue a 2SLS approach, employing geographically determined migrations as an instrument, predicted by means of a pseudo-gravity regression of dyadic migrant flows.[12] Our gravity model is straightforward and has already been used extensively in the literature (see, e.g., Ortega and Peri, 2014; Alesina et al., 2016). More precisely, we model bilateral migration as a function of the 1960 population at destinations, bilateral distance between sending and host countries, contiguity, common language, colonial ties and time zone differences. We also introduce to our gravity model country of origin and period fixed effects to mitigate "multilateral resistance" concerns, as originally put forward by Anderson and van Wincoop (2003).[13] As a check of robustness, we estimate the model with OLS, as in Frankel and Rose (2002), as well as with the pseudo-Poisson maximum likelihood (PPML) method suggested by Santos Silva and Tenreyro (2006). However, despite OLS's popularity, it is less suited to this specific setting, since the PPML estimator deals with zero values in the dependent variable (see, e.g., Ortega and Peri, 2014). We, therefore, consider the latter as our preferable specification.[14]

[12] We, nevertheless, prefer not giving a causal interpretation to our results, since we cannot account for unobserved time-invariant heterogeneity in our cross-country regressions.
[13] We refer to the confounding effects of the attractiveness of other destinations, beyond the pair of the origin and the destination country considered (see, e.g., Bertoli and Fernández-Huertas Moraga, 2013).
[14] Using Monte Carlo simulations, these authors have shown that the PPML estimator outperforms the OLS log linear model.

The research data in this paper is drawn from several sources. Data on the quality of institutions comes from the Worldwide Governance Indicators (WGI) project, developed by Kaufmann et al. (2010). In particular, we employ the mean value (divided by 100, as in Ang et al., 2018) of the perceptions-based indicators of governance, namely Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. In addition, we employ an alternative proxy for the institutional quality inspired by Jones and Tarp (2016), and computed as the mean value of Freedom House's political rights and civil liberty indicators, Polity IV's polity2 index and executive constraints, Database of Political Institutions' checks and balances, Wood and Gibney's (2010) political terror, and CIRI's judicial independence.[15] Before averaging, these indicators were standardized, whilst political terror was rescaled as well, so as a higher score to indicate better governance. Our main independent variable of interest, the ratio of immigrant to total population, was obtained from World Bank's World Development Indicators (available at: datatopics.worldbank.org-/world-development-indicators/).

Our most parsimonious specification is similar to the one put forward by Jones and Tarp (2016) and includes the level of economic development, as proxied by income per person; openness to trade, i.e., the ratio of imports and exports relative to gdp; the size of government, that is, government spending normalized by gdp; life expectancy at birth; population; the degree of urbanization; population per square km; and a dummy variable indicating whether the country is considered as an oil/gas exporter. In further sensitivity analysis, we expand the set of explanatory variables by adding some widely-used geographical controls, such as distance to the equator; the percent of tropical land area and a landlocked dummy indicator. Distance to equator and tropical land area are intended to capture Western influence, related to the Europeans settlement patterns during the 1500s, based on climate and disease environment (see, e.g., Diamond, 1998; Hall and Jones, 1999; Acemoglu et al., 2001). On the other hand, landlockedness is usually correlated with lower levels of trade and development (see, e.g., Frankel and Rose, 2002). Lastly, our preferred specification incorporates colonial dummies for "neo-Europes" (namely USA,

[15] Please note that the relevant indicators used to construct our second proxy for institutions were downloaded from the Quality of Government (QoG) database, available at: https://qog.pol.gu.se/data.

Australia, Canada and New Zealand), former British and French colonies (La Porta et al., 2008), as well as continent fixed effects to account for broad differences across countries.[16]

[Insert Table 1 about here]

For our pseudo-gravity model, we use data from two sources. Dyadic migrant stocks for the period from 2000 to 2010 come from the World Bank's Bilateral Migration Matrices (available at: https://www-.worldbank.org/en/topic/migration-remittancesdiasporaissues/brief/migration-remittances-data). The remaining controls were obtained from the CEPII gravity database (available at: http://www.cepii-.fr/cepii-/en/bdd_modele-/download.asp?id=8).

4 Results

In this section, we summarize and discuss the main findings concerning the impact of migrants on the quality of institutions. These results were obtained using the methods outlined in section 3. Our basic proxy for institutions is the metric obtained from the Worldwide Governance Indicators (labeled as INSTQ1), while we also run regressions with an alternative composite index, calculated with data from the Quality of Government dataset (labeled as INSTQ2), as a robustness check. Lastly, we conduct a battery of sensitivity tests, to assess the validity of our baseline estimations to outlying observations and the inclusion of further controls.

Due to the usual endogeneity and measurement error concerns, we focus on the evidence produced through our 2SLS strategy. We employ as an instrument the fitted values (aggregated at the destination country level) from the gravity model of bilateral migrations flows, the estimates of which are reported in Table 2. As can easily be verified, the results appear to be quite stable across specifications and bear the expected sign, while the overall fit of the model is quite high. In congruence with Alesina et al. (2016), we opt to build our instrument using the estimates from the last specification, which excludes the 1960 population at destination, in order to minimize the risk of not meeting the exclusion restriction.

[16] Variables, sources and preliminary statistical information are summarized in Table 1. A visual illustration of the main variables of interest is shown in the Appendix Figure 1.

[Insert Table 2 about here]

The first set of second-stage empirical results is shown in Table 3. Since our approach entails cluster robust standard errors, the Kleibergen–Paap (KP) test is used to evaluate whether our instrument is a robust predictor of contemporaneous immigrant shares.[17] As can easily be verified, our gravity approach has returned very encouraging results, since the KP test always displays a value above the rule of thumb of 10.

Overall, the coefficients on the immigrant share variable are more precisely estimated when employing the synthetic metric INSTQ2 as the dependent variable. This, however, is hardly surprising, since INSTQ1 displays much greater variation as compared to INSTQ2 (see Table 1). Specification 1 suggests that immigrants exhibit a negative but insignificant effect on institutions, as proxied by the World Bank's indicator. More precisely, the second column expands the set of covariates by adding further geographical variables, whereas the third column adds former colonial dummies and continent-specific fixed effects. Notice, however, that the estimated coefficient of interest shows up much stronger, both in terms of magnitude and statistical significance, as it becomes significant at the p=0.1 and p=0.05 levels, respectively. The estimated coefficient on the immigrant share variable implies that a one percent increase in immigration lowers the quality of institutions by about 0.7 and 0.9 points, respectively. In the remaining specifications, we test the sensitivity of our previous findings by employing our alternative institutional indicator as the dependent variable. Importantly, there is a similar pattern of association, since immigration enters with a negative, and significant coefficient through columns 4 and 6.

[Insert Table 3 about here]

In Table 4, we attempt to quantify the relationship between immigration and the institutional quality of countries analyzed in this study, by means of the standardized beta coefficients. The results correspond to the specifications reported in columns 3

[17] The first stage coefficients on the gravity-based instrument (not shown, available upon request) always enter positively and significantly at the conventional levels of significance.

and 6 of Table 3. We observe that a standard deviation increase in the ratio of immigrants to total population reduces our WGI composite indicator of interest by about 0.36 standard deviations. On the other hand, it appears that the magnitude of the estimated coefficient of interest becomes stronger when considering our alternative indicator of institutional quality (i.e., 0.7). Concerning the associations between the remaining control variables and institutions, the results appear to make sense and to be compatible with our expectations. More precisely, the evidence suggests that income per person is among the most significant predictors of institutions across countries, lending support to Lipset's (1959) law that income per capita is positively associated with the quality of governance. What is more, there is a considerable negative association between the oil/gas exporter indicator and the quality of institutions. This corroborates with the findings of the so-called resource curse literature, which is nicely summarized in Vahabi (2018). It is also unsurprising to find that population and urbanization display positive correlations with institutions. Lastly, it is also evident that some geographic indicators explain large part of cross-country differences in the quality of institutions.

[Insert Table 4 about here]

In Figure 1, we perform a heterogeneity analysis, in order to test whether the effects of immigration are different between OECD member states and non-OECD countries. This choice is motivated by Collier (2000; 2001) who contend that ethnic diversity is mostly problematic in countries with weaker political institutions. In line with previous immigration literature (see, e.g., D'Amuri and Peri, 2014), we modify our model by introducing the interaction between immigration and two dummies indicating OECD and non-OECD status, respectively, whereas similar interactions are considered for the instrumental variables.[18] In line with the Collier's argument, the coefficients on the interaction term immigration*OECD appear to be significant and much stronger than the ones of the immigration*non-OECD term. The latter enters with a marginally significant coefficient only when our second indicator for institutional quality is considered.

[18] The results remain qualitatively similar when all the constitutive terms (i.e., immigration, the OECD indicator and their interaction) are included in the regression as suggested by Brambor et al., 2006).

[Insert Figure 4 about here]

Next, further analysis was done to see whether our main results withstand the inclusion of further controls. Panel A of table 5 uses the WGI-based proxy as the dependent variable, whilst panel B uses the QoG-based indicator. In specification 1 we add average years of schooling, motivated by Boix (2003) who suggests that education and democracy are closely related.[19] The second column, pays attention to the so called "deep roots" literature, by adding the immigrant share in 1500 as suggested by Putterman and Weill (2010).[20] By the same token, column 3 introduces into the model population density in 1500, as a proxy for early development.[21] Specification 4 introduces the 1900 percentage of Protestants, Catholics and Muslims, respectively.[22] Lastly, specification 5 introduces the above covariates simultaneously. Importantly, a comparison of the results obtained from these experiments with the ones we found in our main specification, strengthens our confidence on the robustness of our previous conclusion that migration displays a negative and significant correlation with the quality of governance. However, the results in the last two specifications become weaker and lose significance at the conventional levels. We note, however, that these findings should be cautiously interpreted, since the first-stage F test falls below the threshold of 10, and, thus might suffer from weak identification issues.

[Insert Table 5 about here]

In Table 6, we move beyond the mean effects reported above, by estimating the impact of immigration on each dimension of governance separately. This is important to determine whether our main finding that immigration deteriorates institutional quality is driven by a particular sub-indicator. As it is apparent from this table, the coefficient on the immigrant share variable appears to be always negative and

[19] We have also performed robustness checks to the inclusion of alternative measures for openness, such as the Alcalá and Ciccone's (2004) real trade openness, the KOF aggregate globalization index and its sub-components, that is, economic, social and political globalization. The results from this empirical exercise (not shown, available upon request) are qualitatively similar to the ones we present in the main text.

[20] This variable was taken from the work of Ortega and Peri (2014).

[21] The rationale for the inclusion of population density in 1500 is discussed in a wider context in Ang (2013) and Ang et al. (2018).

[22] These variables were downloaded from McCleary and Barro (2006).

significant at conventional levels, through most specifications. Hence, the results are reassuring concerning the association between migration and the quality of governance. It could be argued, however, that the effects of immigration are multidimensional rather been determined by a single indicator. Interestingly, the findings concerning political instability and corruption corroborate the ones previously reported by Mavisakalyan and Gebremedhin (2013) and Dimant et al. (2015), respectively.

[Insert Table 6 about here]

Next, an important empirical exercise involves an experiment à la Coates et al. (2010), in order to ascertain whether our findings are driven by outlying observations. More precisely, we estimate our full specification 1000 times, randomly eliminating 10% of observations at a time from the sample. The visual representation of the results obtained following the above approach can be seen in Figure 2. This figure illustrates the estimated coefficients of interest, and the corresponding confidence intervals. As it is apparent, the immigrant share variable enters always with a negative coefficient, signifying that our findings are unlikely to be influenced by particular observations. Importantly, the estimates are always significant, at least at the 10 percent level.

[Insert Figure 2 about here]

Lastly, we re-estimate our main specification by including fractionalization and polarization indices as regressors, in order to assess whether immigration-induced diversity drives the effects reported previously. Our fractionalization indicator is akin to the one employed in Alesina et al. (2016); Akay et al. (2017) and is computed as follows:

$$Fractionalization_{ct} = 1 - \sum_{j \neq c} \left(\pi_{jc}\right)^2$$

where π_{jc} designates the share of migrants from country j to country c. This index indicates the probability that two randomly drawn migrants stem from different countries. A zero index indicates a perfectly homogeneous immigrant population in

terms of origin. At the other end of the spectrum, a value of one implies that each migrant comes from a different country. Importantly, our fractionalization indicator is highly correlated (0.82) with the one constructed by Alesina et al. (2016) for the years 1990 and 2000.

However, a related strand of the literature, emphasizes that it is important to distinguish between cultural pluralism and cultural polarization, since the latter better captures potential social conflicts (see e.g., Montalvo and Reynal-Querol, 2005; Ager and Brückner, 2013). To account for this possibility, we alternatively measure diversity using the polarization index, which is computed as follows (see, e.g., Montalvo and Reynal-Querol, 2005; Bove and Elia, 2016):

$$polarization_{ct} = 1 - \sum_{j \neq c} \frac{\left(0.5 - \pi_{jc}\right)^2 \pi_{cj}}{0.25}$$

where π_{jc} is defined in an analogous way as in our fractionalization indicator.[23] A value of one indicates that there two equally sized origin groups.

In Table 7, we proceed by showing three sets of empirical 2SLS estimates. The first set is based on the immigrant share variable and the fractionalization indicator. The second, substitutes polarization for fractionalization, whereas the third uses both diversity indicators simultaneously whilst omitting the immigrant share variable.[24] Notice, however, that the applicability of the gravity-based instrumental variables regression is not always possible. Unfortunately, an assessment of the instruments we attempted to generate yielded no statistically significant correlations with our potentially endogenous indicators of diversity.[25] We, therefore, have followed an intermediate solution, building conventional "shift-share" instruments for fractionalization and polarization, using the 1980 migrant shares by country of origin and the contemporaneous nationwide stocks of migrants (see, e.g., Card, 2001).[26]

[23] Interestingly, a preliminary examination of the data in Appendix Figure 2, suggests that there is a strong positive correlation between our two indicators, at least up to a certain point, which becomes negative at high levels of fractionalization. It is also important to highlight that similar patterns emerge in scatterplots presented in Montalvo and Reynal-Querol (2005, p. 307); Ager and Brückner (2013, p. 81); Bove and Elia (2016, p. 4).

[24] Similar models are also estimated in Montalvo and and Reynal-Querol (2005).

[25] A similar issue also arises in Ortega and Peri (2014)

[26] The rationale is that migrant networks play a significant role in the settlement patterns of new immigrants (see, e.g., Bartel, 1989). We omit the technical details on the construction of the shift-share instruments for brevity, and refer the interested reader to Card (2001). Please, also note, that the results of this empirical exercise should be interpreted with caution, since we cannot exclude the possibility that the imputed migrant stocks are fully exogenous (see Orefice and Santoni, 2018).

As can be easily seen, two patterns emerge from the results summarized in Table 7. On the one hand, our fractionalization indicator enters with a positive coefficient through specifications, though statistically different from zero only in the first column. On the other hand, polarization appears to be correlated with lower quality of institutions across specifications. On balance, we interpret the evidence as suggestive that immigration induced polarization is the main channel through which immigration adversely affects the quality of institutions in the countries under scrutiny.

5 Conclusion

This paper places under scrutiny the effects of immigration and multiculturalism on institutional quality, as proxied by the composite metric, constructed using data from the World Bank's Worldwide Governance Indicators and the one built by employing information from the Quality of Government database. As migrants usually tend to locate into regions endogenously (i.e., they might prefer to settle into developed states), we pursue an instrumental variables approach, fitting pseudo-gravity equations of bilateral migrations to obtain the exogenous component of immigration, attributed to geographical determinants. This study design seems to be advantageous compared with the majority of related existing work.[27] To mitigate omitted variables bias concerns, we employ an extensive set of controls which are considered amongst the most important drivers of institutions.

Analyzing a sample of 130 countries, our 2SLS estimates indicate that migration and the quality of governance exhibit a robust negative and significant association.[28] This finding survives the inclusion of further controls and holds true for both the alternative proxies of institutional quality used in this study. It also appears not to be driven by outlying observations. When looking at the effects of multiculturalism, as proxied by our cultural fractionalization and polarization indices, we find correlations of the opposite sign, in congruence with Montalvo and Reynal-Querol's (2005b) contention, that polarization is more relevant when exploring issues related to social tensions. We have also explored whether the impact of immigration differs

[27] One notable exception is, of course, Mavisakalyan and Gebremedhin (2013) who also rely on a 2SLS approach to address potential endogeneity.
[28] Our results for sub-components of the metrics analyze in this study are in line with Mavisakalyan and Gebremedhin (2013) and Dimant et al. (2015), who suggest that migration causes political instability and corruption to increase.

between OECD member states and non-OECD countries, inspired by Collier's (2000, 2001) argument that the level of institutional development into the host countries matters when analyzing immigration impacts. Interestingly, the message conveyed by this heterogeneity test, is that the finding that immigration is negatively correlated with institutional quality is mainly driven by the sample of non-OECD countries.

The results of the present study add to the growing body of empirical cross-country analyses on the effects of immigration on development. On balance, the results cannot be claimed to be consistent with Borjas's (2015) arguements, since institutions in the more advanced states do not appear to be dramatically affected by migrants. Despite the limitations of the cross-sectional design, the findings of this study are important and contribute to our understanding on the relationship between immigration and economic development as well, through the quality of institutions channel. As more data will be available, further research should be carried out to examine this issue, especially by means of conventional panel data techniques.

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Table 1. Summary Statistics

	Obs	Mean	S.D.	Min	Max	Definition	Source
INSTQ1	130	0.48	0.27	0.07	0.98	Average of six broad dimensions of governance, namely, corruption, effectiveness, stability, regulatory quality, rule of law, voice accountability	World Government Indicators
Corruption	130	0.47	0.29	0.03	1	Captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	World Government Indicators
Effectiveness	130	0.5	0.28	0.03	0.99	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies	World Government Indicators
Stability	130	0.44	0.26	0.01	0.98	Measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism	World Government Indicators
Regulatory	130	0.51	0.28	0.01	0.99	Captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development	World Government Indicators
Rule of law	130	0.48	0.29	0.02	0.99	Captures perceptions of the extent to which agents have Confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	World Government Indicators
Voice & Accountability	130	0.48	0.29	0.01	1	Captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	World Government Indicators
INSTQ2	127	0	0.06	-0.15	0.12	Average of standardized indicators capturing judicial, independence checks and balances, democracy, political terror and executive constraint	Quality of Government

Judicial Independence	127	-0.04	0.1	-0.14	0.11	Indicates the extent to which the judiciary is independent of control from other sources, such as another branch of the government or the military	Quality of Government
Checks	127	0.01	0.08	-0.11	0.38	The number of veto players over political decision	
Democracy	127	0	0.09	-0.19	0.11	Average of Freedom House (civil liberties and political rights) and Polity (polity2) transformed to a scale 0-10.	Quality of Government
Political terror (rescaled)	127	-0.01	0.09	-0.18	0.12	Indicates levels of abuse, political terror, or physical integrity rights	
Executive constraint	127	0.01	0.05	-0.25	0.03	Refers to the extent of institutionalized constraints on the decision making powers of chief executives, whether individuals or collectivities.	
Immigrant share	130	0.07	0.1	0	0.66	Share of migrants over total population	World Bank Development Indicators
Fractionalization						Probability that two randomly drawn individuals were born in different countries.	Own calculations on World Bank's Bilateral Migration Matrices
Polarization						Index that captures how far the distribution of the ethnic groups is from a bipolar distribution	Own calculations on World Bank's Bilateral Migration Matrices
GDP/capita	130	8.18	1.55	5.46	11.25	Gross Domestic Product per person ($2010)	World Bank Development Indicators
Trade openness	130	70.49	34.67	18.11	213.91	Exports+Imports normalized by GDP	World Bank Development Indicators
Government size	130	16.08	6.21	1.48	41.37	Government expenditure divided by GDP	World Bank Development Indicators
Life expectancy	130	65.52	10.24	35.32	79.85	Life expectancy at birth	World Bank Development Indicators
Population	130	16.13	1.54	12.26	20.91	Total population (logged)	World Bank Development Indicators
Urbanization	130	53.12	23.02	7.23	98.32	Share of population leaving in urban areas	World Bank Development Indicators
Density	130	90.55	117.2 1	1.48	885.8	Population per sq. km of land area	World Bank Development Indicators
Oil/gas exporter	130	0.25	0.34	0	0.8	Dummy variable indicating positive oil or gas net exports.	Quality of Government

Distance to equator	130	28.33	17.93	0.42	67.47	Distance to equator (in degrees)	Ortega and Peri (2014)
% Tropic land	130	0.46	0.48	0	1	The percentage of land in the tropics	Ortega and Peri (2014)
Landlocked	130	0.22	0.41	0	1	Dummy variable for landlockedness	BACI database
Years of schooling	115	6.59	3.03	0.85	12.65	Average years of schooling for population aged 25 and above	Barro and Lee (2013)
% of Immigrants in 1500	130	0.26	0.32	0	1	Share of immigrants in 1500	Putterman and Weil (2010)
Population density in 1500	128	1.08	1.69	-3.83	5.64	Population per sq. km of land area in 1500	Ortega and Peri (2014)
% of Catholics in 1900	130	0.27	0.39	0	1	Share of Catholics over total population in 1900	McCleary and Barro (2006)
% of Protestants in 1900	130	0.11	0.25	0	1	Share of Protestants over total population in 1900	McCleary and Barro (2006)
% of Muslims in 1900	130	0.21	0.36	0	1	Share of Muslims over total population in 1900	McCleary and Barro (2006)

Table 2 Gravity estimates of bilateral migrations

	(1)	(2)	(3)	(4)
Estimator	OLS	OLS	PPML	PPML
Dependent variable	$\ln(M_{ij})$	$\ln(M_{ij})$	M_{ij}	M_{ij}
Population at destination in 1960	-0.466***		-1.68e-08*	
	(0.0760)		(9.98e-09)	
Bilateral distance	-1.472***	-1.579***	-0.000564***	-0.000539***
	(0.175)	(0.176)	(8.53e-05)	(8.13e-05)
Colonial relationship	2.607***	1.964***	1.130***	0.976***
	(0.276)	(0.230)	(0.201)	(0.163)
Common ethnic language	0.964***	1.085***	0.753***	0.716***
	(0.300)	(0.287)	(0.248)	(0.259)
Common official language	0.319	0.619**	1.039***	1.105***
	(0.215)	(0.252)	(0.222)	(0.227)
Common border	1.807***	1.047**	0.833***	0.722***
	(0.346)	(0.464)	(0.218)	(0.234)
Time zone difference	0.252*	0.181	0.225***	0.177***
	(0.135)	(0.133)	(0.0620)	(0.0561)
Observations	29,909	29,995	70,996	71,166
Adjusted R-squared	0.419	0.325	0.302	0.272

Robust standard errors (in parentheses) clustered by destination country. All Models include period and period by country of origin fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table 3 Immigration and institutional quality, 2SLS estimates

Dependent variable	INSTQ1			INSTQ2		
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant share	-0.321	-0.717*	-0.963**	-0.277**	-0.336***	-0.446***
	(0.438)	(0.367)	(0.436)	(0.139)	(0.119)	(0.129)
GDP/capita	0.150***	0.148***	0.118***	0.037***	0.036***	0.029***
	(0.017)	(0.019)	(0.023)	(0.005)	(0.006)	(0.007)
Trade openness	-0.000	-0.000	-0.000	0.000	0.000	-0.000
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Government size	0.003	0.004	0.003	0.000	0.001	0.001
	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.001)
Life expectancy	0.003	0.000	0.003	-0.000	-0.001	-0.002*
	(0.003)	(0.003)	(0.004)	(0.001)	(0.001)	(0.001)
Population (log)	-0.018	-0.025*	-0.036**	-0.008	-0.009*	-0.013**
	(0.012)	(0.014)	(0.016)	(0.006)	(0.006)	(0.006)
Urbanization	-0.002	-0.001	0.001	-0.000	0.000	0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Density	0.000	0.000*	0.000	0.000*	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Oil/gas exporter	-0.174***	-0.147***	-0.139***	-0.040***	-0.036***	-0.029**
	(0.047)	(0.044)	(0.044)	(0.014)	(0.013)	(0.012)
Distance to equator		0.004*	0.003		0.001*	0.000
		(0.002)	(0.002)		(0.001)	(0.001)
Pct. Tropic land		0.054	0.120*		0.032	0.028
		(0.076)	(0.073)		(0.023)	(0.021)
Landlocked		-0.013	0.011		-0.007	-0.008
		(0.033)	(0.037)		(0.009)	(0.010)
“NeoEuropes”			0.302***			0.065*
			(0.087)			(0.036)
British colony			0.071			0.034**
			(0.051)			(0.015)
French colony			-0.017			-0.003
			(0.051)			(0.013)
Africa			0.065			-0.059*
			(0.073)			(0.031)
Americas			-0.021			-0.022
			(0.060)			(0.030)
Asia			0.101			-0.013
			(0.092)			(0.036)
Europe			0.125			0.022
			(0.096)			(0.038)
Observations	130	130	130	127	127	127
Adjusted R-squared	0.694	0.682	0.688	0.500	0.488	0.523
Kleibergen-Paap F-Test	17.19	19.19	17.46	16.43	17.27	14.51

Robust standard errors (in parentheses) clustered by country
*** p<0.01, ** p<0.05, * p<0.1

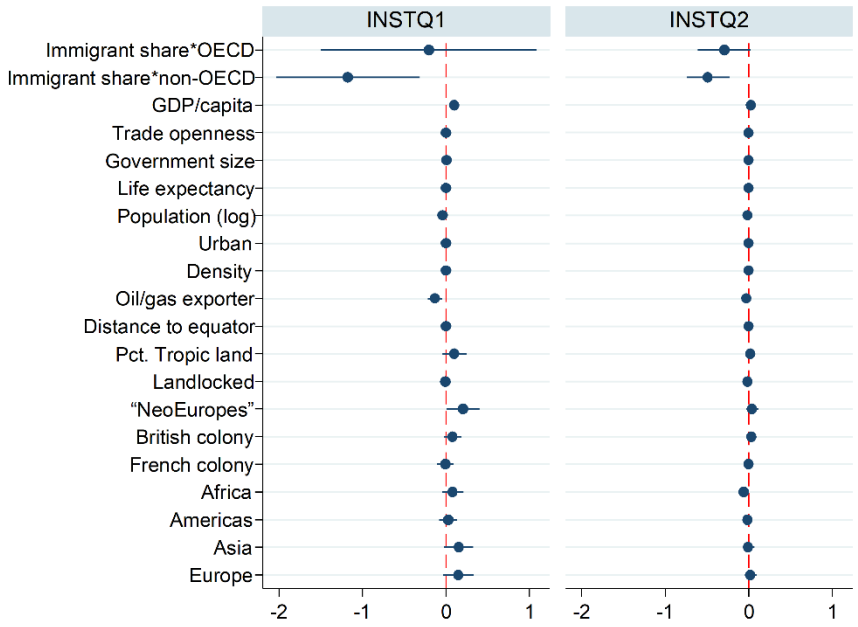


Figure 1 Heterogeneous effects of immigration on institutional quality

Table 4 Immigration and institutional quality, standardized beta coefficients

	(1)	(2)
Dependent variable	INST1	INST2
Immigrant share	-0.359	-0.703
GDP/capita (PPP)	0.685	0.696
Trade openness	-0.048	-0.045
Government size	0.078	0.101
Life expectancy	0.114	-0.333
Population (log)	-0.210	-0.295
Urbanization	0.080	0.222
Density	0.089	0.097
Oil/gas exporter	-0.175	-0.156
Distance to equator	0.199	0.117
Pct. tropic land	0.213	0.206
Landlocked	0.018	-0.050
"NeoEuropes"	0.196	0.157
British colony	0.118	0.230
French colony	-0.024	-0.017
Africa	0.112	-0.429
Americas	-0.030	-0.134
Asia	0.166	-0.088
Europe	0.203	0.148
Observations	130	127
Adjusted R-squared	0.688	0.523

Robust standard errors (in parentheses) clustered by country *** p<0.01, ** p<0.05, * p<0.1

Table 5 Robustness to the inclusion of further controls

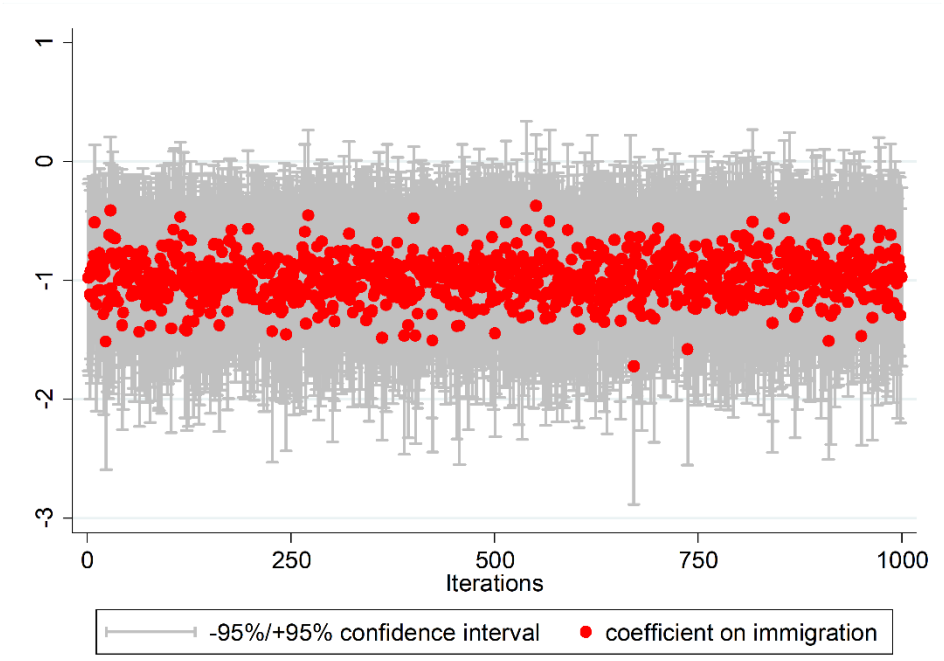
	(1)	(2)	(3)	(4)	(5)
Panel A INSTQ1					
Immigrant share	-0.789*	-0.991**	-0.909**	-0.216	-0.179
	(0.442)	(0.453)	(0.440)	(0.505)	(0.557)
Years of schooling	0.001				-0.002
	(0.009)				(0.007)
Pct. of Immigrants in 1500		0.078			-0.034
		(0.095)			(0.098)
Population density in 1500			-0.003		-0.003
			(0.012)		(0.011)
Pct. of Catholics in 1900				0.119**	0.119**
				(0.058)	(0.057)
Pct. of Protestants in 1900				0.204**	0.210**
				(0.081)	(0.086)
Pct. of Muslims in 1900				-0.126**	-0.128**
				(0.054)	(0.056)
Observations	115	130	128	115	114
Adjusted R-squared	0.726	0.685	0.687	0.773	0.764
Kleibergen-Paap F-Test	15.17	22.88	18.48	11.20	11.09
Panel B INSTQ2					
Immigrant share	-0.396***	-0.447***	-0.438***	-0.301*	-0.264
	(0.135)	(0.130)	(0.130)	(0.167)	(0.175)
Years of schooling	0.002				0.002
	(0.003)				(0.002)
Pct. of Immigrants in 1500		0.008			-0.034
		(0.028)			(0.030)
Population density in 1500			-0.002		-0.003
			(0.003)		(0.003)
Pct. of Catholics in 1900				0.034**	0.033**
				(0.016)	(0.015)
Pct. of Protestants in 1900				0.029	0.032
				(0.022)	(0.023)
Pct. of Muslims in 1900				-0.023	-0.025
				(0.018)	(0.018)
Observations	112	127	125	112	111
Adjusted R-squared	0.561	0.518	0.517	0.610	0.616
Kleibergen-Paap F-Test	12.39	19.99	15.12	9.103	9.811

Robust standard errors (in parentheses) clustered by country
*** p<0.01, ** p<0.05, * p<0.1

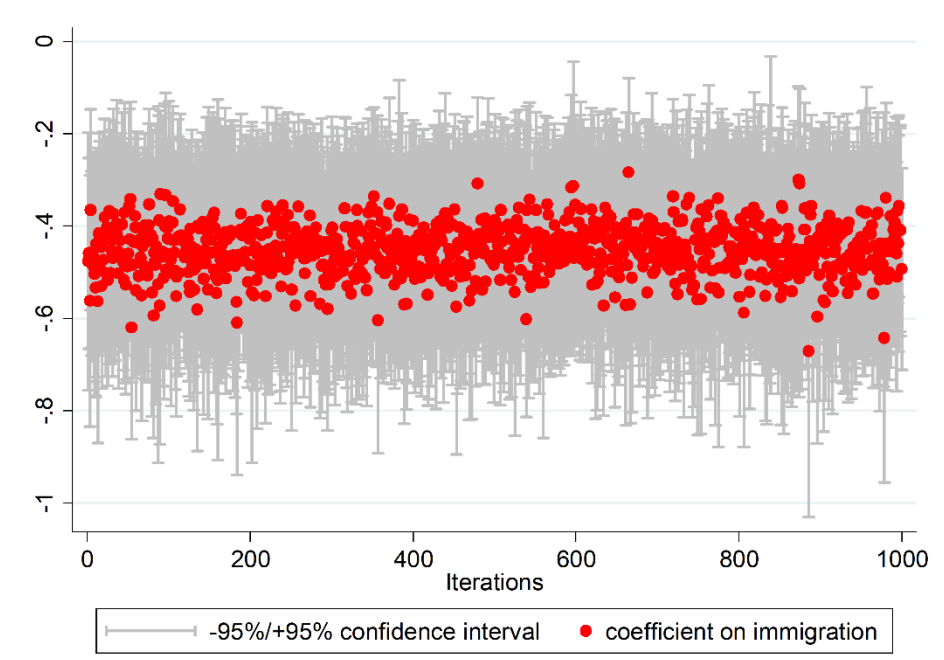
Table 6 Immigration and institutional quality components, 2SLS estimates

Panel A INSTQ1	Coeff.	St.err
Corruption	-0.965*	-0.535
Effectiveness	-0.716	-0.475
Stability	-1.320**	-0.575
Regulatory	-0.281	-0.522
Rule of law	-1.036**	-0.504
Voice Accountability	-1.462***	-0.558
Panel B INSTQ2	Coeff.	St.err
Judicial independence	-0.500**	-0.211
Checks	-0.223	-0.187
Democracy	-0.537**	-0.213
Political terror	-0.441**	-0.188
Executive constraint	-0.024	-0.119

Robust standard errors clustered by country in the last column
*** p<0.01, ** p<0.05, * p<0.1



Panel A Dependent variable INSTQ1



Panel B Dependent variable INSTQ2

Figure 1 This figure plots the coefficient on the immigrant share variable and the associated t-statistics based on 1000 estimations of our main proxy for institutional quality on immigration and the full set of the remaining covariates, randomly dropping 10 percent of observations at a time from the sample.

Table 7 Fractionalization, polarization and institutional quality

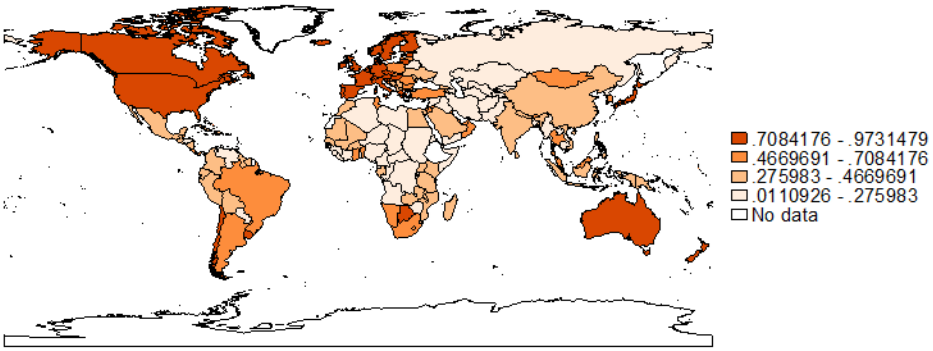
	INSTQ1			INSTQ2		
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant share	-0.825*	-0.785		-0.423***	-0.424***	
	(0.451)	(0.478)		(0.133)	(0.135)	
Fractionalization	0.261**		0.186	0.053		0.030
	(0.125)		(0.121)	(0.035)		(0.038)
Polarization		-0.216	-0.269*		-0.044	-0.078
		(0.149)	(0.141)		(0.051)	(0.053)
GDP/capita	0.110***	0.103***	0.087***	0.027***	0.026***	0.019***
	(0.022)	(0.022)	(0.020)	(0.007)	(0.007)	(0.006)
Trade openness	-0.000	0.000	0.000	-0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Government size	0.006	0.007*	0.002	0.002*	0.002**	-0.000
	(0.004)	(0.004)	(0.003)	(0.001)	(0.001)	(0.001)
Life expectancy	0.002	0.003	0.004	-0.002**	-0.002**	-0.001
	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.001)
Population (log)	-0.039***	-0.031*	-0.020*	-0.013**	-0.012**	-0.003
	(0.015)	(0.016)	(0.012)	(0.005)	(0.005)	(0.005)
Urbanization	-0.001	-0.000	-0.002*	0.000	0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Density	0.000**	0.000	0.000	0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Oil/gas exporter	-0.130***	-0.145***	-0.153***	-0.028**	-0.032***	-0.036***
	(0.042)	(0.042)	(0.039)	(0.012)	(0.012)	(0.012)
Distance to equator	0.002	0.004*	0.005**	0.000	0.001	0.001**
	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Pct. Tropic land	0.057	0.122*	0.101	0.015	0.028	0.032*
	(0.079)	(0.070)	(0.072)	(0.022)	(0.021)	(0.019)
Landlocked	-0.010	-0.003	-0.000	-0.013	-0.012	-0.008
	(0.037)	(0.035)	(0.032)	(0.010)	(0.010)	(0.009)
“NeoEuropes”	0.325***	0.282***	0.198**	0.074**	0.064**	0.011
	(0.095)	(0.092)	(0.080)	(0.030)	(0.030)	(0.024)
British colony	0.030	-0.007	-0.042	0.022	0.014	-0.006
	(0.047)	(0.056)	(0.050)	(0.014)	(0.020)	(0.019)
French colony	-0.035	-0.050	-0.070*	-0.009	-0.012	-0.024*
	(0.048)	(0.045)	(0.041)	(0.012)	(0.012)	(0.013)
Africa	0.052	0.044	0.003	-0.060***	-0.064***	-0.084***
	(0.089)	(0.088)	(0.079)	(0.023)	(0.024)	(0.021)
Americas	0.007	-0.051	-0.085	-0.014	-0.029	-0.052**
	(0.076)	(0.074)	(0.069)	(0.023)	(0.026)	(0.025)
Asia	0.130	0.044	-0.046	-0.005	-0.024	-0.087***
	(0.105)	(0.111)	(0.089)	(0.030)	(0.034)	(0.028)
Europe	0.117	0.016	-0.046	0.018	-0.005	-0.052
	(0.111)	(0.117)	(0.116)	(0.032)	(0.036)	(0.038)
Observations	127	127	127	124	124	124
R-squared	0.762	0.772	0.782	0.632	0.626	0.647
Kleibergen-Paap F-Test	7.992	7.666	18.23	6.544	6.409	17.23

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

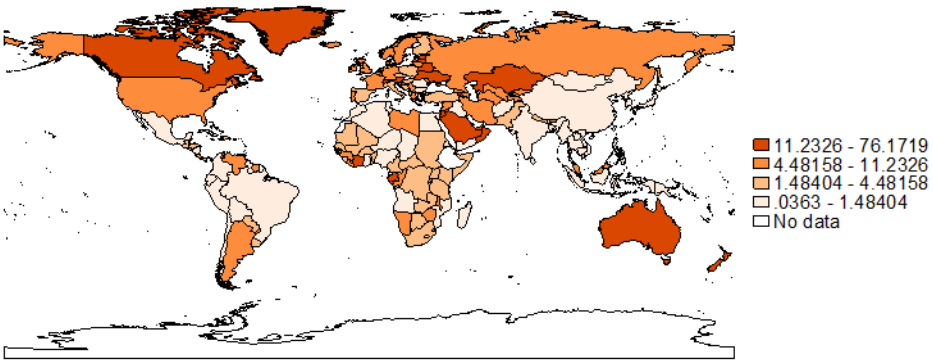
Appendix A. Countries analyzed in this study

Country	INSTQ1	INSTQ2	Country	INSTQ1	INSTQ2
Argentina	x	x	Kenya	x	x
Armenia	x	x	Kyrgyz Republic	x	x
Australia	x	x	Korea, Rep.	x	x
Austria	x	x	Kuwait	x	x
Azerbaijan	x	x	Lao PDR	x	x
Burundi	x	x	Libya	x	x
Belgium	x	x	Sri Lanka	x	x
Benin	x	x	Lithuania	x	x
Burkina Faso	x	x	Luxembourg	x	x
Bangladesh	x	x	Latvia	x	x
Bulgaria	x	x	Morocco	x	x
Belarus	x	x	Moldova	x	x
Belize	x		Madagascar	x	x
Bolivia	x	x	Mexico	x	x
Brazil	x	x	Mali	x	x
Bhutan	x	x	Mongolia	x	x
Botswana	x	x	Mozambique	x	x
Central African Republic	x	x	Mauritania	x	x
Canada	x	x	Malawi	x	x
Switzerland	x	x	Malaysia	x	x
Chile	x	x	Namibia	x	x
China	x	x	Niger	x	x
Cote d'Ivoire	x	x	Nigeria	x	x
Cameroon	x	x	Nicaragua	x	x
Congo, Rep.	x	x	Netherlands	x	x
Colombia	x	x	Norway	x	x
Costa Rica	x	x	Nepal	x	x
Czech Republic	x	x	New Zealand	x	x
Germany	x	x	Oman	x	x
Denmark	x	x	Pakistan	x	x
Dominican Republic	x	x	Panama	x	x
Algeria	x	x	Peru	x	x
Ecuador	x	x	Philippines	x	x
Egypt, Arab Rep.	x	x	Papua New Guinea	x	x
Eritrea	x	x	Poland	x	x
Spain	x	x	Portugal	x	x
Estonia	x	x	Paraguay	x	x
Finland	x	x	Qatar	x	x
France	x	x	Russian Federation	x	x
Gabon	x	x	Rwanda	x	x
United Kingdom	x	x	Saudi Arabia	x	x
Georgia	x	x	Senegal	x	x
Ghana	x	x	Sierra Leone	x	x
Guinea	x	x	El Salvador	x	x
Gambia, The	x	x	Slovak Republic	x	x
Guinea-Bissau	x	x	Slovenia	x	x
Greece	x	x	Sweden	x	x
Guatemala	x	x	Eswatini	x	x
Guyana	x	x	Chad	x	x
Honduras	x	x	Togo	x	x
Croatia	x	x	Thailand	x	x
Haiti	x	x	Tajikistan	x	x
Hungary	x	x	Turkmenistan	x	x
Indonesia	x	x	Tunisia	x	x
India	x	x	Turkey	x	x
Ireland	x	x	Tanzania	x	x
Iran, Islamic Rep.	x	x	Uganda	x	x
Iraq	x	x	Ukraine	x	x
Iceland	x		Uruguay	x	x
Israel	x	x	United States	x	
Italy	x	x	Uzbekistan	x	x
Jamaica	x	x	Venezuela, RB	x	x
Jordan	x	x	Vietnam	x	x
Japan	x	x	South Africa	x	x
Kazakhstan	x	x	Zimbabwe	x	x

Appendix B

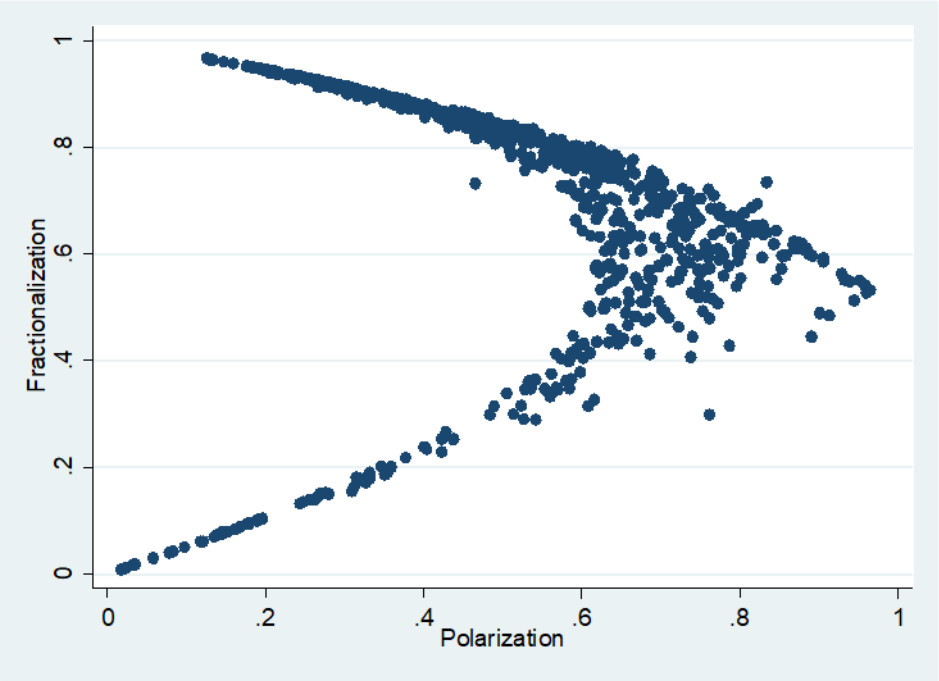


Panel A Quality of Institutions



Panel B Immigrant share

Appendix Figure 1 Institutional quality measured by the mean value of the Wordlwide Governance Indicators (Panel A) and immigration as a percentage of a country's population (Panel B), Sample averages.



Appendix Figure 2. fractionalization vs polarization. Source: Authors' elaborations on World Bank's bilateral migration matrices.