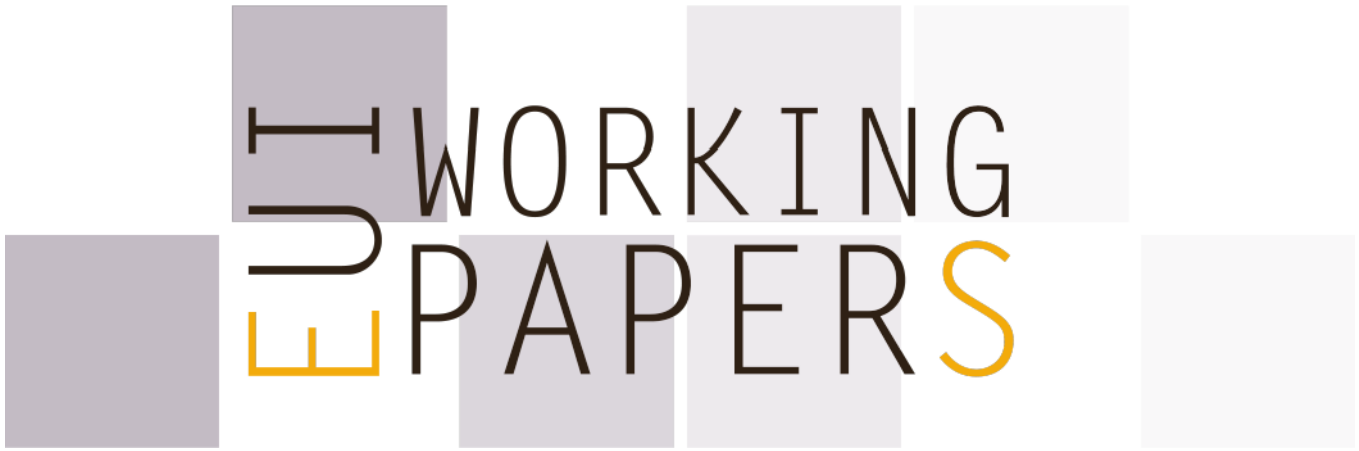

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Migrant Integration Policies and Bilateral Migration

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Abstract

Using a novel gravity methodology based on international and intra-national (i.e. internal) migration flows, I investigate the impact of non-discriminatory migrant integration policies set by destination countries on bilateral migration. In a sample of 27 destination countries and 189 origin countries for the years 2010-2014, I show that these policies, on average, positively affect migration. Moving from the 25th percentile to the median of the variable that summarizes all migrant integration policies leads to a predicted 27 percent increase in international, relative to internal migration flows. Not all migrant integration policies, however, have such positive effect. Only policies favoring migrants' access to nationality and policies affording migrants legal protection from discrimination are robust determinants of migration flows.

Keywords

International Migration; Migrant Integration; Gravity Equation.

JEL Classification: F22; J15; J61.

1 Introduction*

Millions of people legally migrate abroad every year, and their number is just a small fraction of the number of people who would migrate if only they could.[1] The factors that make each destination country more or less attractive for migrants from a given origin country can be classified in three broad categories (see Mayda, 2010, and Beine et al., 2016): origin-specific 'push' factors; destination-specific 'pull' factors and pair-specific factors.

In this paper, I propose and apply a methodology to consistently estimate the impact of pull factors on bilateral migration flows, while fully taking into account the two other sets of factors. I focus on migrant integration policies. These are defined in this study as policies that are set by the destination country and that apply equally to migrants from all origins, i.e. they are unilateral, non-discriminatory policies. I consider policies that cover various dimensions of migrant integration: access to nationality; anti-discrimination; education; family reunion; labor market mobility; permanent residence; and political participation.

A focus on migrant integration policies is motivated by two considerations. First, the integration of migrant communities is, *per se*, a primary concern for policy making, if only because this is a highly publicly debated issue.[2] Second, while there is a presumption that, other things being equal, migrant integration policies reduce migration costs, thereby increasing migration flows from any origin country into the destination country implementing such policies, the migration gravity literature provides limited empirical evidence in support.

There are two relevant empirical challenges that have largely prevented proper analysis the impact of migrant integration policies on bilateral migration. The first is lack of information.

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[1] Esipova et al. (2018) report that 15 percent of world adults would move permanently to another country – with the United States, Canada, Germany, France and Australia being the top five desired destinations – if they had the opportunity.

[2] See, among others, Boeri et al. (2015), Fiorini (2016), and Kancs and Lecca (2018).

As argued by Beine et al. (2016, p. 507), "limited progress has been made on the measurement of policy-induced migration costs". The second is endogeneity, in particular the mechanical correlation between migrant integration policies (or any other determinant of bilateral migration costs) and unobservable multilateral resistances to migration, and the fact that correlation between migrant integration policies and other observable or unobservable migration pull factors can give rise to a classical omitted variable bias in migration gravity estimations.[3] Hence, Beine et al. (2016, p. 507) recommend, "[to] make use of the panel dimension and include [destination-time] fixed effects that control for the influence of general immigration policies".

Early attempts to build and test the effect of policy-induced migration costs include Clark et al. (2007), Mayda (2010), and Ortega and Peri (2013). These studies focus on immigration restrictions, and show that they significantly affect the magnitude and composition of immigration flows (see Czaika and de Haas, 2013 for a review). However, the policy variables used in these studies only capture specific dimensions of immigration policies. As indicated by Ortega and Peri (2013, p. 53), "[b]esides entry laws, other laws may also be relevant to migration decisions: integration and citizenship, access to public services and employment, and so on". Compared to these studies, I consider the effects of policies sourced from the Migrant Integration Policy Index (MIPEX) that cover the other dimensions besides entry laws mentioned by Ortega and Peri, and I apply an identification strategy that fully addresses the endogeneity issues discussed above.

My identification approach is based on recent advances in trade gravity estimations.[4] A methodology is provided to estimate the impact of country-specific determinants of trade costs, while fully addressing endogeneity concerns, by combining international and internal (i.e. intranational) trade data. Beverelli et al. (2018), in particular, show formally that, in a cross-sectional setting (data varying across importers and exporters), the introduction of internal trade flows

[3] On multilateral resistances to migration, see Anderson (2011), and Bertoli and Fernández-Huertas Moraga (2013). On potential sources of omitted variable bias due to correlation between migration policies and other variables affecting migration, see the examples provided in Section 3.

[4] See Waugh (2010), Heid et al. (2017), and Beverelli et al. (2018).

in the gravity equation allows for identification of the impact of any country-specific characteristic on international trade (relative to internal trade), even in estimations with importer- and exporter-specific effects. By extension, if the analysis is conducted in a panel setting (data varying across importers, exporters and years), the identification of the impact of any country-specific characteristic on international trade is still possible after including importer-time, exporter-time and country-pair fixed effects.[5]

I tackle the empirical issue of whether migrant integration policies affect bilateral migration in a gravity model featuring both international and internal (i.e. intra-national) migration flows. The inclusion of the latter allows to identify the impact of destination country-specific migrant integration policies while fully controlling for multilateral resistances to migration, observable or unobservable pull factors that might be correlated with the variables of interest, observable or unobservable push factors, and observable or unobservable pair characteristics. To my knowledge, this is the first paper doing so in a migration gravity framework.

To provide the theoretical underpinnings of the empirical exercise, I show that the migration gravity model of Anderson (2011) is suited to accommodate both internal and international migration. Equally important, I employ measures of internal and international migration that are comparable between each other, and can therefore be used to produce an integrated dataset comprising international and internal migration flows. In a sample of 27 destination countries and 189 origin countries for the years 2010-2014, I show that migrant integration policies, on average, positively affect migration from origin to destination, relative to internal migration within the destination country. The effect is economically sizable. Moving from the 25^{th} percentile to the median of the variable that summarizes all migrant integration policies leads to a predicted 27 percent increase in bilateral migration flows.

Not all policies, however, have such a positive effect. Only policies favoring migrants' access

[5]Beverelli et al. (2018) further show that, even in the presence of intra-national trade flows, it is not possible to identify simultaneously the impact of exporter-specific and of importer-specific characteristic. Without loss of generality, the researcher can decide to focus on exporter- or importer-specific characteristics.

to nationality and policies affording migrants legal protection from discrimination are robust determinants of bilateral migration flows in the full sample. I discuss how these results can be rationalized based on theory. Policies encouraging the education of migrants' children, and policies favoring family reunion have a positive effect on international migration flows, relative to internal migration flows, only in the subsample excluding intra-European Union (EU) flows. I argue that the latter result is obtained because free movement of people within the EU makes policies directly targeting family reunion less important for flows between EU countries than for flows involving non-EU countries. Conversely, I do not find a robust effect of policies favoring migrants' access to the labor market and labor market mobility, of policies allowing migrants to obtain permanent residence, or of policies favoring migrants' political participation.

This paper is related to the vast literature on the determinants of migration flows, and in particular to the studies focusing on pull factors for migration. They can be classified in three branches. First, a series of studies have investigated whether short-run or long-run changes in economic conditions at destination attract more migrants.[6] Second, some studies, belonging to a more general literature on the impact of environmental factors on international migration, have investigated whether natural disasters at origin or destination impact bilateral migration flows.[7] Third, some studies, to which this paper is mostly related to, have explicitly taken into account the role of migration policies at destination.[8] While in previous literature attempts were made to take into account potential endogeneity of the pull factors of interest, in Section 3 I discuss why the methodology proposed in this paper does it more thoroughly and convincingly, even if, after including destination-time fixed effects, migrant integration policies were still believed to be endogenous.

[6]See for instance Grogger and Hanson (2011) for the role of wages; McKenzie et al. (2014) and Beine et al. (2019a) for the role of short-run fluctuations.

[7]See Gröschl (2012), Beine and Parsons (2015), and Gröschl and Steinwachs (2016).

[8]Beyond the work by Clark et al. (2007), Mayda (2010) and Ortega and Peri (2013) cited above, other papers in this strand of literature include Czaika and Parsons (2017) – who consider the effect on policies aimed to attract and select high-skilled workers on bilateral migration flows of the highly skilled – and Helbling and Leblang (2019) – who use data from the Immigration Policies in Comparison (IMPIC) database to study the effects of immigration control measures on bilateral migration flows into 33 OECD countries for the period 1980-2010.

This paper is also closely related to Beine et al. (2019b), who study the impact of migrant integration policies from the MIPEX database on emigration desires (measured with data from the Gallup World Poll survey) rather than on observed migration flows. They find a positive effect of policies favoring migrants' access to nationality, of policies favoring migrants' access to the labor market and labor market mobility, and of policies allowing migrants to obtain permanent residence. While the first result is also obtained in the present study, the latter two results are not, indicating some significant differences in how integration policies affect the percieved versus the actual attractiveness of a given destination for international migrants.

2 Theory

In this section, I show that the simple migration gravity model proposed by Anderson (2011) is suited to accommodate both internal and international migration, thereby providing the theoretical underpinnings of the empirical exercise of Section 4.2.

Under the assumption that workers' utility is the log of a Constant Relative Risk Aversion function, Anderson (2011) derives the following gravity equation for bilateral migration from origin o to destination d:

$$M^{od} = \frac{L^d N^o}{N}\left[\frac{\delta^{od}}{\Omega^d W^o}\right]^{1-\theta}, \tag{2.1}$$

where θ is the coefficient of relative risk aversion; L^d is labor supply in d; N^o is the population of natives in o; $N \equiv \sum_o N^o = \sum_d L^d$ is the world labor supply; δ^{od} is an iceberg migration cost; and Ω^d and W^o are multilateral resistance terms.[9]

The labor market clearing condition used to derive equation (2.1) is that the total labor

[9]The term $\Omega^d \equiv \left[\sum_o \frac{\left(\delta^{od}\right)^{1-\theta}}{W^o}\frac{N^o}{N}\right]^{\frac{1}{1-\theta}}$ is inward multilateral resistance to migration – a Constant Elasticity of Substitution (CES) price index of migration frictions inciding on average on destination countries. The term $W^o \equiv \left[\sum_d \frac{\left(\delta^{od}\right)^{1-\theta}}{\Omega^d}\frac{L^d}{N}\right]^{\frac{1}{1-\theta}}$ is outward multilateral resistance to migration – a CES price index of migration frictions inciding on average on origin countries (see Anderson, 2011, p. 154).

force supplied to d from all origins, L^d, is equal to the sum of all bilateral migration flows into that destination, i.e. $L^d \equiv \sum_o M^{od}$. Allowing for interal migration in d, this can be rewritten as $L^d \equiv M^{dd} + \sum_{o \neq d} M^{od}$, with the results of equation (2.1) still going through.

It is straightforward to slightly the setting of Anderson (2011) to micro-found the possibility of internal migration. In Anderson's model, worker h who migrates from origin o to destination d receives a net wage equal to w^d/δ^{od}, with $\delta^{od} > 1$. Worker's h idiosyncratic utility for migration is represented by ϵ^{odh}, private information to her. She chooses to migrate if $\left(w^d/\delta^{od}\right)\epsilon^{odh} \geq w^o$ for at least some d. Define internal migration as a movement of a worker residing in a given location $\ell \in d$ to a location $\kappa \neq \ell$ ($\kappa \in d$). Assuming away, for the sake of simplicity, within-country wage differentials and within-country iceberg migration costs, the internal migrant receives a net wage $w^d/\delta^{dd} = w^d$, and therefore chooses to migrate internally if $w^d\epsilon^{ddh} \geq w^d$, i.e. if $\epsilon^{ddh} \geq 1$.[10]

Migration frictions – including notably non-discriminatory migration policies applied by destination countries equally to all origin countries – enter the δ term of the gravity equation (2.1) in multiplicative form. Multilateral resistance terms can be computed iteratively using the procedure suggested by Anderson and van Wincoop (2003), or fully controlled for using exporter and importer fixed effects (in cross section) or importer-time and exporter-time fixed effects (in panels) – see Olivero and Yotov (2012). Most importantly, it is consistent with theory to use internal migration data alongside international migration data in the estimations of the migration gravity equation. As discussed in the next section, this allows for correct identification of the effects of destination-specific migration policies.

3 Identification

This section presents the strategy to identify the effects of destination-specific migration policies in a bilateral gravity framework with internal and international migration flows. I focus on a panel setup, which allows to more thoroughly address issues related to proper identification of

[10]Note that I reasonably let $\delta^{rs} = 1$ if $r = s$, and $\delta^{rs} > 1$ if $r \neq s$, where r and s index countries.

the coefficients of interest relative to a cross-section setup.

In a panel setup, with the availability of both internal and international migration flow data, an estimable migration gravity equation that derives from (2.1) can be expressed as:

$$MIG_{odt} = \exp\left[\pi_{ot} + \chi_{dt} + \mu_{od} + \boldsymbol{\eta_1'}\mathbf{x}_{odt} + \boldsymbol{\eta_2'}\mathbf{w}_{dt} \times BRDR_{od}\right] \times \varepsilon_{odt}, \tag{3.1}$$

where MIG_{odt} are bilateral migration flows into country d from all origin countries o, including d, at time t; π_{ot} is the set of origin-time fixed effects; χ_{dt} is the set of destination-time fixed effects; μ_{od} is the set of pair fixed effects (which might be directional or symmetric); $\mathbf{x}_{odt}$ is a vector of pair-specific variables that may influence bilateral migration and that may vary over time; $\mathbf{w}_{dt}$ is a set of possibly time-varying destination-specific variables that may influence bilateral migration (so-called pull factors in the literature); ε_{odt} is an error term; and $BRDR_{od}$ is a dummy variable taking value one if o and d are different countries (therefore separated by a border), and zero if they are the same country.[11] The inclusion of this dummy variable is made possible by the fact that MIG_{odt} contains both internal and international migration flows. It is easy to see that – while the impact of destination-specific pull factors in $\mathbf{w}_{dt}$ cannot be identified in isolation, because of perfect multicollinearity with χ_{dt} – their interaction with the BRDR dummy variable can be identified, because such interaction varies along the odt dimension.[12]

The inclusion of χ_{dt} fixed effects differentiates the present paper from previous work that has estimated the impact of pull factors in migration gravity equations. Such fixed effects, at the same time, fully control for time-varying inward multilateral resistance to migration, and address omitted variable bias that might arise from correlation between migration policies and

[11] In principle, $BRDR_{od}$ (henceforth denoted BRDR) could vary over time, due to countries splitting or merging. This is not the case in the sample, where the set of countries does not change. As a consequence, the effect of BRDR alone cannot be estimated in the specification (3.1) with pair fixed effects.

[12] Note that interaction terms between the BRDR dummy and origin-specific variables that may influence bilateral migration (so-called push factors in the literature) cannot be included at the same time as interaction terms between the BRDR dummy and destination-specific pull factors in (3.1). This is because, as shown by Beverelli et al. (2018), they would be dropped due to perfect collinearity. Without loss of generality, I only include interaction terms between the BRDR dummy and destination-specific pull factors. Origin-specific push factors are fully controlled for by origin fixed effects.

observable or unobservable pull factors affecting migration flows.

There are several reasons to believe that migration policies are correlated with potentially omitted variables. I provide four examples. First, migration policies are correlated with trade policies.[13] Trade liberalization, in turn, is correlated with factor price convergence,[14] which, other things equal, reduces the incentives to migrate. In my framework, trade policy is fully controlled for by destination-year fixed effects. I do not need to worry about omitted variable bias stemming from the correlation between trade policy and migration policy.

Second, as shown theoretically by Fiorini (2016), the level of migrant integration is (under some conditions) increasing in the employment capacity and in the opportunities in the informal economy of the destination country. Both employment capacity and opportunities in the informal economy could be pull factors for bilateral migration, thus giving rise to a positive omitted variable bias. For the reasons explained above, this is not an issue in my framework, where all time-variant destination country-specific pull factors are absorbed by destination-year fixed effects.

Third, as argued by Beine et al. (2019a), business cycles at destination are positively correlated with immigration policies, in the sense that economic downturns are associated with more restrictive immigration policies. If such correlation was contemporaneous, a positive omitted variable bias in the estimation of the short-term effect of business cycles on bilateral migration could arise if migration policies were not controlled for.[15] Again, in the approach proposed in

[13] In the sample of the 27 destination countries and five periods between 2010 and 2014 of Table 1 (N = 135), the estimated coefficient of a regression of the MIPEX overall score on the (log of) applied tariffs is positive and statistically significant, indicating some degree of substitutability between trade restrictions and the restrictiveness of migrant integration policies, even after controlling for country and year fixed effects. The coefficient is positive and significant both if the simple average and if the weighted average of applied tariffs are used. Similarly, it is positive and significant both if tariffs are averages across all sectors and if tariffs are averages only across manufacturing sectors. The results are available upon request.

[14] In a neoclassical trade model, Falvey (1999) shows that trade liberalization (i.e. the removal of trade interventions which tax trade) has an impact on factor price convergence. In particular, such trade liberalization is biased towards factor price convergence if comparative advantage is based on factor endowment differences, and against factor price convergence if technology differences are the source of comparative advantage.

[15] Beine et al. (2019a) justify the exclusion of immigration policies in their study on the effects of business cycles on bilateral migration noting that any correlation between business cycle variables and unilateral immigration policies is non-contemporaneous. This is because, "even if the policies are adjusted with respect to the economic cycle, there is clearly a time lag needed to pass the immigration laws" (Beine et al., 2019a, pp. 143-4). Note further that they include origin-time fixed effects and pair fixed effects in all estimations.

this paper, even contemporaneous correlation between migration policies and business cycles would not be an issue.

Fourth, policies affecting the integration of migrants are likely to be correlated with immigration control policies. Political leaders with an overall anti-migrant agenda, for instance, may at the same time oppose new migrant flows and higher levels of integration of resident migrants. Since immigration control policies significantly affect migration flows, an omitted variable bias would arise. This is not an issue for my identification approach, because even time-varying immigration restrictions are absorbed by destination-year fixed effects.

The inclusion of pair fixed effects μ_{od} in equation (3.1) addresses three issues. The first is potential endogeneity of bilateral variables in $\mathbf{x}_{odt}$. As discussed in Section 4.1, in all panel estimations I control for Preferential Trade Agreements (PTAs). Reasoning along similar lines as Baier and Bergstrand (2007), country pair fixed effects address potential endogeneity of such PTAs.[16] The second issue addressed by pair fixed effects relates to migrant networks, which have been shown to positively affect migration (see Fagiolo and Santoni, 2016 for recent empirical evidence). Large migrant networks are likely correlated with migrant integration policies through a lobbying channel: resident migrants might lobby the government to make integration policies less restrictive. If this was the case, an omitted variable bias might arise. The inclusion of pair fixed effects μ_{od} in equation (3.1) fully addresses this issue, because such fixed effects absorb all non-time varying pair characteristics, including migrant networks. Thirdly, pair fixed effects greatly reduce the scope for the BRDR dummy to be correlated with the error term. As discussed below, this is important if one believes that, after including country-time fixed effects, migrant integration policies cannot still be considered exogenous.

[16] In the estimation of the impact of PTAs on bilateral trade, Baier and Bergstrand (2007) argue that country pairs for which trade is above or below its 'natural' level might be more likely to form PTAs, leading to a simultaneity bias in the PTA coefficient estimate. When pair fixed effects are included, identification occurs in term of deviations from country pair averages. This addresses the issue of endogeneity of PTAs because "since the decisions to select into PTAs are likely influenced by the levels of trade relative to 'natural' levels, recent *changes* in trade levels are not likely to influence FTA formations" (Baier and Bergstrand, 2007, p. 79, emphasis in the original). In the present bilateral migration setting, the source of endogeneity that country pair fixed effects address has to do with incentives for country pairs with levels of migration higher or lower than their 'natural' levels to sign PTAs – especially deep PTAs with migration provisions.

Note further that the specification in (3.1) includes origin-time fixed effects π_{ot} to control for possibly time-varying push-factors and outward multilateral resistance to migration. Czaika and Parsons (2017) discuss the importance of controlling for origin-time fixed effects to ensure consistence with theory.

Even if one believes that, after including country-time fixed effects, migrant integration policies cannot still be considered exogenous, recent developments in the econometric literature shows that it is still possible to obtain consistent estimates of the key variable of interest – the interaction between migrant integration policies and the BRDR dummy. Specifically, as shown by Bun and Harrison (2019) in the context of Ordinary Least Squares (OLS), when interest lies in the estimation of the interaction between an endogenous variable x and an exogeneous variable w, the coefficient on the interaction term $x \times w$ is consistently estimated, with standard heteroskedasticity-robust inference applying, under a set of reasonable assumptions.[17] For instance, following Nizalova and Murtazashvili (2016), the interaction term $x \times w$ will be consistently estimated in case of independence between the two variables x and w.[18] These results apply directly to the current setting, with migrant integration policies representing x and BRDR representing w. On the one hand, after including standard bilateral gravity controls or, even more comprehensively, pair fixed effects that reduce to the maximum extent possible the scope for omitting variables, it would be difficult to argue that the border dummy is correlated with the omitted variables. On the other hand, the border dummy is independent of migrant integration policies. Mechanically, BRDR varies within each destination in a given year (taking value zero for internal migration flows and value one for international migration flows), while migrant integration policies do not.[19] Following Bun and Harrison (2019), therefore, the estimate on the interaction term between migrant integration policies and the BRDR dummy – which

[17] See Bun and Harrison (2019) for details and Dreher et al. (2018) for an application to the growth effects of foreign aid.

[18] Nizalova and Murtazashvili (2016) analyze the case in which x (the policy/treatment) is exogenous and w (the 'moderator' along which the impact of the policy/treatment varies) is endogenous.

[19] Pearson's chi-squared tests of independence between each MIPEX variable and BRDR, using the baseline sample of Table 3, do not reject the null hypothesis of independence between each MIPEX variable and BRDR. The results are available upon request.

is naturally interpreted as the differential effect of migrant integration policies on international relative to internal migration – is consistently estimated.[20]

Some previous literature dealing with origin- or destination-specific push or pull factors to migration has adopted an alternative identification approach, which does not require internal migration data to identify the coefficients of interest. Papers such as Gröschl (2012), Gröschl and Steinwachs (2016) and Czaika and Parsons (2017) apply the 'bonus vetus OLS' introduced by Baier and Bergstrand (2009) in a trade context, approximating multilateral resistance terms by means of a first-order log-linear Taylor-series expansion. The bonus vetus methodology – which should be applied to *each* trade cost variable (see Head and Mayer, 2014) – is however not as good as the methodology proposed in this paper. As shown by Sellner (2019) in a trade context, only the fixed effect estimator that utilizes data on intra-national trade flows yields estimates that are unbiased and consistent under very general assumptions on the data generating process. This is not the case for other estimators, including the bonus-vetus or the two-stage fixed effects strategy proposed by Head and Mayer (2014, Section 3.7).[21] Furthermore, the favorable asymptotic properties of the fixed effects estimator (compared to other methodologies) are even more relevant for relatively short panels, as it is the case in the present study.

A potential source of endogeneity that is often (but not always) discussed in the related literature, and that does not lend itself to the methods of Bun and Harrison (2019) mentioned above, is reverse causality – namely the possibility that bilateral migration flows affect migration policies. In the absence of internal migration data, reverse causality would be a relatively more serious concern: i) for bilateral policies (such as PTAs with migration provisions, as argued in footnote 16) as opposed to unilateral policies that are the focus of this paper, which are less likely to be set in response to changes in inflows from a given origin; and ii) if the number of

[20]The coefficient on BRDR is also consistently estimated. This insight only applies to regressions that exclude pair fixed effects. Since BRDR is pair-specific, it is dropped in the preferred estimations with pair fixed effects. Note further that migrant integration policies are never included as non-interacted variables in any estimation, because they are perfectly collinear with destination-time fixed effects. Potential inconsistency of the coefficient associated with migrant integration policies in isolation is therefore irrelevant.

[21]I am aware of only one study applying the two-stage fixed effects strategy proposed by Head and Mayer (2014) to a migration gravity context, namely Beine et al. (2019b).

destination-year cells with high concentration of immigrants from a given origin is large. This is not the case in this paper. In the 19,897 observations that represent the baseline sample (see Table 3) minus the number of observations corresponding to internal migration, in only 1.17 percent of cases is the share of total migration from a given origin in total migration from abroad larger than ten percent, and in only 0.55 percent of cases is this share larger than 15 percent. Given the very small number of observations that could drive feedback effects from migration flows to migration policies, I disregard this potential source of endogeneity in the estimations.

4 Empirical evidence

This section describes the data used, presents some useful descriptive statistics and shows the estimation results.

4.1 Data and descriptive statistics

The dependent variable combines data on international migration flows and data on internal migration flows. The former are sourced from the OECD International Migration Database (IMD), while the latter are sourced from the OECD Regional Demography database.

The IMD database has been used extensively in the previous literature, either alone – as in Backhaus et al. (2015) – or combined with other databases on international migrant flows – as in Ortega and Peri (2013). The variable 'inflow of foreign population by nationality' (in units) is used to measure migration from abroad.

The OECD Regional Demography database contains information on inter-regional migration flows, defined as the number of new residents in a region coming from another region of the same country, for 39 OECD and non-OECD countries in the period 1990-2015.[22] The OECD classifies two levels of regions within each country: large regions (Territorial level 2 or TL2),

[22]Data are not available for the whole 1990-2105 period for all countries. See table on p. 156 of OECD (2018) for details on year and country coverage.

and small regions (Territorial Level 3 or TL3).[23] For five of the 39 countries (Hungary, Israel, Italy, the Republic of Korea and New Zealand) the aggregation of migration flows into all TL3 areas within a TL2 perfectly corresponds to the reported inflow into that TL2. Therefore, for these countries, whether TL2 or TL3 regions are used in the aggregation of migration flows at country level does not make any difference. For most other countries, the aggregation is based on TL3 regions.[24] There are eight countries (Australia, Belgium, Brazil, Canada, Colombia, Peru, the Netherlands, and the Russian Federation) for which data on TL3 regions are wholly or partially missing, while data on TL2 regions are always available. In such cases, the aggregation of interregional migration flows at country level is consistently done using data for TL2 regions.[25]

Importantly, data on international and on internal migration are both expressed as flows, in units. I can therefore append the two databases to produce an integrated dataset comprising international and internal migration flows into 39 OECD and non-OECD destination countries from approximately 200 origin countries (including of course the 39 destinations) during the period 1990-2015. Due to lack of availability of data on migration policies (see below), the final dataset used for estimations comprises 27 destination countries and five years (2010-2014).[26] These 27 countries account for 99 percent of migration inflows recorded in the IMD dataset.

Columns (1)-(2) of Table 1 respectively show, for each of the 27 destination countries in the dataset used for estimations, the shares of internal and of foreign migration in total migration in the last available year (2014 for most countries). On average, inflows of internal migrants

[23]Take the case of Italy. TL2 areas correspond to the 20 Italian regions, matching the European Union's NUTS 2 level of aggregation. TL3 areas correspond to the 110 Italian provinces, matching the European Union's NUTS 3 level of aggregation.

[24]In particular, the aggregation is based on TL3 regions for the following 26 countries: Austria, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Japan, Latvia, Lithuania, Montenegro, Norway, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

[25]Only four of these eight countries (Australia, Belgium, Canada, and the Netherlands) are in the final dataset used for estimations. As shown in Section 4.3, exclusion of these four countries does not affect the results.

[26]The 27 destination countries (with ISO 3 digit country codes in parentheses) are: Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), the Czech Republic (CZE), Denmark (DNK), Estonia (EST), Finland (FIN), France (FRA), Germany (DEU), Hungary (HUN), Italy (ITA), Japan (JPN), the Republic of Korea (KOR), Latvia (LVA), the Netherlands (NLD), New Zealand (NZL), Norway (NOR), Poland (POL), Portugal (PRT), the Slovak Republic (SVK), Slovenia (SVE), Spain (ESP), Sweden (SWE), Switzerland (CHE), the United Kingdom (GBR), and the United States (USA).

account for almost three quarters of total migration inflows, with significant differences across countries. Not surprisingly, Belgium and Switzerland are the only two countries in which there is more migration from abroad than internal migration. In general, while there is no significant correlation between country size (log population) and internal migration shares – see panel (i) of Figure A.1 – richer countries tend to have lower shares of internal migration – see panel (ii) of Figure A.1.

It is interesting to compare the shares of internal vs. foreign migration with the shares of internal vs. foreign trade used in the recent trade gravity literature mentioned in Section 1. Columns (3)-(4) of Table 1 respectively report the shares of internal and foreign trade in total trade, computed from the World Input-Output Database (WIOD) for 2013. On average, and very similarly to internal migration, internal trade (exports to thyself) accounts for almost three quarters of total trade.[27]

Destination-specific non-discriminatory migration policies are sourced from the Migrant Integration Policy Index (MIPEX).[28] MIPEX data include a set of eight policy strands that capture various dimensions of migrant integration policy:

1. Access to nationality: are legal immigrants encouraged to naturalize and are their children born in the host country entitled to become full citizens?

2. Anti-discrimination: do all residents have effective legal protection from racial, ethnic, religious, and nationality discrimination in all areas of life?

3. Education: are all the children of immigrants encouraged to achieve and develop in school like the children of nationals?

[27] As displayed in panel (iii) of Figure A.1, larger countries tend to trade more internally. This is because they have large domestic markets, and internal trade costs are lower than international trade costs. What is more interesting is that – contrary to internal migration, which is negatively correlated with a country's level of development – the share of internal trade tends to be higher in richer countries (see panel (iv) of Figure A.1). This stylized fact, obtained here in a small cross-section of 27 developed countries, deserves more careful empirical assessment, which is left for future research.

[28] MIPEX is a joint survey project of the Barcelona Centre for International Affairs (CIDOB) and the Migration Policy Group (MPG). Huddleston et al. (2015) provide a complete description of the database.

4. Family reunion: do legally resident foreign citizens have a facilitated right to reunite in their families?

5. Health: is the health system responsive to immigrants' needs?

6. Labor market mobility: do legally resident foreign citizens have comparable workers' rights and opportunities like nationals to access jobs and improve their skills?

7. Permanent residence: do temporary legal residents have facilitated access to a long-term residence permit?

8. Political participation: do legally resident foreign citizens have comparable opportunities as nationals to participate in political life?

For each of these strands, there are different dimensions taken into account, and, within each dimension, a list of indicators and (in some cases) sub-indicators, with three possible scores: 100 if the policy is least restrictive, and therefore most integration-friendly; 50 if the policy is halfway restrictive; 0 if the policy is most restrictive, and therefore least integration-friendly. For instance, access to nationality comprises the following four dimensions: eligibility, conditions for acquisition, security of status, and dual nationality. For the eligibility dimension, there are six indicators (residence period, permits considered, periods of prior-absence allowed, birth-right citizenship for second generation, birth-right citizenship for third generation, and requirements for spouses and partners), with the latter indicators divided in two sub-indicators (one for spouses of nationals, one for partners of nationals). Take the residence period indicator. The score of 100 (least restrictive, i.e. most integration-friendly) is assigned if the residence requirement for ordinary legal residents is of five years or less; the score of 50 (halfway restrictive) is assigned if such requirement is between six and nine years; and the score of 0 (most restrictive, i.e. least integration-friendly) is assigned if the requirement is ten years or more. The overall score assigned to each dimension is the simple average of the scores assigned to each indicator and sub-indicator. Similarly, the overall score assigned to each strand is the simple average of the

scores assigned to each dimension. And the overall score summarizing all policy strands (which is denoted MIPEX overall score in the present analysis) is the simple average of the scores assigned to each strand.[29]

By construction, MIPEX scores vary between 0 (most restrictive, i.e. least integration-friendly) and 100 (least restrictive, i.e. most integration-friendly). Figure A.2 displays – for the 27 destination countries in the dataset used for estimations and for the last available year, 2014 – the overall score and the scores for strands 1-4, 6-8. There are significant differences across countries for all indicators, while the within-country differences are smaller: migrant integration policies tend to be consistently more or less restrictive across all strands in each country.[30]

In the preferred estimations, the identification strategy exploits variation in MIPEX policy indexes within destination countries over time. This begs the question of how large such variation is. Table A.2 displays changes over time, computed between the initial year of the sample (2010) and the final year (2014).[31] On average, changes are small, mostly due to the short time span of the sample.[32] Table A.2 further reveals that, in the majority of countries, migration policies became less restrictive over time (see also Ortega and Peri, 2013 for similar results). In particular, migration policies became sizeably less restrictive in Denmark, Poland, Germany, Latvia, and Finland, and somewhat less restrictive in France, Estonia, the United States, Sweden, Slovenia, Japan, and the Slovak Republic. In Australia, Austria, Belgium, the Czech Republic, Hungary,

[29]Due to data availability issues, the health strand is excluded. The MIPEX overall score variable is therefore equal to the average of strands 1-4, 6-8 from the list in the main text. The tree structure of MIPEX is available in the file 'MIPEX_Policy_Indicators_List_and_Questionnaire.xlsx', which can be downloaded at `www.mipex.eu/download-pdf`.

[30]In the estimation sample, the MIPEX overall score is highly correlated with all other indicators. Moreover, the correlations between all other indicators are also quite high – in particular, the correlations between anti-discrimination and access to nationality, between education and access to nationality, between labor market mobility and education, between political participation and education, and between political participation and labor market mobility are all above 0.6. In view of such high correlations, the empirical analysis of Section 4.2 considers only one MIPEX indicator at the time. In-sample correlations between MIPEX indicators are available in Table A.1.

[31]The row MIPEX data cover 38 countries in the 2007-2014 period. Information on all the variables of interest is available only as 2010. In particular, for ten countries, there are no data between 2007 and 2009, while for 28 other countries there are no data on the 'Education' strand and on the overall score between 2007 and 2009. For these reasons, my panel estimation sample starts in 2010.

[32]In the sample of the 27 destination countries and five periods between 2010 and 2014 of Table 1 (N = 135), the standard deviation of the residuals of a regression of MIPEX overall score on time fixed effects (equal to 12.5) is ten times larger than the standard deviation of the residuals of a regression of MIPEX overall score on country fixed effects (equal to 1.2). Qualitatively, the same applies to other MIPEX variables.

Italy, Portugal, and Switzerland, some policies became less, some more restrictive. However, in all these countries with the exception of Australia migration policies became less restrictive on average. Only in seven countries (Canada, the Republic of Korea, the Netherlands, New Zealand, Norway, Spain, and the United Kingdom) did migration policies become more restrictive, and sizeably so only in the Netherlands and the United Kingdom.

In all regressions, I control for additional interactions between the BRDR dummy and destination country-specific variables. Specifically, I use the interaction between BRDR and the log of GDP per capita to control for economic and institutional development; the interaction between BRDR and the log of population to control for economic size; and (when possible) the interaction between BRDR and the log of internal distance to control for internal geography.[33] Data on GDP per capita and population are from the World Development Indicators. Data on internal distance are from CEPII (see Mayer and Zignago, 2011).

Orefice (2015) and Figueiredo et al. (2016) show that PTAs in general, and the migration-related provisions included in several deep PTAs in particular, positively affect bilateral migration. Accordingly, I also control for the presence of a Preferential Trade Agreement (PTA) within each *od* pair. In the preferred estimations, I use a PTA dummy variable, equal to one if o and d are in a PTA in year t.[34] Data on the presence/content of a preferential trade agreement (PTA) between each destination and each origin are from the 'Content of Deep Trade Agreements' database (see Hofmann et al., 2019). This database covers the universe of PTAs in force in 2015 and notified to the WTO.[35] It provides information on the year in which a PTA was signed and the year in which it entered into force, and maps 52 provisions of each PTA, including information on whether such provisions are legally enforceable.

[33]Since internal distance within each destination country does not vary over time, neither does its interaction with the BRDR dummy. Therefore, in a panel setting, the coefficient on BRDR × internal distance can only be identified if country pair fixed effects are excluded. See Section 4.2 for further details.

[34]In non-reported specifications, available upon request, I alternatively use the depth of the PTA, i.e. the number of provisions included in the PTA, or a MIG PTA dummy, equal to one if o and d have a PTA with migration provisions at time t. See Orefice (2015) and Figueiredo et al. (2016) for details on how the MIG PTA variable is constructed.

[35]Following Beverelli and Orefice (2019), I also code PTAs (but not their specific provisions) that were no longer in force in 2015 or that were not notified to the WTO.

Finally, in estimations that exclude pair fixed effects I control for the standard set of bilateral non time-varying gravity variables: distance (in logs), contiguity, common language and colony. These variables are from CEPII (see Mayer and Zignago, 2011). Note that the dummy variables contiguity, common language and colony are all coded as one's when the BRDR dummy is switched off, i.e. when origin and destination are the same country.[36]

Table A.3 presents in-sample descriptive statistics, while Table A.4 describes all variables used in the estimations.

4.2 Results

This section presents the Pseudo-Poisson Maximum Likelihood (PPML) estimations of the migration gravity model of equation (3.1).[37] Table 2 displays the results of regressions that exclude pair fixed effects, while including in the vector $\mathbf{x}_{odt}$ (see equation (3.1)) standard non-time varying gravity controls, alongside origin-time and destination-time fixed effects. The coefficient on BRDR × MIPEX overall score is positive and statistically significant. The same applies to the coefficients on BRDR × MIPEX access to nationality, BRDR × MIPEX education, BRDR × MIPEX permanent residence, and BRDR × MIPEX political participation. These results constitute prima facie evidence of a positive effect of at least some migrant integration policies on bilateral migration flows. The estimates of Table 2 further capture the fact that distance is a significant impediment to international migration, while sharing a common official language or past colonial relationships promote bilateral migration, all else equal. The coefficient on PTA is positive, as expected, although not statistically significant. Note further that, in line with the descriptive evidence of panels (i) and (ii) of Figure A.1, the coefficients on the BRDR × population and on the BRDR × GDP per capita interactions are respectively positive and

[36] Coding contiguity and common language as zero when origin and destination are the same country would be incorrect. Whether colony is equal to one or zero in cases in which origin is equal to destination does not affect the results excluding pair fixed effects and including pair characteristics, let alone the baseline results, which include pair fixed effects and therefore exclude pair characteristics.

[37] In line with the the empirical gravity literature in trade (Santos Silva and Tenreyro, 2006; 2011, and Head and Mayer, 2014) and migration (Beine et al., 2016), regressions are based on the PPML estimator because it deals better than the OLS estimator with the presence of zeros in the dependent variable and with heteroskedasticity in the data.

negative.

The preferred estimations, also including pair fixed effects μ_{od} (see equation (3.1)) together with origin-time and destination-time fixed effects, are in Table 3. Relative to the results of Table 2, the coefficient on BRDR × education turns non-statistically significant, while the coefficients on BRDR × anti-discrimination and BRDR × labor market mobility become statistically significant. Note further that the coefficients are generally of smaller magnitude in estimations with pair fixed effects of Table 3 than in estimations with pair gravity controls of Table 2.[38] The results show that not all migration policies increase bilateral migration when they are made less restrictive. For instance, in the full sample I do not find any evidence that family reunion policies matter for bilateral migration.[39]

To gauge insights into the economic significance of these results, consider the aggregate MIPEX indicator of column (1) of Table 3. The estimated coefficient (a semi-elasticity) on BRDR × MIPEX overall score suggests that a one point increase in the overall score at destination increases foreign migration, relative to internal migration, by 2.7 percent. This effect is economically sizeable. Moving from the 25^{th} percentile to the median of the MIPEX overall score variable (roughly ten points increase) leads to a predicted 27 percent increase in bilateral migration flows relative to internal migration flows. The same predicted effect would be obtained from a move to the median to the 75^{th} percentile of the MIPEX overall score variable, because this is also an increase of around ten points. Considering the distribution of the MIPEX overall scores in 2014 reported in panel (i) of Figure A.2, a move from the 25^{th} percentile to the median would correspond to Slovenia, Estonia or Austria adopting the (average) integration policy of Italy. A move from the median to the 75^{th} percentile of the MIPEX overall score, in turn,

[38] Note that the coefficient on PTA stays non-statistically significant. This is in contrast to the literature, but easy to explain in view of the short time span of the panel. Out of 4110 country pairs for which the origin is different from the destination used in the estimations of Table 3, only 357 (i.e. less than nine percent) signed a PTA during the sample period. The little within-pair variation over time in the PTA variable explains the lack of significance of its coefficient.

[39] This result was surprising enough to warrant further investigation. In unreported regressions (available upon request) I show that family reunion policies do not have a significant impact on migration when, instead of MIPEX data, data from the Immigration Policies in Comparison (IMPIC) dataset are used. (For a description of IMPIC data, see Bjerre et al., 2016).

would correspond to Italy adopting the (average) integration policy of Norway. If a country like Austria were to adopt the same (average) integration policies as Norway, the predicted increase in bilateral migration flows, relative fo internal migration flows, would then be 54 percent.[40]

4.3 Robustness

In this section, I present a battery of robustness checks for the results of Section 4.2. They are all based on estimations with internal and international migration data and on the most demanding specification with origin-time, destination-time and pair fixed effects. This is because the interest lies in verifying that the results are not driven by factors such as the composition of the sample or the assumptions on error terms, rather than in comparing results from correctly-specified models that can be estimated when internal migration data are available with results from specifications that can be estimated when only international migration data are available.[41]

The first robustness check is about the time span used for panel estimations. A recommendation emerging from the trade gravity literature is that estimations with panel data in non-consecutive years are to be preferred to estimations with panel data pooled over consecutive years to allow for the adjustment of the dependent variable in response to trade policy changes.[42] This reasoning equally applies to the current migration gravity setting. Within the short time span of the panel (2010-2014), I select three years, 2010, 2012, and 2014 to run estimations with non-consecutive years. The results are in Table A.5. They are similar to the baseline results of Table 3. The only difference is that the interaction BRDR × MIPEX labor market mobility loses statistical significance.

In the next set of robustness exercises, I change the composition of the set of destination

[40]The semi-elasticity is the coefficient on the BRDR × MIPEX overall score. This interaction has the same moments as it MIPEX overall score component, so that a move from the 25^{th} percentile to the median (or from the median to the 75^{th} percentile) of MIPEX overall score is quantitatively the same as a move from the 25^{th} percentile to the median (or from the median to the 75^{th} percentile) of BRDR × MIPEX overall score.

[41]As emphasized in Section 3, it has been shown in the trade literature that – especially in short panels – the fixed effect estimator that utilizes data on internal flows yields unbiased and consistent estimates. This is not necessarily the case for other estimators based on identification approaches not requiring data on internal flows, such as the bonus vetus OLS or the two-stage fixed effects strategy suggested by Head and Mayer (2014).

[42]See Trefler (2004), Baier and Bergstrand (2007), and Anderson and Yotov (2016).

countries. I estimated regressions excluding the following Eastern European countries (which tend to have positive net migration outflows): the Czech Republic, Hungary and Slovakia. The results (available upon request) are similar to the baseline results of Table 3, except that the coefficient on interaction BRDR × MIPEX political participation loses statistical significance.

One might be further concerned that within the European Union all policies affecting migration, including restrictions and integration policies, are fairly homogeneous and preferential. This could raise the suspicion that the results would be significantly different for intra-EU migration flows. Table A.6 shows the results of regressions that exclude such intra-EU migration flows. Two results are worth noting. First, the coefficient on the interaction BRDR × MIPEX overall score doubles in size with respect to the same coefficient in Table 3. Migrant integration policies, on average, matter more for extra-EU than for intra-EU migration flows, most likely because the free movement of people within the EU makes specific policies addressed at migrants less important. Second, the coefficients on the interaction BRDR × MIPEX education and on the interaction BRDR × MIPEX family reunion turn statistically significant. While there is no clear reason to believe that the MIPEX education variable should have different effects in two samples (full sample vs. sample excluding intra-EU migration flows), the latter result can be explained as follows: because of free movement of people within the EU, policies specifically directed at easening family reunion of migrants from inside the EU into an EU country should not matter as much as in the case of family reunion of EU migrants in an extra-EU country, or extra-EU migrants in an EU country.

Different levels of within-country aggregation of internal migration data could be another source of concern. Among the 27 destination countries used for estimations there are 23 (Austria, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Japan, the Republic of Korea, Latvia, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States) for which data are available for small (TL3) regions. For the remaining four countries (Australia, Belgium,

Canada, and the Netherlands), data are only available for large (TL2) regions. The inclusion of these four countries in the dataset could create an aggregation bias. Reassuringly, as reported in Table A.7, the results of estimations that exclude Australia, Belgium, Canada, and the Netherlands from the set of destinations are similar to the baseline results of Table 3, with the only difference that the coefficients on the interactions BRDR × MIPEX permanent residence and BRDR × MIPEX political participation lose statistical significance.

I finally show results of regressions that drop one destination country at the time in Table A.8. There is only one country whose exclusion significantly alters some the results: the United Kingdom.[43] In particular, the coefficient on BRDR × MIPEX overall score turns not significant, and the coefficients on BRDR × MIPEX education and on BRDR × MIPEX family reunion turn negative. It should however be reminded that the United Kingdom is one of the largest destinations of migration inflows. Therefore, the fact that it is this country driving these two specific results is not as worrisome as if they were driven by a smaller destination country.

I estimated various other specifications, with results that are not shown in the paper but are available upon request. In particular, I replaced the PTA dummy with the PTA depth continuous variable, or alternatively with the MIG PTA dummy variable described in Section 4.1. In another robustness check, I replaced directional pair fixed effects with symmetric pair fixed effects. In both cases, the results are fully consistent with the baseline results of Table 3. In a final robustness check, I changed the clustering of standard errors, replacing the two-way clustering that is standard practice in the recent trade gravity literature with country pair clustering. In this case, the coefficient on the interaction BRDR × MIPEX permanent residence loses statistical significance.

Taken together, the results of the baseline estimations of Table 3 and of several robustness checks imply that the overall restrictiveness of migration policies (BRDR × MIPEX overall score)

[43]The coefficient on BRDR × MIPEX overall score turns not statistically significant if Germany is excluded. The z statistics is, however, equal to 1.62, implying that the coefficient is very close to being statistically significant at the ten percent level.

is a robust determinant of bilateral migration flows. Among its components, the restrictiveness of access to nationality (BRDR × MIPEX access to nationality), and anti-discrimination norms (BRDR × MIPEX anti-discrimination) are also robust determinants of bilateral migration flows.

4.4 Discussion

Research shows that immigrants living in destination countries with higher MIPEX scores on access to nationality are more likely to hold citizenship of the host country than immigrants in countries with lower scores (see Bilgili et al., 2015). There is evidence that naturalization leads to better employment outcomes and higher levels of social and political participation for certain naturalizing immigrants (see OECD, 2011). Migrants from developing origin countries are more likely to naturalize than migrants from rich countries (Vink et al., 2013), most likely because they attach a higher value to acquiring a new nationality.[44] The consistently positive effect of the BRDR × MIPEX access to nationality interaction is therefore obtained because the process of acquiring nationality is indeed affected by MIPEX scores on access to nationality, and there are relevant perceived benefits of acquiring nationality of the host country, especially in the case of migration from poor to rich countries.

Moving to anti-discrimination norms, Auer and Ruedin (2019) contend that immigrants might be willing to tolerate some degree of discriminatory treatment as part of the costs of migrating that are more than compensated by the financial benefits accruing to them or to their children. Furthermore, the stringency of anti-discrimination norms (as measured by the MIPEX anti-discrimination index) correlates with the level of public awareness of discrimination as a societal issue (Ziller, 2014). As argued by Larsen and Di Stasio (2019, p. 6), "this could potentially affect the attitudes of employers, either through general awareness of the harmful consequences associated with discrimination, or simply through a stronger fear of sanctions

[44]Migrants into Switzerland who are national of a country outside of the Schengen Area, for instance, have relatively more to gain from naturalization than EU migrants into Switzerland. By becoming Swiss nationals they start benefiting from freedom of movement within the Schengen Area, which EU migrants into Switzerland already have.

and reported incidents". In terms of the theoretical model of Section 2, more stringent anti-discrimination norms can therefore: i) reduce the costs of migrating from o to d, δ_{od}; ii) increase wage at destination, w_d; and iii) increase worker's h idiosyncratic utility for migration, ϵ^{odh}.[45] Taken together, these considerations justify the consistently positive effect of the BRDR × MIPEX anti-discrimination on bilateral migration flows that I obtain.

5 Conclusions

The attractiveness of a country to migrants is a blend of several factors. Many of them depend on historical, cultural, geographical and institutional ties between origin and destination. Former colonies send disproportionately more migrants to the colonizer. Destinations where the same language as in the origin country is spoken are relatively more attractive than destinations where a different language is spoken. The presence of a dense network of migrants from the origin country attracts even more migrants from the same origin. More distant destinations receive less migrants than geographically closer destinations. And bilateral migration is stimulated by bilateral agreements that reduce the costs of settling in the partner country.

Still, several factors that make some countries highly desirable migrant destinations are common across all origin countries. They have to do with things that are measurable – such as economic conditions, climate and the environment, the quality of public goods, policies affecting migration – but also with things that are difficult to grasp, let alone measure precisely – such as natives' attitudes towards migrants in day-to-day interactions, or the overall quality of life at destination. Showing the empirical relevance of such 'pull' factors to migration is not an easy task. Observable variables are likely correlated with unobservable ones; and variables that are the result of human decisions (e.g. those describing destination-specific migration policies) are rarely exogenous.[46]

[45] To justify why the third effect could arise, consider migrants from different ethnic groups than natives. Strong anti-discriminatory legislation at destination reduces the exposure of potential migrants to humiliating episodes of racial discrimination, increasing their utility for migration.

[46] There is a large literature that has exploited exogenous variation in migration policy to overcome endogeneity

In this paper, I applied a methodology recently developed in the trade literature to a migration gravity setting to consistently estimate the impact of destination-specific migrant integration policies on bilateral migration flows. By exploiting the availability of internal migration data for several OECD and non-OECD countries that together account for the quasi totality of international migrant inflows, I was able to estimate the differential impact of migrant integration policies on international migration inflows, relative to internal migration inflows. I showed that the proposed methodology is grounded in theory. Empirically, not only does the proposed methodology thoroughly control for multilateral resistances to migration and for potential correlation between migration policies and other determinants of migration. It is also valid if one believes that – even after addressing multilateral resistances and omitted variables – migration policies cannot be considered exogenous. All that is required for correct identification of their effects is, in fact, that the 'border' dummy (equal to one for international migrant flows and zero for internal migrant flows) with which migration policy variables are interacted is exogenous, and independent of migrant integration policies. In the sample, exogeneity of the border dummy can be taken for granted because the set of countries is constant, therefore borders are exclusively determined by geography. Furthermore, the border dummy is mechanically independent of migrant integration policies.

In a sample of 27 destination countries and 189 origin countries for the years 2010-2014, I showed that migrant integration policies, on average, positively affect bilateral migration. This effect is economically relevant. Moving from the 25^{th} percentile to the median of the variable that summarizes all migrant integration policies leads to a predicted 27 percent increase in bilateral migration flows. Not all migrant integration policies, however, have a positive effect on bilateral migration flows. Only policies favoring migrants' access to nationality and policies affording migrants legal protection from discrimination are robust determinants of bilateral migration

of such policy. The 'natural' or 'quasi' experiments in this literature are however specific to a given origin (see for instance Makovec et al., 2018), or destination (see for instance Beerli and Peri, 2017, and Galli and Russo, 2019), or country pair (see for instance Theoharides, 2020). There is clearly no natural experiment available in multi-origin and -destination gravity framework.

flows. in the full sample. Intuitively, less restrictive conditions to obtain nationality of the host country make it easier to naturalize, improving as a result both employment outcomes and the levels of social and political participation. This is a significant attraction factor, especially for migrants from poor into rich countries. Strong anti-discriminatory legislation at destination, in turn, can at the same time reduce the perceived costs of migrating and increase its financial returns, encouraging migration. In the sample excluding intra-EU flows, policies encouraging the education of migrants' children, and policies favoring family reunion also have a positive effect on international migration flows, relative to internal migration flows. Free movement of people within the EU, which makes policies directly targeting family reunion less important for flows between EU countries than for flows involving non-EU countries, likely explains the latter result.

The empirical strategy proposed in this paper could be applied to other pull or push factors for migration suggested by the gravity literature. Future research could analyze, for instance, whether political instability or adverse economic shocks at origin cause more emigration, or whether political cycles at destination affect immigration. This is all the more relevant in view of the enormous pressures to migrate from poor to rich countries, and of the rise of populist governments with negative views on international migration in several traditional destination countries.

Another fruitful direction of research would be to characterize the type of migration that is more sensitive to integration policies. Do migrant integration policies disproportionately affect high skilled migration? Do they substitute or complement standard migration policy in defining the composition of the migrant population at destination? A first attempt in this direction is Beine et al. (2019b), who are able to estimate the effects of migrant integration policies on emigration desires of different subsample of individuals, by skill level, family structure, gender and age. Unfortunately, currently available cross-country data on migrant flows do not provide any information on such migrant characteristics. The question of whether migrant integration

(and control) policies disproportionately affects certain types of migrants remains open.

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Tables

Table 1: Internal vs. foreign migration and trade shares

	Migration shares		Trade shares	
Country	Internal	Foreign	Internal	Foreign
	(1)	(2)	(3)	(4)
Australia	0.60	0.40	0.88	0.12
Austria	0.53	0.47	0.69	0.31
Belgium	0.42	0.58	0.58	0.42
Canada	0.52	0.48	0.78	0.22
Czech Republic	0.69	0.31	0.64	0.36
Denmark	0.79	0.21	0.65	0.35
Estonia	0.89	0.11	0.60	0.40
Finland	0.83	0.17	0.74	0.26
France	0.88	0.12	0.79	0.21
Germany	0.69	0.31	0.76	0.24
Hungary	0.95	0.05	0.49	0.51
Italy	0.57	0.43	0.83	0.17
Japan	0.87	0.13	0.85	0.15
Republic of Korea	0.86	0.14	0.78	0.22
Latvia	0.86	0.14	0.75	0.25
Netherlands	0.81	0.19	0.63	0.37
New Zealand	0.79	0.21	n.a.	n.a.
Norway	0.70	0.30	0.78	0.22
Poland	0.86	0.14	0.75	0.25
Portugal	0.79	0.21	0.74	0.26
Slovak Republic	0.91	0.09	0.60	0.40
Slovenia	0.76	0.24	0.65	0.35
Spain	0.62	0.38	0.80	0.20
Sweden	0.69	0.31	0.75	0.25
Switzerland	0.49	0.51	0.77	0.23
United Kingdom	0.76	0.24	0.82	0.18
United States	0.80	0.20	0.90	0.10
Mean	0.74	0.26	0.73	0.27
Median	0.79	0.21	0.75	0.25

Notes: Internal and foreign migration (trade) shares computed as shares in total migration (trade). Migration data, for 2014 (2011 for the Netherlands, Portugal and the United States, 2013 for New Zealand), from the OECD Regional Demography database for internal migration, and from the OECD International Migration Database (IMD) for foreign migration. Trade data, for 2013, from the World Input-Output Database (WIOD). Countries included: 27 destination countries from the sample of Table 3.

Table 2: PPML regressions with gravity pair controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRDR × MIPEX overall score	0.048**							
	(0.012)							
BRDR × MIPEX access to nationality		0.016^{+}						
		(0.008)						
BRDR × MIPEX anti-discrimination			-0.000					
			(0.009)					
BRDR × MIPEX education				0.027**				
				(0.009)				
BRDR × MIPEX family reunion					0.018			
					(0.013)			
BRDR × MIPEX labor market mobility						0.015		
						(0.010)		
BRDR × MIPEX permanent residence							0.032*	
							(0.015)	
BRDR × MIPEX political participation								0.029**
								(0.006)
PTA	0.081	0.088	0.122	0.100	0.134	0.126	0.118	0.067
	(0.142)	(0.148)	(0.142)	(0.139)	(0.143)	(0.142)	(0.146)	(0.146)
BRDR	-2.174	-1.606	-3.608	-0.204	-6.911	-0.996	-7.992^{+}	2.515
	(4.061)	(3.652)	(4.283)	(3.622)	(4.653)	(4.154)	(4.492)	(4.034)
BRDR × GDP per capita	-0.980**	-0.712*	-0.510	-1.000**	-0.331	-0.852^{+}	-0.446	-1.331**
	(0.370)	(0.315)	(0.384)	(0.329)	(0.372)	(0.455)	(0.358)	(0.338)
BRDR × population	0.590**	0.456**	0.463**	0.554**	0.539**	0.466**	0.581**	0.483**
	(0.163)	(0.149)	(0.155)	(0.133)	(0.175)	(0.154)	(0.183)	(0.130)
BRDR × internal distance	-0.486^{+}	-0.330	-0.227	-0.426^{+}	-0.419	-0.240	-0.275	-0.085
	(0.287)	(0.241)	(0.310)	(0.247)	(0.285)	(0.261)	(0.260)	(0.221)
Distance	-1.116**	-1.114**	-1.111**	-1.128**	-1.108**	-1.109**	-1.110**	-1.115**
	(0.102)	(0.101)	(0.101)	(0.105)	(0.100)	(0.102)	(0.101)	(0.101)
Contiguity	-0.197	-0.228	-0.223	-0.174	-0.223	-0.228	-0.201	-0.182
	(0.235)	(0.230)	(0.233)	(0.276)	(0.237)	(0.234)	(0.237)	(0.229)
Common language	1.234**	1.233**	1.243**	1.205**	1.260**	1.275**	1.253**	1.271**
	(0.179)	(0.178)	(0.183)	(0.181)	(0.182)	(0.189)	(0.181)	(0.183)
Colony	0.444*	0.446*	0.407*	0.384^{+}	0.405*	0.395*	0.441*	0.421*
	(0.193)	(0.186)	(0.186)	(0.206)	(0.203)	(0.201)	(0.204)	(0.188)

Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin *o* to destination *d*. Standard errors clustered by origin and by destination in parentheses. Origin-year and destination-year fixed effects included in all specifications. Number of origin countries: 191. Number of destination countries: 27. Number of years: 5 (2010-2014). Number of observations: 21,367. Variables defined in Table A.4.

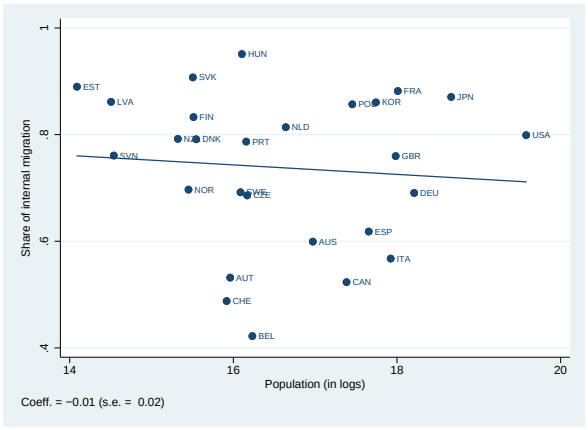
Table 3: PPML regressions: baseline

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRDR × MIPEX overall score	0.027*							
	(0.011)							
BRDR × MIPEX access to nationality		0.005^{+}						
		(0.003)						
BRDR × MIPEX anti-discrimination			0.047**					
			(0.011)					
BRDR × MIPEX education				0.003				
				(0.016)				
BRDR × MIPEX family reunion					0.004			
					(0.008)			
BRDR × MIPEX labor market mobility						0.014^{+}		
						(0.008)		
BRDR × MIPEX permanent residence							0.013*	
							(0.006)	
BRDR × MIPEX political participation								0.016^{+}
								(0.009)
PTA	0.007	0.009	0.012	0.008	0.007	0.010	0.003	0.009
	(0.050)	(0.050)	(0.051)	(0.050)	(0.050)	(0.056)	(0.050)	(0.050)
BRDR × GDP per capita	-0.017	-0.042	-0.184	0.023	0.035	-0.110	0.118	-0.008
	(0.294)	(0.308)	(0.328)	(0.324)	(0.309)	(0.285)	(0.299)	(0.302)
BRDR × population	0.113	-0.620	-0.245	-0.688	-0.401	-0.404	-0.208	-0.791
	(1.876)	(1.800)	(1.725)	(1.658)	(1.895)	(1.791)	(1.889)	(1.783)

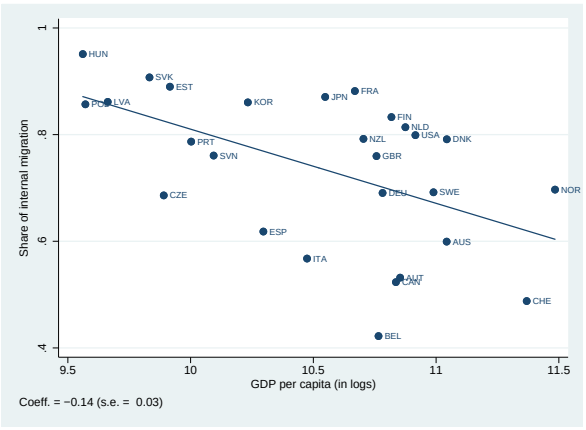
Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin o to destination d. Standard errors clustered by origin and by destination in parentheses. Origin-year, destination-year and directional country pair fixed effects included in all specifications. Number of origin countries: 189. Number of destination countries: 27. Number of years: 5 (2010-2014). Number of observations: 20,006. Variables defined in Table A.4.

Appendix figures and tables

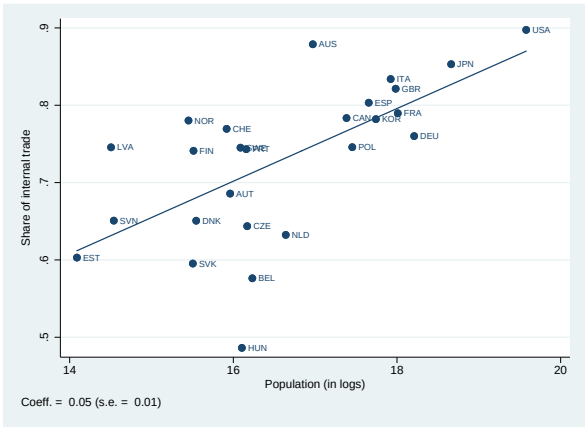
Figure A.1: Correlation between shares of internal migration or trade, country size and level of development, 2014



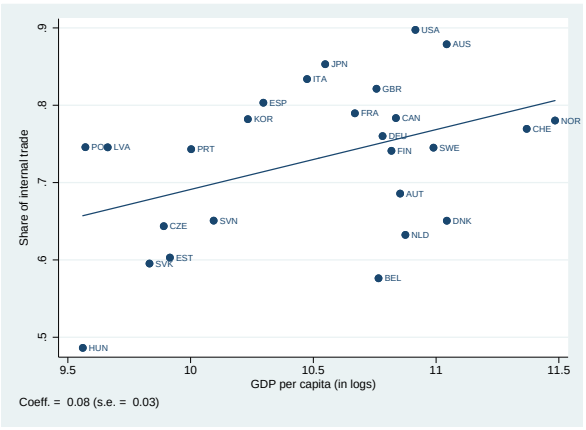
(i) Internal migration and country size



(ii) Internal migration and country level of development



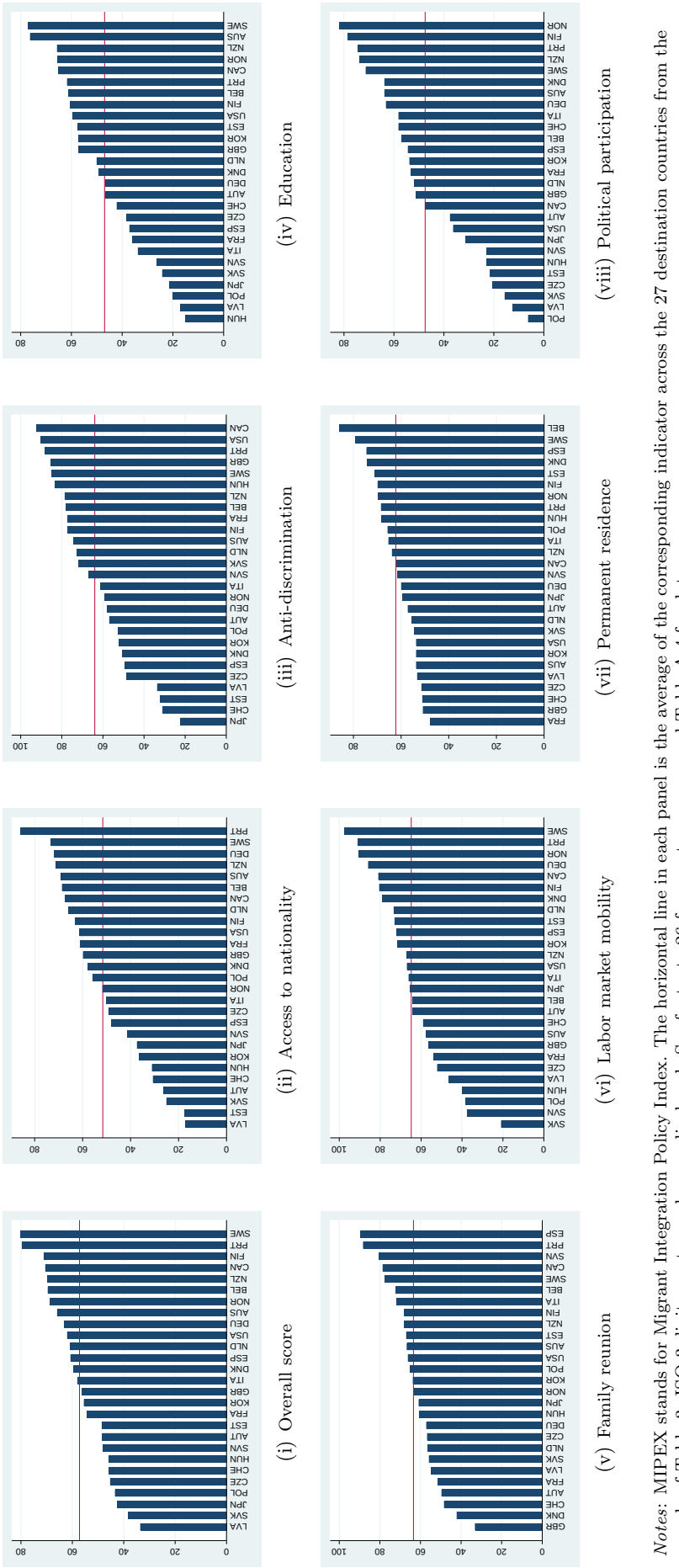
(iii) Internal trade and country size



(iv) Internal trade and country level of development

Notes: See notes of Table 1 for the definition of internal and foreign migration (trade) shares. ISO 3-digit country codes are displayed. See footnote 26 for country names.

Figure A.2: MIPEX scores, 2014



Notes: MIPEX stands for Migrant Integration Policy Index. The horizontal line in each panel is the average of the corresponding indicator across the 27 destination countries from the sample of Table 3. ISO 3-digit country codes are displayed. See footnote 26 for country names, and Table A.4 for data sources.

Table A.1: In-sample correlation of MIPEX variables

	Overall score	Access to nationality	Anti-discrimination	Education	Family reunion	Labor market mobility	Permanent residence	Political participation
Overall score	1							
Access to nationality	0.830	1						
Anti-discrimination	0.609	0.650	1					
Education	0.840	0.606	0.439	1				
Family reunion	0.484	0.349	0.293	0.256	1			
Labor market mobility	0.746	0.483	0.066	0.680	0.209	1		
Permanent residence	0.450	0.177	0.123	0.231	0.468	0.356	1	
Political participation	0.791	0.580	0.238	0.665	0.111	0.728	0.258	1

Notes: Correlations computed from the sample of Table 3. Variables defined in Table A.4.

Table A.2: Changes in MIPEX indexes, 2010-2014

Country	MIPEX							
	Overall score	Access to nationality	Anti-discrimination	Education	Family reunion	Labor market mobility	Permanent residence	Political participation
Australia	-0.84	0.00	3.89	0.00	-5.08	0.00	-5.50	0.00
Austria	6.37	-1.56	3.80	12.00	3.48	24.19	-1.03	0.00
Belgium	2.60	11.15	0.00	1.03	-8.17	8.45	7.84	0.00
Canada	-1.38	-4.72	0.00	0.00	-4.35	0.00	0.00	0.00
Czech Republic	8.57	23.56	0.00	10.84	-8.11	0.00	0.00	450.00
Denmark	21.64	64.88	9.02	8.26	52.04	13.47	18.39	14.61
Estonia	1.49	0.00	0.00	0.00	0.00	7.36	0.00	0.00
Finland	2.55	3.41	3.73	0.00	0.00	10.29	0.00	0.00
France	1.84	0.69	1.83	13.16	1.76	0.00	0.00	0.00
Germany	4.99	9.52	3.72	0.00	0.00	14.44	0.00	3.06
Hungary	1.48	8.76	2.57	0.00	-3.96	22.44	2.34	-21.43
Italy	1.49	0.00	0.00	0.00	-1.95	3.93	8.14	0.00
Japan	0.53	0.00	0.00	0.00	0.00	0.00	2.70	0.00
Republic of Korea	-1.35	0.00	0.00	0.00	-5.56	0.00	-2.83	0.00
Latvia	4.64	57.69	0.00	0.00	0.00	9.85	0.00	0.00
Netherlands	-11.44	-2.47	0.00	-16.08	-9.72	-19.27	-0.27	-27.83
New Zealand	-0.73	0.00	0.00	0.00	-4.99	0.00	0.00	0.00
Norway	-1.16	0.00	0.00	0.00	0.00	0.00	0.00	-6.43
Poland	14.77	114.40	9.82	0.00	3.31	6.98	0.00	0.00
Portugal	0.75	-0.48	0.00	0.00	2.42	2.83	0.00	0.00
Slovak Republic	0.52	0.00	1.98	0.00	0.00	0.00	0.00	0.00
Slovenia	0.53	0.00	0.00	0.00	2.27	0.00	0.00	0.00
Spain	-1.16	0.00	0.00	-11.88	0.00	0.00	0.00	0.00
Sweden	0.75	0.00	0.00	5.71	0.00	0.00	0.00	0.00
Switzerland	0.79	-5.16	0.00	10.99	0.00	0.00	0.00	0.00
United Kingdom	-8.83	-3.37	-1.60	-15.95	-24.25	-4.26	-17.41	0.00
United States	0.79	0.00	0.00	0.00	1.37	3.88	0.00	0.00

Notes: MIPEX stands for Migrant Integration Policy Index. Changes are expressed in percentages and are computed between 2010 and 2014. Countries included: 27 destination countries from the sample of Table 3. See Table A.4 for data sources.

Table A.3: In-sample descriptive statistics

Continuous variables	Mean	Median	Std Dev	Min	Max
Migration	4,913.19	69	85,931	0	4,017,806
BRDR × MIPEX overall score	57.54	58.02	12.00	0	80.11
BRDR × MIPEX access to nationality	50.92	51.67	16.93	0	86.25
BRDR × MIPEX anti-discrimination	63.24	61.11	19.42	0	92.36
BRDR × MIPEX education	47.74	46.67	17.66	0	77.08
BRDR × MIPEX family reunion	63.73	63.21	13.11	0	89.64
BRDR × MIPEX labor market mobility	65.26	65.42	17.56	0	97.50
BRDR × MIPEX permanent residence	62.15	61.46	10.17	0	85.94
BRDR × MIPEX political participation	49.72	54.38	20.86	0	87.50
BRDR × GDP per capita	10.53	10.75	0.93	0	11.54
BRDR × population	16.68	16.63	1.78	0	19.58
Distance	8.58	8.87	0.90	4.20	9.88
BRDR × internal distance	5.22	5.33	0.92	0	7.08
Dummy variables	Zeros	Ones	Std Dev	Min	Max
PTA	13,710	6,296	0.46	0	1
Contiguity	20,837	530	0.16	0	1
Common language	19,201	2,166	0.30	0	1
Colony	20,945	422	0.14	0	1
BRDR	113	21,254	0.07	0	1

Notes: Summary statistics computed from the sample of Table 2 for the variables Distance, BRDR × internal distance, Contiguity, Common language, Colony and BRDR. Summary statistics computed from the sample of Table 3 for the variables Migration, BRDR × MIPEX overall score, BRDR × MIPEX access to nationality, BRDR × MIPEX anti-discrimination, BRDR × MIPEX education, BRDR × MIPEX family reunion, BRDR × MIPEX labor market mobility, BRDR × MIPEX permanent residence, BRDR × MIPEX political participation, BRDR × GDP per capita, BRDR × population, and PTA. Variables defined in Table A.4.

Table A.4: Variables list

Variable	Description	Data source
Dependent variable		
Migration	Inflow of foreign migrants from origin o to destination d	OECD International Migration Database (IMD) and
Explanatory variables	or internal migrants from d to d, in units	OECD Regional Database
BRDR × MIPEX overall score	Interaction between BRDR and the overall score of the Migrant Integration Policy Index (MIPEX) in d	Migrant Integration Policy Index (MIPEX)
BRDR × MIPEX access to nationality	Interaction between BRDR and the access to nationality indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX anti-discrimination	Interaction between BRDR and the anti-discrimination indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX education	Interaction between BRDR and the education indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX family reunion	Interaction between BRDR and the family reunion indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX labor market mobility	Interaction between BRDR and the labor market mobility indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX permanent residence	Interaction between BRDR and the permanent residence indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × MIPEX political participation	Interaction between BRDR and the political participation indicator of the Migrant Integration Policy Index (MIPEX) in d	– " –
BRDR × GDP per capita	Interaction between BRDR and log of GDP per capita (in current US$) in d	World Bank's World Development Indicators (WDIs)
BRDR × population	Interaction between BRDR and log of population (in millions) in current US$ in d	– " –
BRDR × internal distance	Interaction between BRDR and log of internal distance in d	CEPII's GeoDist Database

Continued on next page

Table A.4 – *Continued from previous page*

Variable	Description	Data source
PTA	Dummy = 1 if o and d have a PTA	World Bank's Content of Deep Trade Agreements
Distance	Log of population-weighted distance between o and d	CEPII's GeoDist Database
Contiguity	Dummy = 1 if o and d share a common border or if BRDR = 0	– " –
Common language	Dummy = 1 if o and d share a common official language or if BRDR = 0	– " –
Colony	Dummy = 1 if o and d were in a colonial relationship post 1945 or if BRDR = 0	– " –

Notes: BRDR is a dummy equal to one if if o and d are distinct (therefore separated by a border) and zero if they are the same country.

Table A.5: PPML regressions with non-consecutive years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRDR × MIPEX overall score	0.027*							
	(0.013)							
BRDR × MIPEX access to nationality		0.006*						
		(0.003)						
BRDR × MIPEX anti-discrimination			0.041*					
			(0.017)					
BRDR × MIPEX education				0.010				
				(0.012)				
BRDR × MIPEX family reunion					0.003			
					(0.012)			
BRDR × MIPEX labor market mobility						0.011		
						(0.010)		
BRDR × MIPEX permanent residence							0.016^{+}	
							(0.010)	
BRDR × MIPEX political participation								0.025**
PTA	0.007	0.010	0.014	0.003	0.006	0.012	-0.000	0.008
	(0.053)	(0.052)	(0.058)	(0.052)	(0.052)	(0.054)	(0.054)	(0.052)
BRDR × GDP per capita	0.290	0.267	0.141	0.455	0.419	0.174	0.569	0.335
	(0.343)	(0.366)	(0.412)	(0.362)	(0.356)	(0.343)	(0.371)	(0.325)
BRDR × population	-1.573	-2.384^{+}	-2.062	-2.567*	-2.648	-1.897	-2.465^{+}	-2.647*
	(1.595)	(1.423)	(1.333)	(1.303)	(1.759)	(1.787)	(1.445)	(1.245)
								(0.006)

Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin o to destination d. Standard errors clustered by origin and by destination in parentheses. Origin-year, destination-year and directional country pair fixed effects included in all specifications. Number of origin countries: 189. Number of destination countries: 26. Number of years: 3 (2010, 2012 and 2014). Number of observations: 11,724. Variables defined in Table A.4.

Table A.6: PPML regressions excluding intra-EU migration flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRDR × MIPEX overall score	0.055*							
	(0.022)							
BRDR × MIPEX access to nationality		0.004						
		(0.004)						
BRDR × MIPEX anti-discrimination			0.065^{+}					
			(0.035)					
BRDR × MIPEX education				0.028**				
				(0.010)				
BRDR × MIPEX family reunion					0.027*			
					(0.012)			
BRDR × MIPEX labor market mobility						0.015		
						(0.009)		
BRDR × MIPEX permanent residence							0.037**	
							(0.010)	
BRDR × MIPEX political participation								0.028*
								(0.014)
PTA	-0.002	0.001	0.007	-0.004	-0.003	0.002	-0.010	0.001
	(0.053)	(0.055)	(0.055)	(0.052)	(0.052)	(0.055)	(0.050)	(0.055)
BRDR × GDP per capita	-0.033	-0.059	-0.198	0.092	0.030	-0.068	0.167	-0.061
	(0.364)	(0.387)	(0.465)	(0.319)	(0.368)	(0.386)	(0.316)	(0.377)
BRDR × population	-0.668	-2.215	-2.320	-1.783	0.301	-2.321	-0.180	-2.221
	(2.465)	(2.466)	(2.172)	(2.343)	(2.717)	(2.466)	(2.771)	(2.493)

Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin o to destination d. Standard errors clustered by origin and by destination in parentheses. Origin-year, destination-year and directional country pair fixed effects included in all specifications. Number of origin countries: 189. Number of destination countries: 27. Number of years: 5 (2010-2014). Number of observations: 17,815. Variables defined in Table A.4.

Table A.7: PPML regressions excluding four countries with internal migration data only available at TL2 level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BRDR × MIPEX overall score	0.018^{+}							
	(0.010)							
BRDR × MIPEX access to nationality		0.004*						
		(0.002)						
BRDR × MIPEX anti-discrimination			0.046**					
			(0.012)					
BRDR × MIPEX education				-0.006				
				(0.019)				
BRDR × MIPEX family reunion					-0.001			
					(0.006)			
BRDR × MIPEX labor market mobility						0.014*		
						(0.006)		
BRDR × MIPEX permanent residence							0.006	
							(0.005)	
BRDR × MIPEX political participation								0.016
								(0.010)
PTA	0.009	0.011	0.013	0.010	0.009	0.015	0.006	0.011
	(0.056)	(0.056)	(0.056)	(0.055)	(0.056)	(0.057)	(0.056)	(0.056)
BRDR × GDP per capita	-0.017	-0.037	-0.155	0.011	0.013	-0.072	0.055	0.012
	(0.362)	(0.377)	(0.386)	(0.376)	(0.380)	(0.359)	(0.377)	(0.378)
BRDR × population	1.755	1.335	1.778	1.018	1.212	0.593	1.672	0.947
	(3.568)	(3.358)	(3.580)	(2.939)	(3.365)	(3.080)	(3.515)	(3.486)

Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin *o* to destination *d*. Standard errors clustered by origin and by destination in parentheses. Origin-year, destination-year and directional country pair fixed effects included in all specifications. Number of origin countries: 189. Number of destination countries: 23 (all the countries in Table 1 except Australia, Belgium, Canada, and the Netherlands). Number of years: 5 (2010-2014). Number of observations: 16,544. Variables defined in Table A.4. TL2 stands for 'Territoral Level 2' (large regions) in the OECD Regional Demography database.

Table A.8: PPML regressions excluding one destination country at the time

Excluded country	BRDR × MIPEX								Observations
	Overall score	Access to nationality	Anti-discrimination	Education	Family reunion	Labor market mobility	Permanent residence	Political participation	
Australia	0.022*	0.005^{+}	0.045**	-0.003	-0.001	0.014^{+}	0.009*	0.016^{+}	19,081
	(0.009)	(0.003)	(0.013)	(0.017)	(0.007)	(0.008)	(0.005)	(0.009)	
Austria	0.029*	0.005^{+}	0.052**	0.004	0.005	0.020*	0.013*	0.017^{+}	19,106
	(0.012)	(0.003)	(0.013)	(0.016)	(0.008)	(0.009)	(0.006)	(0.009)	
Belgium	0.025*	0.005*	0.047**	0.003	0.005	0.014^{+}	0.011	0.016^{+}	19,227
	(0.011)	(0.002)	(0.011)	(0.016)	(0.007)	(0.007)	(0.007)	(0.009)	
Canada	0.025*	0.005^{+}	0.045**	0.001	0.002	0.015^{+}	0.012^{+}	0.016^{+}	19,076
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Czech Republic	0.025*	0.005*	0.047**	0.002	0.006	0.015^{+}	0.013*	0.003	19,343
	(0.011)	(0.002)	(0.011)	(0.016)	(0.007)	(0.008)	(0.006)	(0.016)	
Denmark	0.031*	0.006^{+}	0.053**	0.003	0.005	0.015^{+}	0.015*	0.018^{+}	19,196
	(0.012)	(0.003)	(0.011)	(0.016)	(0.009)	(0.008)	(0.007)	(0.010)	
Estonia	0.027*	0.005*	0.047**	0.003	0.004	0.015^{+}	0.013*	0.017^{+}	19,466
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Finland	0.026*	0.005^{+}	0.047**	0.003	0.004	0.014^{+}	0.013*	0.016^{+}	19,181
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
France	0.024*	0.004*	0.043**	0.007	0.007	0.010^{+}	0.012	0.016*	19,109
	(0.011)	(0.002)	(0.012)	(0.012)	(0.008)	(0.005)	(0.008)	(0.008)	
Germany	0.023	0.005*	0.034*	0.002	0.006	0.028^{+}	0.016**	0.006	19,076
	(0.014)	(0.002)	(0.017)	(0.017)	(0.008)	(0.016)	(0.006)	(0.012)	
Hungary	0.027*	0.005*	0.048**	0.003	0.004	0.014*	0.013*	0.023**	19,176
	(0.011)	(0.003)	(0.010)	(0.016)	(0.008)	(0.007)	(0.006)	(0.006)	
Italy	0.022*	0.004^{+}	0.040**	0.002	0.002	0.011*	0.013*	0.015^{+}	19,104
	(0.009)	(0.002)	(0.010)	(0.016)	(0.008)	(0.005)	(0.005)	(0.009)	
Japan	0.028*	0.006*	0.048**	0.003	0.004	0.015^{+}	0.013^{+}	0.017^{+}	19,066
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.007)	(0.009)	
Republic of Korea	0.026*	0.005*	0.052**	0.002	0.004	0.015^{+}	0.011^{+}	0.017^{+}	19,110
	(0.010)	(0.003)	(0.010)	(0.015)	(0.007)	(0.008)	(0.006)	(0.009)	

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Table A.8 – *Continued from previous page*

Excluded country	BRDR × MIPEX								Observations
	Overall score	Access to nationality	Anti-discrimination	Education	Family reunion	Labor market mobility	Permanent residence	Political participation	
Latvia	0.027*	0.005*	0.047**	0.003	0.004	0.014^{+}	0.013*	0.016^{+}	19,992
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Netherlands	0.027*	0.005^{+}	0.048**	0.003	0.004	0.016^{+}	0.013*	0.016^{+}	19,178
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.007)	(0.009)	
Norway	0.027*	0.005*	0.049**	0.004	0.005	0.015^{+}	0.013^{+}	0.014	19,136
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.007)	(0.011)	
New Zealand	0.025*	0.005^{+}	0.046**	0.002	0.003	0.014^{+}	0.012^{+}	0.016^{+}	19,247
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Poland	0.030*	0.014*	0.047**	0.003	0.006	0.015^{+}	0.013*	0.016^{+}	19,196
	(0.012)	(0.006)	(0.015)	(0.016)	(0.007)	(0.008)	(0.006)	(0.009)	
Portugal	0.026*	0.005*	0.047**	0.003	0.004	0.014^{+}	0.013*	0.016^{+}	19,866
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Slovak Republic	0.027*	0.005^{+}	0.050**	0.004	0.005	0.015^{+}	0.013*	0.018^{+}	19,538
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.010)	
Slovenia	0.026*	0.005^{+}	0.046**	0.003	0.003	0.014^{+}	0.013*	0.016^{+}	19,575
	(0.011)	(0.003)	(0.011)	(0.016)	(0.008)	(0.008)	(0.006)	(0.009)	
Spain	0.034**	0.005*	0.043**	0.022**	0.008	0.012	0.017*	0.021**	19,077
	(0.012)	(0.002)	(0.013)	(0.007)	(0.008)	(0.008)	(0.007)	(0.007)	
Sweden	0.030**	0.005^{+}	0.048**	0.005	0.006	0.015^{+}	0.015*	0.017^{+}	19,116
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.007)	(0.009)	
Switzerland	0.027*	0.005^{+}	0.046**	0.003	0.004	0.015^{+}	0.013*	0.017^{+}	19,110
	(0.011)	(0.003)	(0.013)	(0.016)	(0.008)	(0.009)	(0.006)	(0.009)	
United Kingdom	0.022	0.005^{+}	0.040**	-0.052*	-0.017^{+}	0.011	0.007	0.018*	19,730
	(0.016)	(0.003)	(0.014)	(0.022)	(0.010)	(0.007)	(0.016)	(0.009)	
United States	0.026*	0.005*	0.048**	0.001	0.004	0.015^{+}	0.013^{+}	0.015^{+}	19,078
	(0.011)	(0.003)	(0.012)	(0.016)	(0.008)	(0.008)	(0.007)	(0.009)	

Notes: $^{+}$ p<0.10, * p<0.05, ** p<0.01. Dependent variable: migration flow from origin o to destination d. Standard errors clustered by origin and by destination in parentheses. Origin-year, destination-year and directional country pair fixed effects included in all specifications. Each cell is a separate regression. PTA, BRDR × GDP per capita and BRDR × population controlled for in all regressions. Variables defined in Table A.4.

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