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Abstract

This paper explores the empirical support behind the idea that there is a trade-off between the size of the migrant population and the rights and entitlements enjoyed by immigrants. We first look at the empirical correlation between measures of migrants' rights and the size of the stock of immigrants in a number of existing databases. Using data on migrants' rights from three recent studies—the Economist Intelligence Unit's Migrant Accessibility Index, the Migration Policy Group and British Council's Migrant Integration Policy Index (MIPEX) and the Human Development Report Office's Migrant Entitlements and Services Index—we fail to find a systematic correlation of any sign. We then turn to regression analysis using OLS and instrumental variable techniques and again fail to find evidence in favor of the existence of a correlation. The numerical magnitudes of the correlations suggest a quantitatively small relationship which in several cases is positive rather than negative.

Keywords: migration rights and entitlements, measurement, migration data.

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1. Introduction

In recent years, a lively discussion has emerged in academic and policy circles regarding the relationship between the magnitude of immigration flows and the expansiveness of the welfare state. A position that has emerged in the literature postulates the existence of a negative relationship between the number of migrants and the rights that can be accorded to them (see, among others, Ruhs 2009, Ruhs and Martin 2008, Carens 2008, Bell and Piper 2005, and Martin 2004). This conclusion is usually justified by an appeal to either rudimentary economics or a basic political economy argument. The main proponents of the numbers versus rights hypothesis emphasize the former: "more rights for migrants typically mean higher costs" (Ruhs and Martin 2008, p. 251). In other words, the rising labor costs associated with increasing entitlements lower employer demand for unskilled labor. Supporters of the political economy position, in contrast, assert that the contributions of unskilled migrants to the welfare system are unlikely to cover their costs. As a result, voters and/or policymakers are less willing to pay for the fiscal burden generated by high entitlements to migrants if their numbers are large.[1]

If there does indeed exist a numbers versus rights trade-off, there are significant normative implications that arise for policymaking. In particular, such a trade-off can be used to justify the imposition of severe restrictions on migrants' rights in developed countries in order to significantly improve the capabilities of very large numbers of individuals. By accepting regimes in which migrants have few rights, it can be argued, developed countries could accept much larger inflows of migrants, offering them significantly higher levels of income, health and education than they have in their home countries. It is possibly even the case that the restricted rights of migrants in such a regime would still be superior to those that they would have in their country of origin. This reasoning is indeed implicit in the argument made by many scholars in favor of an expansion of temporary worker programs in the United States (see, for example, Pritchett 2006 and Portes 2007).

[1] The political economy form of the hypothesis seems intuitively more plausible. Given the magnitude of international differences in wages between developed and developing countries, which appear to be on the order of three to one after controlling for selection bias (see Clemens, Montenegro and Pritchett, 2008), entry restrictions rather than entitlements would appear to be the primary determinant of the price of immigrant labor. In other words, policymakers can choose almost any level of immigration by lowering entry barriers while guaranteeing migrants a regime of rights and entitlements which is at least as generous as that accorded to natives. That they may not do so in practice appears to be an issue of the determination of political economy equilibria.

The numbers versus rights trade-off is often illustrated with reference to the countries of the Gulf Cooperation Council (GCC), a set of rich resource-abundant economies which are also characterized by significant labor shortages. These countries have very high levels of immigration: foreign nationals account for between 26 and 81 percent of their population. They also offer significantly reduced rights to migrant employees, including effective prohibition of family visas, no opportunity to obtain permanent residence, and conditionality of legal status on maintaining a work relationship with the employer requesting the immigration permit (Ruhs 2009, pp. 14-17).

While the GCC case is interesting and suggestive, it may be of questionable relevance for policymakers in developed countries—to which the numbers versus rights hypothesis is often posed—deciding whether to lower barriers to immigration. Assuming that the observation of the GCC countries with high numbers and restricted rights tells us something about the choice open to developed countries implies a judgment that the political and economic systems of authoritarian Middle Eastern regimes are sufficiently comparable to those of Western democracies so as for it to make sense to try to understand them within the framework of the same model. However, the authoritarian nature of the GCC regimes makes it easy to imagine that the rights regime accorded to migrants—or to women or political dissidents—is largely independent of their number, with the latter being driven largely by economic considerations such as the extent of labor shortages. Furthermore, the GCC countries may simply be an outlier in a world in which instances of low levels of immigration and low levels of rights of migrants are also common.

This paper looks more broadly at the evidence regarding the numbers versus rights hypothesis by analyzing the sign and significance of the correlation in a number of existing databases. The indices under study include samples that cover both developed and developing countries—the Economist Intelligence Unit's Migrant Accessibility Index and the Human Development Report Office's Migrant Entitlements and Services Index—as well as one focused solely on developed countries—the Migration Policy Group and British Council's Migrant Integration Policy Index (MIPEX).

We begin with an analysis of all three indices using migrant stock data from UNDESA (2009). We then turn to higher quality datasets from the OECD which allow us to disaggregate by migrant characteristics to perform a more comprehensive examination of the hypothesis. Afterwards, we carry out a series of regressions—using both stock and flow data—to see if the pattern of correlations remains after controlling for basic variables. To overcome the evident limitation in trying to evaluate the numbers versus rights theory by the use of simple cross-national correlations, we use the predicted share of immigrants from a gravity model to give us a purely exogenous variation in the foreign labor force. As we will show, these tests do not on the whole support the existence of a numbers versus rights tradeoff in immigration policy.

This paper is divided into four sections including this introduction. In section two, we provide a description of the data and section three presents the results. The main conclusions of the analysis are summarized in section four.

2. Data

We examine the numbers versus rights hypothesis using two sets of data. The first set consists of indices that evaluate unique aspects of migrants' rights and is described in section 2.1. The second consists of migrant stocks and flows, which is discussed in section 2.2.

2.1 Indices

The first index that evaluates migrant's rights is the Migrant Accessibility Index, which is part of the Economist Intelligence Unit's 2008 Global Migrant Barometer. The overall model assesses three broad issues across 61 developing and developed countries, including attractiveness to migrants, need for migrants and accessibility for migrants. The latter component measures ease of entry, integration and legal environment for migrants on a scale of 0-100 where 100 = extremely open. Specifically, the Migrant Accessibility Index evaluates: public attitudes towards migrants, trade union power, *de jure* and *de facto* discrimination towards migrants, official migration policy, ease of hiring foreign nationals, licensing requirements for migrants, ease of family reunification and official programs to integrate migrants.

The second index is the MIPEX, which is produced by the Migration Policy Group and British Council. It measures policies to integrate migrants in various EU and non-EU member states and creates a picture of migrants' opportunities to participate in the mainly European societies. The MIPEX was created in 2004 and initially covered the EU15.[2] In 2006, however, the MIPEX was expanded to include all 25 EU member states as well as three non-EU countries.[3] The most recent edition is comprised of 140 policy indicators focused on six areas, which include: long-term residence, family reunion, access to nationality, political participation, anti-discrimination and labor market access. Each of the policy areas is scored on a scale of 0-100,[4] where 100 is the best practice, and the average of the six areas is converted into an aggregate score.

The Migrant Entitlements and Services Index is the final migrants' rights index under study, which is part of the Human Development Report Office's 2009 Migration Policy Assessment. HDRO staff, together with national migration experts and the International Organization for Migration, carried out a survey across 20 developing and developed countries to evaluate openness to immigration, enforcement of immigration policies, and services and entitlements offered to immigrants. The latter component included ratings for preventative and emergency health care, public schooling, unemployment benefits, union membership, family allowances and voting rights for permanent, temporary and undocumented migrants. The survey responses were carefully cross-checked with national documents and legislation, and countries were scored on a scale of 0-100 where 100 = immediate, full rights without restrictions for all services across all migrant groups.[5]

2.2 Foreign-born Populations

[2] The EU15 refers to the EU member countries prior to the accession of the ten candidate countries in 2004 and includes: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

[3] The 25 EU member states include the EU15 plus Cyprus, Czech Republic, Estonia, Hungary, Lavtia, Lithuania, Malta, Poland, Slovak Republic and Slovenia. The three non-EU countries also covered by the MIPEX are Canada, Norway and Switzerland.

[4] The point systems and policy areas slightly differ for MIPEX versions 2004 and 2006. For comparative purposes, we adjusted the 2004 scale to 0-100. Moreover, the political participation policy area was not used in 2004, so the 2004 aggregate scores reflect the average values of the other five policy areas.

[5] See Human Development Report Office (2009a) for details.

Apart from the indices, testing the numbers versus rights hypothesis requires data on the magnitude of the foreign-born (henceforth FB) population. In our initial analysis of the global country samples covered by the migrant's rights indices, we use the international migrant stock as a percentage of the total population from UNDESA (2009). For comparability purposes, our calculations reflect the stock and population figures for the average of the 2005 and 2010 values because the data is only available in five-year increments.[6] Moreover, since the numbers versus rights hypothesis is largely predicated on labor-driven migrants, international refugees were removed from these calculations.

We then utilize two unique databases from the OECD. The first is the Database on Immigrants in OECD Countries (DIOC), which provides us with the FB population as a percentage of the total population in the year 2000 for 28 OECD countries.[7] This database is distinctive from the other OECD database described below because it is based on the 2000 round of censuses which offers detailed information about the immigrant populations. Restricting the FB data by age, country of origin and education allows us to estimate the 15 and over FB populations from developing countries with low levels of formal education as a percentage of the total population.[8] By doing so, we control for skilled migrants and capture an approximate value for economically active unskilled migrants from developing countries that live in selected OECD countries. This is probably the most adequate measure for evaluating the numbers versus rights hypothesis because the theory is most commonly applied to unskilled migrant workers who face the greatest restrictions in terms of admissions policies in developed countries. Importantly, all FB figures from this dataset are based on country of residence.

The second source of foreign population information from the OECD is the International Migration Database (IMD). This database furnishes us with the FB population as a percentage of the

[6] All of the correlation and regression exercises were also carried out using the migrant stock values for 2005 and 2010. However, the different base years did not impact the results, so we present the average values from circa 2008 for overall consistency with the indices.

[7] The DIOC provides data for the following countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

[8] For purposes of this paper, a migrant with a low level of formal education is one who has acquired post-secondary non-tertiary education or less (i.e., any education below a category five level as defined by the International Standard Classification of Education).

total population for 21 countries[9] in the year 2006.[10] In contrast to the DIOC database, the IMD has the advantage of being based on more recent information which is closer to the time at which most of our immigration policy variables are measured. It also has flows and not just stocks data. However, the IMD database has certain limitations. Unlike the DIOC, the IMD consists of total populations covering all age groups—not just 15 and older—and immigrant information is derived from an array of sources, including population registers, residence permits, labor force surveys and censuses. As in the DIOC, we are able to restrict the data by country of origin to measure the foreign citizens from developing countries, but regrettably this cannot be extended to the unskilled.

3. Results

3.1 Correlation Analysis

The correlation results for the complete country samples for all of the indices under examination together with the 2008 population and FB stock data from UNDESA are presented in Table 1 below. The following trends are observed: essentially zero correlation between higher Migrant Accessibility and MIPEX aggregate scores and higher percentages of FB in the respective population samples (ρ= 0.00 and 0.03), and a moderate negative correlation between higher Migrant Entitlements and Services aggregate scores and higher percentages of FB (-0.34).

While the global samples provide little support for the numbers versus rights hypothesis in general, perhaps more revealing are the results when restricting the country samples. In the case of the MIPEX, higher rights for developed OECD countries coincide with higher mean percentages of FB in the population when compared to the rest of the world, contradicting the numbers ver-

[9] The IMD provides data for the following countries: Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

[10] We use the FB populations defined by nationality to capture foreign citizens or, in other words, those migrants who are not afforded the rights of nationals in the host countries in which they reside. The alternative is to use the FB population defined by country of birth as is the only option in the DIOC. This latter concept, however, may include persons born abroad who retain the nationality of their country of origin. As a result, some of the FB counted under this definition may be entitled to the full rights of national citizens and hence should not be included in the analysis of migrants' rights.

sus rights hypothesis.[11] The other indices, conversely, suggest just the opposite, with the rest of the world having higher mean percentages of FB in their populations and lower rights when compared to developed OECD countries. However, this difference is largely driven by the inclusion of the GCC countries. If we omit the GCC countries, the comparison between developed OECD countries and the rest is clear cut: across all three indices, developed countries have higher numbers and higher migrant rights. The sensitivity of the correlations to the extreme GCC observations is also confirmed by looking at the median FB populations, which are less affected by extremes. Here developed OECD countries have on average higher rights and higher median FB populations than the rest of the world. In other words, any pattern of negative correlation between migrant rights and numbers is completely driven by the GCC observations; even if we include them, the global correlation is essentially zero for two of the three indicators considered and weakly negative for the third one.

Table 1: Summary of Statistics for UNDESA Migrant Data

Indicator (scale)	# of Observations	Correlation	Mean Score	Mean % of FB in Population*	Median % of FB in Population
Migrant Accessibility (0-100)	61	-0.003	62.4	12.6	8.1
MIPEX 2006 (0-100)	28	0.030	54.1	10.7	9.5
Migrant Entitlements and Services (0-100)	20	-0.336	49.2	13.8	11.0

* unweighted values

While the cross-country correlations described above challenge the existence of the negative tradeoff as posited by the numbers versus rights hypothesis, the UNDESA FB data does not allow us to distinguish between migrant types, origins or flows. It could therefore be argued our

[11] Throughout this analysis, we adopt the definition suggested by the Human Development Report Office (2009b) of classifying as developed those countries that display a human development index greater than 0.9.

initial exercise is of limited value. We now turn to the DIOC which enables us to disaggregate stock data by migrant characteristics for a more in-depth analysis.

The correlations presented in Table 2 column (a) below reflect the 15 and older FB populations as of the year 2000 based on the DIOC. The FB data is limited to 28 OECD countries for which the migrant stocks can be disaggregated by country of origin and skill level. This enables us to capture the working age unskilled migrants from developing countries—for which the numbers versus rights hypothesis is most commonly applied—and empirically test the theory across this selected group of countries.

Data from the DIOC provides suggestive evidence of a positive relationship between increasing numbers of migrants and rights, although the association slightly weakens when controlling for origin and skill level. Overall, there is a strong positive correlation between Migrant Accessibility aggregate scores and higher percentages of total FB in 27 OECD countries ($\rho = 0.59$) and a weak positive correlation between MIPEX aggregate scores and increasing numbers of total FB across 22 countries (0.08). The Migrant Entitlements and Services Index is the only exception to this pattern, which results in a moderate negative correlation (-0.25). It should be noted, however, that this deviation may be attributed to the limited number of observations permitted by the datasets—13. The results are similar when restricting the FB populations to migrants who originated from developing countries. Here, the correlation remains positive for the Migrant Accessibility and MIPEX Indices (0.42 and 0.04, respectively) and—although still negative—becomes more positive for the Migrant Entitlements and Services Index (-0.09). Further controlling for unskilled migrants from developing countries leads to a moderate positive correlation for the Migrant Accessibility Index (0.30) and essentially zero correlation for the other indices (-0.04 for both). Annex 1 presents detailed scatter plots for each of these exercises.

Table 2 column (b) below also provides the correlation results using the IMD in the year 2006 for total migrants and those from developing countries. The findings are in line with the previous analysis based on the DIOC. For the Migrant Accessibility Index, there is a moderate positive correlation between the aggregate scores and higher percentages of total FB in 20 OECD countries ($\rho = 0.22$), which turns weak positive when restricting to the FB from developing countries

(0.10). For 20 OECD countries and the MIPEX, there is essentially zero correlation between both the total and FB populations from developing countries and higher aggregate scores (0.00 and -0.02, respectively). And while there is a weak negative correlation between the total foreign population and Migrant Entitlement and Services aggregate scores (-0.14), this becomes essentially zero when controlling for the migrants from developing countries.

Table 2: Summary of Statistics for OECD Migrant Data

Indicator (scale)	(a) 2000					(b) 2006				
	Correlation	Mean % of FB*	Median % of FB	# of Observations	Mean Score	Correlation	Mean % of FB*	Median % of FB	# of Observations	Mean Score
Migrant Accessibility (0-100)	0.585	9.9	9.5	27	66.1	0.219	5.0	4.7	20	64.6
MIPEX 2006 (0-100)	0.079	10.9	10.2	22	57.3	0.006	6.7	4.9	20	56.9
Migrant Entitlements and Services (0-100)	-0.257	10.0	9.5	13	61.3	-0.135	5.3	4.8	7	72.5

* unweighted values

Two of the indices—Migrant Accessibility and MIPEX—enable us to carry out additional analyses using the individual subcomponents and FB information from both OECD databases. The results for the Migrant Accessibility subcomponents are presented below in Table 3. As evidenced, there is an overwhelmingly positive and significant correlation between all of the subcomponents and the percentage of total FB in the 2000 populations. Also noteworthy is the small change in this tendency when controlling for different migrant characteristics. For all three FB categories, the correlation is generally strong positive for eight of the nine subcomponents, although this slightly weakens when moving from total FB to unskilled. Moreover, three indicators are significant at one percent—including the aggregate score—for total FB, three indicators are

significant at five percent or higher for the developing country sample, and two indicators are significant at five percent or higher when controlling for unskilled migrants.

The results for the 2006 FB data slightly differ but remain positive. Overall, there is a weak positive correlation between five of the nine subcomponent scores and both categories of FB populations. In all of the other subcomponents—except for licensing requirements—there is essentially a zero correlation, and one subcomponent in each of the FB categories is significant at five percent or higher. As in the case of the 2000 data, the correlations tend to weaken when moving from total FB to the FB from developing countries.

Table 3: Summary of Correlations for Migrant Accessibility Subcomponents

Indicator (0-100)	2000 Correlations			Mean Score	2006 Correlations		Mean Score
	Total	From Developing	Unskilled		Total	From Developing	
➢ Aggregate score	0.585***	0.424**	0.296	66.1	0.218	0.093	64.5
1. *De jure* / *de facto* dis-	0.573***	0.492***	0.448**	70.4	0.500**	0.344	70
2. Ease of family reunifica-	0.230	0.138	0.023	62.2	-0.014	0.007	60
3. Ease of hiring foreign	0.244	0.164	0.098	65.9	-0.059	-0.149	64
4. Government policy	0.376*	0.0205	0.110	66.7	-0.029	-0.009	65
5. Licensing requirements	-0.050	-0.132	-0.169	60.7	-0.288	-0.564***	61
6. Openness of country cul-	0.297	0.221	0.144	67.4	0.090	0.206	65
7. Power of trade unions	0.273	0.272	0.236	65.2	0.315	-0.089	64
8. Integration programmes	0.667***	0.641***	0.613**	63.0	0.180	0.180	63

* significant at 10%; ** significant at 5%; *** significant at 1%

Unlike the overall positive correlation between the Migrant Accessibility subcomponent scores and the DIOC data, the results for the MIPEX subcomponents are ambiguous. Presented in Table 4 below, there is a general weak positive correlation between four of the seven indicators and the total FB populations. The correlation strengthens when restricting for the FB from developing countries—five out of seven subcomponents—and subsequently weakens for unskilled migrants where just one of seven are positive. In this latter category, however, there is a moderate negative correlation in just two instances—long-term residence and family reunion—whereby all of

the other correlations are essentially zero (-.06 and below). As in the Migrant Accessibility subcomponents, the correlations tend to weaken when increasingly restricting the FB populations. Also meriting notice is the fact that none of the correlations are statistically significant.

The results for the MIPEX subcomponents and the 2006 FB data are similar to those just described. Here, there is a slight positive correlation between the total FB populations and four of the seven MIPEX subcomponents, which weakens to two of seven when controlling for migrants from developing countries. In the latter FB categories, however, the negative correlations are essentially zero apart from access to nationality and anti-discrimination, and none of the results are significant.

Table 4: Summary of Correlations for MIPEX Subcomponents

Indicator (0-100)	2000 Correlations			Mean Score	2006 Correlations		Mean Score
	Total	From Developing	Unskilled		Total	From Developing	
➢ Aggregate score	0.079	0.037	-0.037	57.3	0.006	-0.024	56.9
1. Long-term resi-	-0.322	-0.262	-0.275	60.7	-0.362	-0.048	61.4
2. Family reunion	-0.121	-0.131	-0.213	58.4	-0.166	-0.047	58.2
3. Access to natio-	0.170	0.041	-0.068	47.4	0.032	-0.234	46.1
4. Political partici-	0.284	0.228	0.240	53.5	0.350	0.020	54.6
5. Anti-	-0.004	0.026	-0.064	62.0	-0.156	-0.235	60.0
6. Labor market	0.059	0.019	-0.042	62.7	0.004	0.320	61.5

* significant at 10%; ** significant at 5%; *** significant at 1%

3.2 Regression Analysis

The small number of observations using the three indices and the 2000 FB data (n=27, 22 and 13, respectively) prevents us from carrying out a full-fledged regression analysis. However, it is still useful to see whether the pattern—or lack of pattern—of correlations remains when controlling for some of the most evident determinants of migration flows. In Table 5 below, we study the effect of the aggregate index scores on the total FB, the FB from developing countries (FBDEV) and the unskilled FB from developing countries (FBUNS) as dependent variables. In

addition to the composite scores of the three indices, the controls include the log of income per capita in the year 2000 the log of the country size in square km and the log of the weighted distance in km to the nearest developing country.[12] When controlling for these, the coefficient appears to be moderately positive for the Migrant Accessibility Index and weak negative for the MIPEX and Entitlements and Services Indices on the aggregate level, which weakens in all cases when further restricting the FB data. Moreover, the coefficient is statistically significant in only one of the specifications—column (a).

Table 5: OLS Results for all Indices

Variable	Migrant Accessibility			MIPEX			Entitlements and Servic-		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Aggregate score	0.39	0.129	0.07	-0.057	-0.039	-0.034	-0.199	-0.019	-0.034
	(2.70)*	(1.42)	(0.92)	(0.57)	(0.6)	(0.63)	(0.83)	(0.14)	(0.36)
Log of income per	7.58	5.784	4.694	8.827	5.289	4.879	13.794	7.912	6.352
	(2.52)*	(3.05)*	(2.98)*	(1.87)*	(1.69)	(1.90)*	(2.18)*	(2.33)*	(2.60)*
Log of country size	-0.356	0.472	0.269	0.18	0.656	0.269	1.084	1.713	1.038
	(0.44)	(0.92)	(0.63)	(0.18)	(1.01)	(0.5)	(0.42)	(1.24)	(1.04)
Log of dist. to poor	1.98	-0.234	-0.437	2.806	0.471	-0.155	-0.155	-1.936	-1.988
	(1.24)	(0.23)	(0.52)	(1.39)	(0.35)	(0.14)	(0.04)	(0.97)	(1.39)
Constant	-	-	-48.255	-97.842	-56.789	-45.486	-132.29	-82.966	-58.184
	(3.34)**	(3.43)*	(3.02)*	(2.16)**	(1.89)*	(1.84)*	(3.14)**	(3.65)*	(3.56)*
Observations	27	27	27	21	21	21	13	13	13
R-squared	0.56	0.44	0.35	0.42	0.29	0.23	0.65	0.71	0.7

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

This same exercise was also carried out across the Migrant Accessibility and MIPEX subcomponents. While the independent variables were unchanged, the dependent variable was restricted to the FBUNS.[13] As presented in Tables 6 and 7 below, the coefficient is positive for six of the nine Migrant Accessibility subcomponents and negative in all seven of the MIPEX subcomponents.

[12] Income per capita and country sizes are based on the World Development Indicators (WDI), and the bilateral weighted distances to the nearest developing countries are derived from the *Centre D'Etudes Prospectives et D'Informations Internationales* (CEPII).

[13] Similar results characterize the exercise with FB and FBDEV. These results are available from the authors upon request.

In the MIPEX, however, the coefficient is very far from statistical significance in all the specifications (t-statistics are uniformly below one), and the absolute value of the coefficient estimate tends to be very low. Moreover, in only one instance is the coefficient for any of the subcomponents significant at conventional levels—the exception being column (i) in the Migrant Accessibility Index. By contrast, between one-third and one-half of the cross-national variation in the dependent variable is due to changes in levels of income, land area and distance to poorer countries.

Table 6: OLS Results for Migrant Accessibility Subcomponents

Variable	Migrant Accessibility Subcomponents								
	(a) Agg.	(b) Dis-	(c) Ease of	(d) Ease of	(e) Govt.	(f) Licens-	(g) Cultural	(h) Union	(i) Integra-
Subcomponent score	0.07	0.091	-0.025	0.088	-0.007	-0.015	0.054	0.041	0.065
	(0.92)	(1.54)	(0.65)	(1.7)	(0.23)	(0.35)	(1.08)	(0.98)	(2.11)*
Log of income per	4.694	3.732	4.966	5.846	4.956	4.769	5.136	4.779	2.389
	(2.98)*	(2.21)*	(3.14)*	(3.66)*	(3.07)*	(2.94)*	(3.28)*	(3.06)*	(1.27)
Log of country size	0.269	0.617	0.501	0.336	0.417	0.349	0.29	0.381	0.425
	(0.63)	(1.46)	(1.11)	(0.86)	(0.94)	(0.82)	(0.7)	(0.94)	(1.12)
Log of distance to	-0.437	-1.112	-0.24	-0.466	-0.286	-0.213	-0.332	-0.384	-0.603
	(0.52)	(1.16)	(0.29)	(0.59)	(0.34)	(0.25)	(0.41)	(0.47)	(0.78)
Constant	-	-	-	-	-48.67	-	-	-	-25.01
	(3.02)*	(2.47)*	(3.03)*	(3.57)*	(2.96)*	(2.64)*	(3.21)*	(3.07)*	(1.35)
Observations	27	27	27	27	27	27	27	27	27
R-squared	0.35	0.39	0.34	0.41	0.33	0.33	0.36	0.36	0.44

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7: OLS Results for MIPEX Subcomponents

Variable	MIPEX Subcomponents						
	(a) Aggre-	(b) Long-	(c) Family	(d) Access	(e) Political	(f) Anti-	(g) Labor
Subcomponent score	-0.034	-0.043	-0.046	-0.017	-0.028	-0.008	-0.001
	(0.63)	(0.65)	(0.99)	(0.29)	(0.9)	(0.23)	(0.04)
Log of income per capita	4.879	4.85	4.234	4.488	5.965	4.716	4.815
	(1.90)*	(1.89)*	(1.64)	(1.6)	(2.09)*	(1.80)*	(1.83)*
Log of country size (km²)	0.269	0.246	0.461	0.19	0.169	0.24	0.211
	(0.5)	(0.46)	(0.8)	(0.36)	(0.32)	(0.44)	(0.39)
Log of distance to poor	-0.155	-0.353	-0.139	-0.091	-0.322	-0.291	-0.346
	(0.14)	(0.34)	(0.13)	(0.06)	(0.31)	(0.27)	(0.32)
Constant	-45.486	-43.013	-40.488	-42.085	-54.925	-44.065	-44.799
	(1.84)*	(1.73)	(1.65)	(1.59)	(2.04)*	(1.76)*	(1.76)*
Observations	21	21	21	21	21	21	21
R-squared	0.23	0.23	0.25	0.21	0.25	0.21	0.21

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

An objection to the foregoing analysis is that migrant stocks, determined by decisions that migrants may have taken several decades previous to the date at which it is measured, may be very imperfect indicators of the interrelationship between migration and highly changing legal and institutional frameworks. It is therefore interesting to analyze the numbers versus rights hypothesis using migrant flow data from the IMD instead of stocks. For this exercise, we restrict the inflow data to those migrants originating from developing countries and carry out several regressions using the Migrant Accessibility and MIPEX Indices.[14] The first regressions—in columns (a) and (b)—regress the inflow of FBDEV in the year 2006 for 23 and 18 OECD countries, respectively, on the levels of the Migrant Accessibility and MIPEX Indices. The resulting coefficient is effectively zero for both indices (0.01 and 0.00), but in neither case is it significant at conventional levels. Columns (c) through (i), on the other hand, present a specification in which the percentage change of the inflow of FBDEV in the total population is regressed on the corres-

[14] This was not carried out using the Migrant Entitlements and Services Index due to the limited number of observations yielded by the datasets.

ponding percentage change of the MIPEX subcomponent scores between 2004 and 2006. Here, the coefficient is positive in six of the seven subcomponents, two of which are significant at ten percent—long-term residence and access to nationality. Note that this is arguably the cleanest specification that we present in this paper, as it differences out country-specific effects.

Table 8: OLS Results for Migrant Flow Data

Variable	2006		Percentage Change between 2004 and 2006						
	Mi-	MI-	MIPEX Policy Areas						
	grant	PEX							
	(a) Aggre-	(b) Aggre-	(c) Aggre-	(d) Long-	(e) Family	(f) Access	(g) Politi-	(h) Anti-	(i) Labor
Component score	0.011	0.001	-	-	-	-	-	-	-
	(1.56)	(0.12)	-	-	-	-	-	-	-
Percentage change in	-	-	1.915	1.994	1.028	1.401	-	-0.112	0.929
	-	-	(1.84)	(2.14)	(1.06)	(2.01)	-	(0.1)	(0.85)
Log of income per capita	0.117	0.161	56.27	15.08	78.62	41.25	-	13.09	53.43
	(0.76)	(0.66)	(0.63)	(0.19)	(0.68)	(0.49)	-	(0.12)	(0.48)
Log of country size	-0.001	0.044	0.761	18.18	-0.639	6.614	-	2.751	-6.43
	(0.03)	(0.84)	(0.06)	(1.31)	(0.04)	(0.54)	-	(0.16)	(0.36)
Log of distance to poorer	0.012	0.001	14.72	17.98	19.94	-2.023	-	21.78	18.09
	(0.16)	(0.01)	(0.61)	(0.8)	(0.73)	(0.08)	-	(0.72)	(0.63)
Constant	-1.624	-1.883	-640.8	-449.5	-899.2	-438.7	-	-291.2	-568.7
	(1.06)	(0.8)	(0.64)	(0.48)	(0.71)	(0.46)	-	(0.24)	(0.47)
Observations	23	18	11	11	11	11	-	11	11
R-squared	0.22	0.13	0.41	0.48	0.23	0.45	-	0.08	0.18

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Since our regression analyses use a maximum of 27 observations, it may be objected that it is unreasonable to expect a strong statistical association to emerge in such a small sample size—although it is interesting to note that the income controls are in several cases statistically significant. One may thus argue that it makes most sense to concentrate on the point estimates of the above regressions as indicators of our best guess as to the magnitude of the potential effect. To follow up on this argument, let us consider the point estimates of what are arguably our most reasonable specifications, from columns (c), (f) and (i) of Table 5. The coefficients—0.07 for

Migrant Accessibility, -0.03 for MIPEX and -0.03 for Migrant Entitlements and Services—imply that a one point increase in the aggregate score of the indices leads to an increase in 0.07, a decrease in 0.03 and a decrease in 0.03 percentage points in the share of FBUNS in the respective country samples. Consider then the effect of going from the lowest country score levels of the three indices (43 for Iran, 39 for Austria and 5 for United Arab Emirates, respectively) to the highest (85 for Australia, 88 for Sweden and 85 for Portugal, respectively). The sizable alterations in integration policies would imply changes of 2.9 [42*(0.07)], -1.5 [49*(-0.03)] and -2.4 [80*(-0.03)] percentage points in the share of FBUNS in the respective populations. These are relatively trivial effects for elephantine changes in immigration policies. In sum, even if we are willing to put aside concerns based on the lack of statistical significance, the absolute magnitudes of the negative point estimates arising in the exercises with stock data suggest that even considerable restrictions in the rights accorded to immigrants would generate at best relatively small changes in the number of migrants that could enter into these societies.

All of the above results use a specification in which the share of FB is used as the dependent variable. Since the numbers versus rights hypothesis posits the existence of a trade-off rather than a strict causal relationship, it is unclear whether the correct specification to evaluate it should use the numbers or the rights indicator as the dependent variable. This is related to the different theories that are used to justify the hypothesis. The labor market demand hypothesis, which speculates that more extensive rights regimes will lead to a decline in the demand for foreign unskilled labor, seems to suggest a specification where the numbers are treated as the dependent variable. In contrast, the political economy hypothesis, where voters will react to higher numbers of migrants by refusing to extend rights and entitlements to them, would seem to suggest a specification where the rights are treated as the dependent variable.

Columns (a), (c) and (e) in Table 9 below repeat the results of columns (c), (f) and (i) in Table 5 using a specification where the composite scores for the three indices are the dependent variable. Putting rights on the left-hand side of the equation requires an alternative specification of the regression equation. The independent variables include the FBUNS, the log of per capita income in 2000, the level of democracy and a dummy for countries where more than 50% of the popula-

tion is catholic.[15] Our choice of independent variables reflects the search for a basic characterization of the type of country characteristics that may have an effect on the view of its populations towards issues related to rights and entitlements regimes. The coefficients—0.74, -0.76 and -1.54, respectively—imply that a one point increase in the share of FBUNS in the population leads to an increase of 0.74 aggregate points in the Migrant Accessibility Index and a decline of 0.76 and 1.54 aggregate points in the MIPEX and Migrant Entitlements and Services Indices. The effect of a dramatic increase in the percentage of FBUNS in the population—say five percent, for example—would imply an increase of 3.7 [5*(0.74)] points in the Migrant Accessibility Index and a decline of 3.8 [5*(-0.76)] and 7.7 [5*(-1.54)] points in the MIPEX and Migrant Entitlements and Services Indices. As in our earlier point estimates, we find that the absolute magnitudes using the FBUNS as a specification suggest that even considerable increases in the share of FBUNS in selected OECD countries would generate at best relatively small changes in the rights accorded to those migrants.

To overcome the evident limitation in trying to evaluate the numbers versus rights theory via simple cross-national correlations, we build on the specification where the aggregate scores for the three indices are used as the dependent variable. We then use the predicted share of immigrants from the gravity model by Cummins et al. (2009) to give us a purely exogenous variation in the foreign labor force.[16] The instrumental variable results are presented below in columns (b), (d) and (f) in Table 9 alongside the OLS results from the previous exercise. Overall, we find a positive association between increasing rights and increasing numbers of FBUNS in selected OECD countries for all three indices, although none of the findings are significant at conventional levels.[17]

[15] Per capita income data comes from the WDI, the level of democracy is derived from the Polity IV Database (see Marshall and Jaggers, 2007) and Catholic countries are classified according to dioceses' statistics as reported by Catholic Hierarchy (see http://www.catholic-hierarchy.org/country/sc1.html).

[16] In the gravity equation used for this exercise, the dependent variable is the log of migrant stock from country i living in country j divided by the population of country i. All stock values are derived from the University of Sussex/World Bank Global Origin Migrant Database version 4. The independent variables include: log of weighted distance between countries, log of population for origin and destination countries, log of area for origin and destination countries, and a dummy variable for landlocked countries.

[17] Regrettably, first stage tests indicate that our instrument is relatively weak, so these results must be read with caution. This weakness likely reflects the fact that in our sample the stock of FB—the variable predicted by the gravity model—is not always strongly correlated with FBUNS.

Table 9: OLS and IV Results for Aggregate Scores as Dependent Variables

Variable	Migrant Accessi-		MIPEX		Entitlements and	
	(a)	(b)	(c)	(d)	(e)	(f)
FBUNS ratio	0.735	2.554	-0.762	3.067	-1.543	8.446
	(1.12)	(0.86)	(0.6)	(0.61)	(0.92)	(0.51)
Log of income per	-1.049	-8.73	14.201	-0.442	-0.093	-86.851
	(0.17)	(0.62)	(1.14)	(0.02)	(0)	(0.58)
Democracy	1.467	1.435	-0.864	-0.221	12.327	27.97
	(0.61)	(0.51)	(0.17)	(0.03)	(1.52)	(0.89)
Catholic dummy	0.029	2.272	-1.143	3.189	6.451	11.389
	(0.01)	(0.41)	(0.17)	(0.32)	(0.81)	(0.56)
Constant	59.096	128.209	-76.131	47.105	-50.034	634.09
	(1.06)	(1.01)	(0.57)	(0.21)	(0.28)	(0.54)
Observations	27	27	21	21	13	13
R-squared	0.1		0.08		0.55	

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

4. Conclusion

The numbers versus rights hypothesis leads us to expect that we should observe a negative correlation between the stock of migrants in a country and the inclusiveness of the rights accorded to them. The common comparison between GCC countries and Western democracies is often taken as illustrative of the existence of this trade-off. The presumed implication is that if Western democracies were able to restrict the rights accorded to immigrant populations they would be able to accept much higher numbers of immigrants. This, in turn, would result in a positive effect on many—if not all—dimensions of human development for those migrants that would be accepted.

This paper has analyzed the empirical relationship between migrants' rights and their numbers by using all available policy indices and distinct sources of migrant stock and flow data. Our results demonstrate that the data do not support the numbers versus rights hypothesis. Overall, we find an association of higher numbers and higher rights between the global and OECD country aggregate scores for all three indices and migrant stock data from UNDESA, the DIOC and

the IMD. When examining the subcomponent scores of the migrants' rights indices with FB data from the DIOC—our best FB estimate—this trend holds, as there is either a positive or zero relationship between increasing migrant stocks and afforded rights. Regression analyses of the data further reveal that the numbers versus rights tradeoff in immigration policy is not supported by empirical evidence. Here, an overall positive or zero relationship appears between increasing numbers and rights when using stock and flow data as dependent variables with other basic independent variables, when looking at the percentage changes of FB inflows and MIPEX subcomponent scores as dependent and independent variables, when moving rights to the left-hand side of the equation with a unique set of independent variables, and when instrumenting for FBUNS.

Despite the cogent evidence that emerges from this analysis, two key limitations must be considered for future evaluations of the numbers versus rights hypothesis. First, the UNDESA and OECD FB datasets use the conventional definition of a migrant, which refers to those who are born in a foreign country.[18] However, the immigrant-related policies that are measured by the various indices impact both the FB and second and higher generation migrants. Second, all three migrants' rights indices use the term "migrants" to refer to third country nationals legally residing in the country samples. The policy scores therefore reflect country-specific migration policies as they impact legal migrants. In practical terms, however, these indices may not be useful comparative tools in terms of analyzing policies as they relate to undocumented migrants, which account for up to a third of total migrants in some developed countries and may account for a larger number in developing countries.[19]

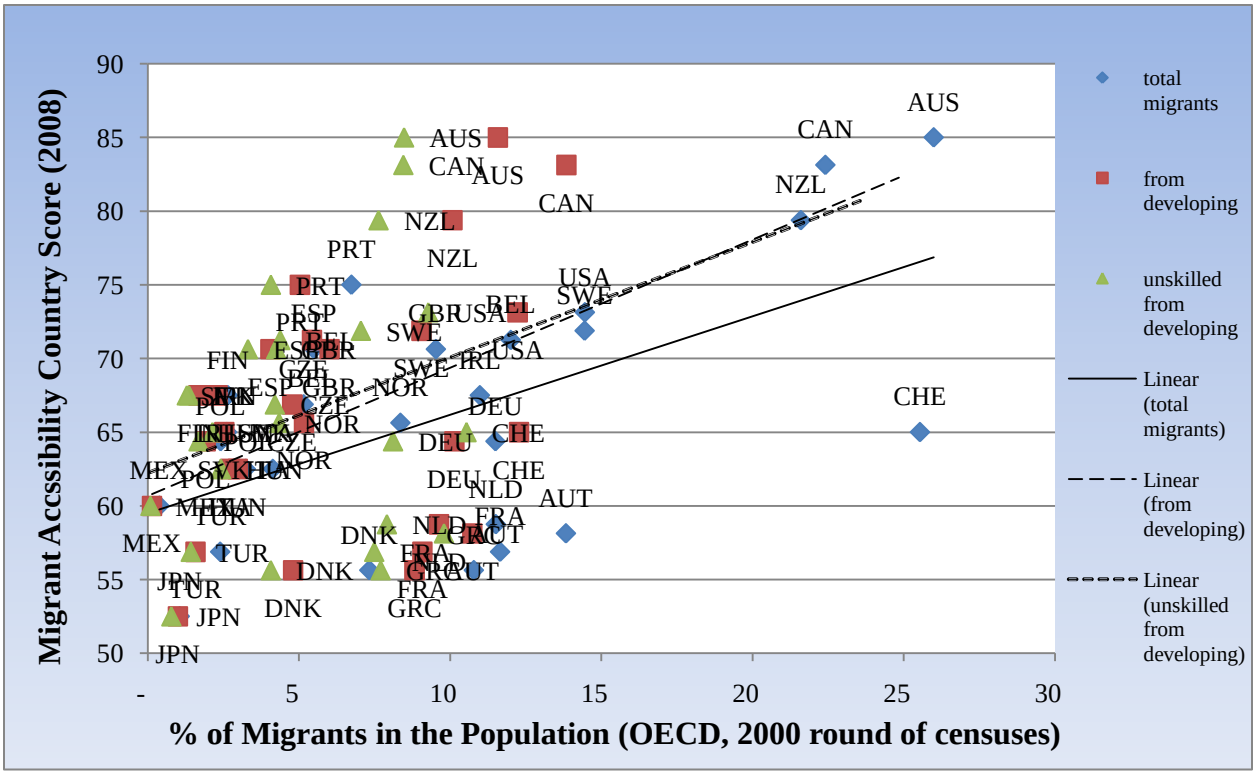
While falling short of a clear indication of a positive correlation between the increasing stock of migrants and more inclusive rights, the evidence does not support the existence of a negative correlation as predicted by the numbers versus rights hypothesis. It warrants mentioning, however, that the measurement of integration policies is still at a nascent stage, and we may see significant developments in the assessment of these policies in future years which, in turn, could lead us to reevaluate the conclusions presented in this paper. In any case, this exercise has shown that the existing data fails to present a strong *prima facie* case in favor of the numbers versus rights

[18] See UNDESA (2009) and OECD (2008).
[19] See the discussion in chapter 2 of Human Development Report Office (2009b).

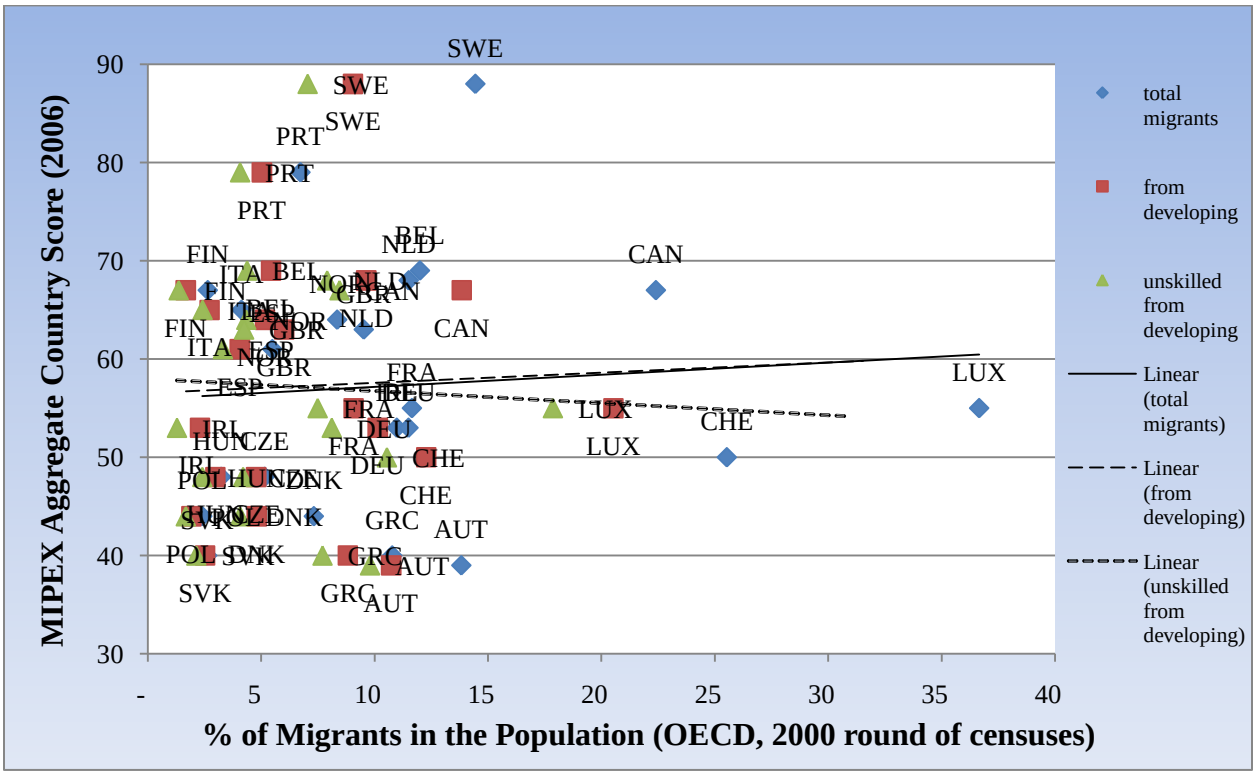
hypothesis. The idea that countries have to choose between having higher migrants and restricted rights or greater rights and a reduced number of migrants does not find evident support from a configuration of the data in which a large number of countries that are more inclusive actually have higher fractions of migrants.

Annex 1: Scatter Plots

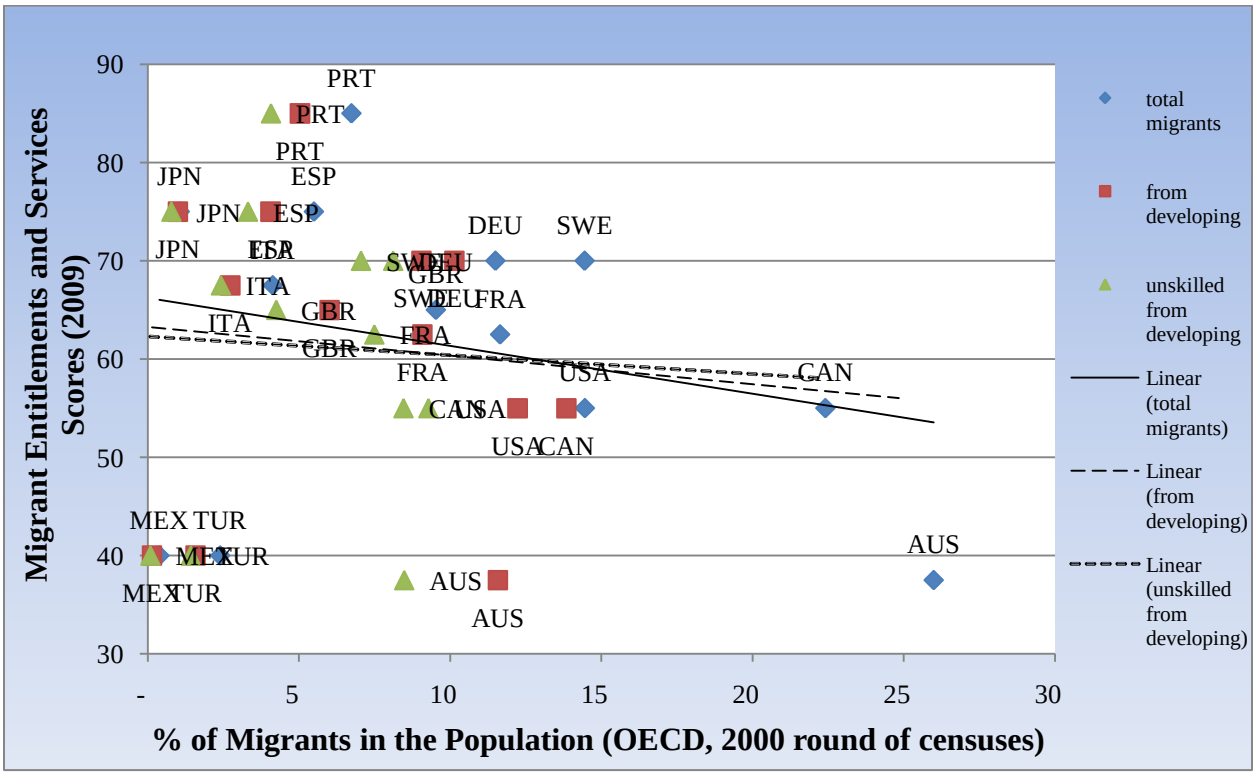
Graph 1: Foreign-born Populations in OECD Countries and the Migrant Accessibility Index



Graph 2: Foreign-born Populations in OECD Countries and the MIPEX



Graph 3: Foreign-born Populations in OECD Countries and Migrant Entitlements and Services Index



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