Beyond Immigration

Moving from Western to Global Indexes of Migration Policy

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Abstract

Over the last twenty years, researchers have undertaken systematic comparisons of migration policy by creating sets of policy indicators/indexes at the national level. These indicators are designed to analyse the differences and trends in migration policy and then be used by the research community to assess the determinants and effects of policy. This article aims to assess the comprehensiveness of current migration policy indicators by analysing their thematic, geographical and temporal coverage as a way of understanding how migration policy has been conceptualised and measured in quantitative migration research. Our analysis of the 67 existing indexes shows that indexes disproportionally focus on immigration policy, mainly admission and citizenship, in OECD and particularly Western European countries, with limited opportunities for longitudinal analysis of policy change. These findings reveal that that migration policy has been mainly conceptualised in indexes as a contemporary phenomenon that mainly concerns Western countries that have become major destination countries.

Policy Implications

- Indicators on migration policy allow policy makers to understand the state of their policy and compare their country with others. Indicators are also useful to monitor countries' progress on the Sustainable Development Goals (SDGs).

- Comparability has been partially hampered by a tendency to focus on Western countries. To allow for comparisons between different countries (e.g. developing and developed countries), researchers should widen the geographical scope of existing indexes.

- Researchers creating new sets of indicators on migration policy should focus on understudied topics (e.g. emigration and governance), to increase the information available to policy makers.

- The temporal coverage of indexes should be expanded to employ a more historical and longitudinal perspective.

- Researchers should make their data available in open access to allow other researchers to build on existing projects, avoid risk of duplication and produce more solid findings.

- Researchers should also co-operate to create repositories of data and sources for hard-to-gather information (e.g. on migration policy, on migration trends and integration outcomes, and on best practices on migration policies). This would allow researchers to provide policy makers with clear results and analyses on the addressed phenomena.

The authors

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The Migration Policy Group (MPG) is an independent think-and-do tank based in Brussels. MPG's purpose is rooted in its ability to inspire networks to provide evidence-based projects, research and campaigns in the areas of integration, migration and anti-discrimination.

Introduction

This article analyses the growing field of migration policy indexes, namely the systematic comparison of migration laws and policies by means of sets of indicators. Over the last twenty years, researchers have undertaken systematic comparisons of migration policies by creating indicators and indexes. These indicators and indexes have been used to analyse differences and trends in migration policy (de Haas, Natter and Vezzoli, 2018; Helbling and Kalkum, 2018) and to assess the determinants and effects of policy (Czaika and De Haas, 2013; Helbing and Leblang, 2019).

The proliferation of projects has resulted in dozens of indicator datasets that measure the degree of restrictiveness of these policies, the extent of equal treatment between migrants and non-migrants and other dimensions of policy regimes and models (Scipioni and Urso, 2018). From these datasets, researchers have often created aggregations and indexes to provide a summary score —a snapshot of the migration policy framework in a given country at a specific period of time.

Following the proliferation of these indexes, a few scholars have made comparisons between existing indexes focusing on specific aspects and limitations (among others, see: Bjerre et al., 2015; Gest et al., 2014; Goodman, 2015 and 2019). They usually have focused on a limited number of indexes (generally, around fifteen) and only one or few policy areas. These stocktaking exercises have not considered the broader overall trends and gaps in the field and only a small number of them has analysed the conceptualisation of migration policy in these indexes.

To close these gaps and advance the field, this article aims to take stock of previous undertakings by focusing on how migration policy has been conceptualized and measured. This article contributes to the study and use of migration policy indicators in three ways. First, indexes' conceptualisations of migration are assessed in three ways: their thematic, geographical and temporal scope. This systematic approach provides clearer insights into the overall trends and the remaining gaps in the field. Second, the analysis expands beyond previous comparisons with a comprehensive literature review of all published indexes of migration policies,

irrespective of their specific thematic focus and policy areas covered. Third, this analysis has a wider temporal scope than previous reviews by covering the entire period up to 2019. As a result, this article has the largest available sample size of 67 indexes of migration policy. To our knowledge, our review includes all the existing indexes on migration policy at national level.

After providing a theoretical and conceptual framework (section 1), this article presents the methodology (section 2) and the findings of our literature review (section 3). We provide a systematic state-of-the-art overview of the analysed indexes based on their thematic, geographical and temporal scope as well as the links between these three dimensions of indexing. The conclusions reflect on gaps and potential biases in the field on how researchers can close those gaps in future research.

1. Migration policy

The definition of migration policy has been characterized by a certain degree of vagueness, regarding its definition and boundaries, i.e. policy areas covered (Bjerre et al., 2015; Scholten, 2020). From a national policymaking perspective, a clear distinction is usually made between policies that address immigrants (and their descendants) and those that address emigrants (and their descendants); whereas every immigrant to a country is an emigrant of another (Pedroza, 2020).

A third area is migration governance. Governance includes both the overall management of a country's economic and social resources and the decision-making and implementation process (Pasetti, 2019). Migration governance concerns the decision-making, implementation and management of a countries' migration and migrant integration policies. Therefore, it goes beyond the formal regulations and involves the political process and strategy behind them.

Immigration policies refer to 'governments' […] laws, regulations, decisions or orders in regard to the selection, admission, settlement and deportation of foreign citizens residing in the country' (Bjerre et al., 2015, p.559). This definition makes it clear that immigration policy is a multidimensional concept, which includes different dimensions and areas of interventions. Hammar (1990) distinguishes

between three steps: *entry*, *settlement* and *full membership*.[1] These reflect the two modes of 'social closure' of nation-states, one before the entry in the country and the other in its territory. By empirically applying this approach, Rayp et. al. (2017) distinguish between entry, integration and stay policies. Entry refers to admission policies, which regulate the entry of migrants in the country. Specific areas of admission include labour migration, family reunion, asylum and education (Gest et al., 2014). Integration policies refer to the wide set of policies that influence migrants' settlement, such as labour market, education, antidiscrimination and health policies (Huddleston et al., 2015). Stay refers to the acquisition of equal rights to stay and participate to the life of the country of immigration, which are normally acquired through citizenship or long-term/permanent residence. Entry and stay policies are also partly linked to exit rules, i.e. withdrawal and loss of status, voluntary return and expulsion for irregular migrants.

Emigration policies consider the countries' policies as a country of origin rather than as a country of destination. These policies are therefore focused on the country's emigrants, their descendants and in general on the country's diaspora. Countries of origin have developed policies and structures to regulate their economic, political or social links with their emigrants. These policies 'vary in scope and nature between different countries and include measures as diverse as dual citizenship policies, programmes to stimulate remittances, the right to vote in the home country from abroad and the creation of government agencies to administer emigrant issues' (Pedroza and Palop-García, 2017, p.165). Emigration and diaspora policies may aim to tap into their emigrants' resources (financial, socio-economic, political), embrace their citizenship in terms of rights protection and political representation and govern their often little-regulated transnational links with the country (Gamlen 2014).

Building on the literature's conceptualisation of migration policy this review will consider to what extent migration policy indicators cover all areas of migration policy: immigration policy, emigration policy and migration governance. Furthermore, within the area of immigration policy, we include the following sub-

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[1] Some authors define immigration policy as only admission-related policy (e.g., Bjerre et al., 2015; Pedroza, 2020), while in this article we consider them as all the policies that address immigrants (and their descendants).

areas: admission policies; integration policies; (long-term) residence and citizenship acquisition policies; expulsion and return policies. The extent to which migration policy as a multidimensional concept is considered and which areas and countries are considered ultimately reflect the conceptualization of the concept itself.

2. Methodology

This article is based on research conducted in the frame of the EU-funded Horizon2020 project *CrossMigration* (2018-2020) and then finalized in the framework of another EU-funded Horizon2020 project, *HumMingBird* (2020-2024). The research consisted of a systematic literature review using the following methods: a) collection of indexes based on previous literature review articles and related literature; b) a literature search in Google, Google Scholar and Scopus by using several keywords (e.g. migration policy index, migration policy indicators, migration policies). We decided to search for literature in Google and Google Scholar as well, to also gather non-academic literature, as many indexes have been developed by non-academic researchers.

Through this differentiated approach, we identified 67 sets of indicators/indexes (see the list of indexes in appendix). To the best of our knowledge, all the existing indexes on migration policy are included in our review. For the sake of comparability, we decided to focus only on sets of indicators/indexes on national policies for international immigrants and emigrants, although a few indexes have emerged on internal migrants and/or integration local policies (e.g, Manatschal, 2011; Aggarwal et al., 2020).

Our review analysed and classified the indexes, according to the following dimensions of indexing: their methodology, thematic coverage, temporal coverage and geographical coverage. This classification led to the creation of an index-level dataset. This paper's analysis also required the construction of a second country-level dataset including relevant background information on the countries covered, ranging from the number of indexes that cover the country to the continent they belong to, from their degree of development to migration and population trends. All variables not related to the indexes drew on information from the United Nations.

These two datasets were used to perform descriptive, bivariate and multivariate analyses in order to assess indexes' conceptualisation of migration policy in terms of their thematic, geographical and temporal coverage.

To check whether the inclusion of a different policy area is correlated to the inclusion of another area (e.g. governance and emigration policies), our analysis employed the Spearman's rho, a non-parametric version of the Pearson's correlation used to measure the strength and direction of association between two variables. Moreover, to explore the underlying facets of index thematic coverage, we performed a factor analysis based on the sub-areas covered (e.g. labour migration, integration policies, nationality acquisition policies). This analysis has been done in Stata.

We analysed the geographical distribution of the indexes by using both the index-level and the country-level datasets. To understand the similarity between countries covered by one index we used three measures: the number of countries covered, the number of continents covered (with at least one country included in the analysis) and a diversity index based on the continent of the covered countries. For the latter, we employed an adjusted version of the Simpson's Index of Diversity $(1 - D)$, which is a measure of diversity: The lower its value is, the lower in diversity the policy index is. For example, if an index covers ten European countries only, the value of the index is equal to zero. The higher the value is, the higher in diversity the policy index is. The highest possible value is 1-1/S, where S is the number of groups to which a case can belong. In the case of the continents, the possible maximum value is 0.8 (1-1/5). Therefore, we rescaled the index based on its minimum and maximus to have a range of value between 0 and 1 and make it easier its interpretation.

Furthermore, we ran a regression analysis to understand what kinds of countries (EU countries, developed countries, etc.) are more likely to be included in the indexes. Here, the dependent variable was the number of times a country that was included in the indexes. As our dependent variable was a count variable, we employed a negative binomial regression model. Results showed overdispersion, indicating that Poisson regression, which is normally used for count variables, was not the most appropriate modelling strategy for our dependent variable. Our model

included the following independent variables: Population (year of reference: 2010); Number of migrants (year of reference: 2010); EU15 country (0 No – 1 Yes); OECD country (0 No – 1 Yes); Continent (reference: Europe); Income group (1- Low, 2 - Lower middle, 3- Upper middle, 4 High).[2]

Furthermore, in order to understand the link between the thematic, geographical and temporal coverage, and within these categories, we used Spearman's correlation measure and the Wilcoxon rank-sum test, which is a non-parametric version of the t-test.

3. Findings

In this section, we address the indexes' thematic, geographical and temporal scope, with the aim of analyzing the conceptualisation of migration policy operating behind these indexes.

Thematic coverage

In the theory section, we identified three dimensions of migration policy: *immigration, emigration and governance*. Our literature review demonstrates a clear tendency to address immigration policy and overlook the other two dimensions. Almost every index address immigration policy, while only a minority focus on emigration policy and governance (Table 1).

Table 1. Frequency of migration macro-dimensions

Macro-topic	Frequency
Immigration	64
Emigration	13
Governance	15

Note. The frequency represents the number of times the immigration area has been covered by the indexes (N=67).

Immigration has been widely analysed in terms of different policies and perspectives, from admission to integration and nationality acquisition (see the

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[2] The choice of the year is based on data availability and years that indexes cover more frequently. All the variables that are not based on our review of indexes has been taken from United Nations.

theory section and below). For example, DEMIG (Haas et al., 2016) tracks migration policy changes in 45 countries between 1945 and 2014 considers the entire spectrum of immigration policies. The Migration Policy Index (Rayp et al., 2017) combines data from other indexes to develop a comprehensive measure of immigration policies.

Only thirteen indexes address emigration policies. One of the most comprehensive sets of indicators in terms of topics covered and indicators is the Emigrant Policies Index (EMIX, Pedroza and Palop-García, 2017 and 2021). EMIX covers 22 Latin American and Caribbean countries and focuses on a wide range of policy areas related to emigrants, such as nationality acquisition, electoral rights, institutional consultation, tax-related and economic policies and cultural policies.

Similarly, governance is addressed by just 15 of the 67 indexes analysed. Two sets of indicators have in depth addressed governance regulating international migration: the Migration Governance Index (MGI) from the International Organization for Migration (IOM), and the Inquiry among Governments on Population and Development from the United Nations (UN). Together with other aspects not strictly related to governance (e.g. integration policies), MGI focuses on the presence of an institutional framework and structure, a migration strategy, a certain degree of institutional transparency and coherence and a process of gathering of data and information. The Inquiry among Governments on Population and Development gathers information on migration governance, by addressing government strategies and a dedicated ministry/department/unit on migration and integration as well as monitoring mechanisms on these topics. On integration governance, Hernes (2020) created the Dataset on Immigrant Integration Governance (DIIG) to study the ministerial structure of migrant integration, namely whether integration was coupled with or decoupled from immigration/justice.

A correlation analysis reveals that indexes addressing emigration policies are more likely to include governance (Spearman's rho=0.28, p<0.05) and less likely to consider immigration policy (Spearman's rho= -0.44, p=0.001). This shows that, when indexes go beyond the immigration area, they tend to adopt a more comprehensive approach including both emigration policy and governance.

Out of the thirteen indexes addressing emigration, only three indexes do not include immigration policies. There is not significant link between inclusion of immigration policies and governance. Only one index addressing governance does not include immigration as well.

Given indexes' predominant focus on immigration policy, we investigate the specific areas and sub-areas measured as part of immigration policy. On average, indexes cover two out of the four immigration areas; however, more than 40% of the indexes focus on one area only (27/64). Furthermore, indexes cover three out of the fourteen sub-areas (Table 3). This confirms Gest et al.'s (2014) finding that coverage is limited to particular sub-areas and that indexes rarely capture a comprehensive array of sub-areas.

Table 2. Frequency of immigration areas

Areas	Frequency
Admission	36
Integration	29
Residence/Citizenship	49
Expulsion and return	13

Note: The frequency represents the number of times the immigration area has been covered by the indexes (N=64). The three indexes only on emigration have not been considered.

The fact that index covers a small number of areas and sub-areas suggest that indexes are often created with the aim of capturing only a specific aspect of immigration policy. Given the focus on measuring specific immigration policies, one could expect a wide coverage of the different areas and policies on immigration. This is not confirmed by the empirical data. Instead, immigration policy indicators have maintained a disproportionate focus on several areas and sub-areas (see Tables 2 and 3). Admission and residence/citizenship policies have been widely covered; related sub-areas are among the most frequently addressed ones, i.e. nationality acquisition, admission of economic/labour migrants, residence permits and family reunification. Expulsion and return polies and, to a lesser extent, integration policies have been less frequently analysed.

Overall, the analysis of migration policies is primarily focused on legal and procedural standards, namely entry (admission) and stay (residence/citizenship),

while the policy framework (e.g. integration policies) is less frequently considered. Furthermore, when analysed, integration is mainly – but not exclusively – regarded in terms of employment.

Table 3. Frequency of immigration sub-areas

Areas	Frequency
Economic/labour migration (admission)	27
Education purpose/student migration (admission)	8
Family reunification	28
Asylum and humanitarian protection	17
Education (integration)	15
Labour market integration	23
Social Inclusion (in general)	17
Political participation	18
Health	16
Antidiscrimination	13
Citizenship	39
Residence permits	27
Return	7
Irregular migration/Expulsion	15

Note: The frequency represents the number of times the immigration area has been covered by the indexes (N=61). The three indexes only on emigration have not been considered. We also left out from the analysis of sub-areas, DEMIG VISA, DIIG and Vikhrov's visa index, as they do not cover any specific sub-areas.

The list of sub-areas displayed in Table 3 is not settled among scholars, and similar topics are somehow treated differently by various indexes. For this reason, we now go beyond this *a priori* definition of topics and explore the underlying dimensions behind the conceptualisation of indexes and indicators. To understand the underlying dimensions, we ran a factor analysis including all the immigration sub-areas (Table 4). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO=0.74. Bartlett's test of sphericity ($x2(91)=422.397$, $p=0.000$) showed that correlation structure was adequate for factor analyses.

Table 4. Factor analysis[3]

Items	Factors	
	1 *Integration*	2 *Control*
Economic/labour migration (admission)	-0.29	**0.94**
Education purpose/student migration (admission)	-0.24	**0.85**
Family reunification	**0.31**	**0.75**
Asylum and humanitarian protection	-0.01	**0.77**
Education (integration)	**0.96**	-0.03
Labour market integration	**0.83**	0.25
Social Inclusion (in general)	**0.80**	0.02
Political participation	**0.98**	-0.20
Health	**0.85**	0.18
Antidiscrimination	**0.86**	-0.06
Citizenship	**0.44**	-0.13
Residence permits	**0.33**	**0.37**
Return	0.20	**0.80**
Irregular migration/Expulsion	0.20	**0.69**

N=61. Note. Extraction method; principal component factors; Rotation method: Promax with Kaiser normalization. Loadings larger than 0.30 are in bold.

The results show two different dimensions underpinning indexes' thematic coverage. The first factor refers to the control of migration (admission, return and expulsion), while the second factor relates to integration of migrants, in line with the two main dimensions already identified by Hammar (1990), immigration (control) policy and immigrant (integration) policy.

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[3] Given that variables were dichotomous (does the index cover this sub-area?), as suggested by literature (Olsson, 1979), we first produced a matrix of tetrachoric correlations (not reported here) and then we used that matrix as the input for the factor analysis. We also run a model directly using the dichotomous variables, and the results were the same. The only difference was that, in the other models, family reunification was slightly more correlated to the integration factor (around 0.4), while its correlation to the control factor remained stable.

As rotation method, we employed Promax (non-orthogonal, oblique) not the default varimax (orthogonal), due to the high correlations between the two factors (0. 62). However, the results on the varimax rotation were the same.

The factor analysis shows three other interesting results. First, 'asylum and humanitarian protection' is linked to the control dimension. This suggest that this topic has been conceived mainly as a control issue. Indeed, indexes covering this topic mostly focus on admission policies. A notable exception is NIEM (Conte and Pasetti, 2021). This set of indicators compares the laws and policies for the integration of refugees and beneficiaries of subsidiary protection in 15 European countries. Similarly, Blair and colleagues (2020) analysed both admission and integration policies for refugee policies. Second, although primarily to control, family reunification is correlated to both factors. Indexers have treated it in terms of both admission and integration, as family reunification can be seen as a right of someone already settled or as an immigration channel for the family. Therefore, it concerns both entry/control and integration, depending on the view adopted. On the one hand, many indexes focusing on admission policy consider family reunification as one of the possible entry reasons. For example, IMPALA (Beine et al., 2016) measures immigration policy by mapping tracks of entry associated to various reasons, including family reunification. On the other hand, indexes on integration policies, such as MIPEX, include family reunification.

Third, nationality acquisition (citizenship) strongly correlates with integration factor, which suggests that it has been considered more from the integration standpoint. This is in line with the literature on citizenship, which has considered the acquisition of citizenship a part and a key step in the integration process in the destination society (Goodman, 2015; Shachar et al., 2017).

Geographical coverage

The analysis of the geographical coverage of the indexes shows that indexes cover, on average, 25 countries spread over four continents.[4] Existing indexes vary widely in the number of countries covered – from three to 200+ countries. However, most frequently indexes cover between 11 and 20 countries (20/67).

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[4] Given the small number of cases and standard deviation, we employed the median, as it is less sensitive to outliers. This applies to all the average values illustrated in the article.

Almost one-third of the indexes (21/67) focus on only one continent, normally Europe (20/21). Despite the fact that indexes have a moderate degree of diversity – the indexes' average value of the Simpson's index of diversity is 0.46 –, the analysis of the geographical coverage of the indexes reveals a tendency to include western/developed countries, in particular OECD and Western European countries. All the 28 EU countries and 36 OECD countries are included in the 50 most covered countries. The first ten countries (Table 5) seem to reflect the immigration trends, as these are among the oldest (European) countries of immigration (Germany, UK, France, the Netherlands) and the largest new destination countries (Italy and Spain). However, this list further illustrates the geographical bias towards Europe, as other relevant traditional destination countries (e.g. Australia, Canada and US) are not in the top ten.

Table 5. Countries in the first 20 position - number of indexes covering the country (N=67)

Rank	Country	n	Rank	Country	n
1	Germany	57	12	Portugal	43
2	United Kingdom	56		Switzerland	43
3	France	55	13	Finland	40
4	The Netherlands	52	14	United States	39
5	Italy	51		Australia	39
	Spain	51		Norway	39
7	Sweden	50	17	Canada	37
8	Belgium	47		Greece	37
9	Austria	46	19	Hungary	35
10	Denmark	45		Poland	35
	Ireland	45			

Europe is dominating the scene, as European countries have been covered 1,285 times, while North America, which is the second most frequently covered continent, is mentioned only 465 times. All of the 10 most covered countries are from Europe (Table 5), and two-third of the 50 most covered countries is from Europe (35/52, see Table 6). On average, European countries make up 75% of the countries covered by each index. 97% of the indexes cover at least one European country, while the percentage drops to 67% for America and equal to or less than 60% for the other countries.

Table 6. Continents

Continent	Number of countries in the 50 most covered countries (N=52)		Number of times a country from the continent is covered		Number of times that at least a country from the continent is covered	
	n	%	absolute value	% (n/ maximum number of possible times)	n	% (n/67)
Africa	2	4%	439	12%	20	30%
America	7	13%	465	14%	45	67%
Asia	6	12%	454	14%	37	55%
Europe	35	67%	1285	45%	65	97%
Oceania	2	4%	167	13%	41	61%

In comparison with Europe, in the other continents, the focus is limited to a few, often developed, countries (Table 7). In Asia and America, the three most frequently covered countries make up around the 20% of the times that a country of the continent has been covered, and this percentage is equal to 47% in Oceania.[5] The only exception to this trend is Africa, where the coverage is more scattered, as the three most frequently covered countries represent only the 9% of the total number of times that an African country has been covered.

Table 7. Most frequently covered countries (top 3) for each continent

Continent	a.v.	% per continent	Continent	a.v.	% per continent
Africa	*439*		*Europe*	*1285*	
South Africa	15	3%	Germany	57	4%
Morocco	14	3%	United Kingdom	56	4%
Ghana	11	3%	France	55	4%
America	*465*		*Oceania*	*167*	
United States	39	8%	Australia	39	23%
Canada	37	8%	New Zealand	33	20%
Argentina	20	4%	Fiji	6	4%
Mexico	20	4%	Papua New Guinea	6	4%
Asia	*454*		Solomon Islands	6	4%
Japan	33	7%	Tuvalu	6	4%
Korea	26	6%	Vanuatu	6	4%
Israel	20	4%			

[5] To allow for a comparison with the other continents, the percentage considers only one country of the ones in the third position.

The focus on western/developed countries still holds within Europe, as there is a strong tendency to focus on Western Europe (EU15 countries), as all the first 10 most covered countries is from EU15 (see Table 4 and Figure 1).

Figure 1. Most covered countries in Europe.

Note. The darker the shade is, the higher the number of indexes covering the country is.

To understand the possible underlying reasons for country selection and control for the potentially confounding effects of different factors (see the methodology section for a description of the independent variables), we ran a negative binomial regression (Table 8).

The results confirm that, while holding all other variables in the model constant (e.g. the population and the number of migrants), EU15 and OECD countries are expected to be covered by more indexes. Compared to non-EU15 and non-OECD countries, EU15 countries and OECD countries are expected to have a rate 1.33 and 2.71 (respectively) times more both in the number of times that indexes cover the country. The same holds for European countries, compared to all the other continents. This confirms that there is a preference to include western countries. Furthermore, countries with larger overall populations and larger migrant populations are expected to be included by a higher number of indexes.

Table 8. Negative binomial regression. DV: number of times that a country has been covered by indexes[6]

Independent variables	B	SE	IRR
Population (standardised)	0.08	0.02	1.09***
Number of migrants (standardised)	0.06	0.02	1.06***
Developed country	0.04	0.04	1.04
OECD country	1.00	0.08	2.71***
EU15 country	0.29	0.09	1.33***
African country (reference: European country)	-0.37	0.11	0.69***
American country (reference: European country)	-0.42	0.09	0.66***
Asian country (reference: European country)	-0.40	0.09	0.67***
Oceanian country (reference: European country)	-0.48	0.12	0.62***
Constant	2.38	0.14	10.79***
/lnalpha	-4.15	0.56	
alpha	0.02	0.01	
LR	359.65***		
N	198		
R2	0.257		

*p<0.05; **p<0.01; *** p<0.001
Note. IRR refers to the incidence rate ratios for the negative binomial regression model. The IRR score is the estimated rate ratio for a one unit increase in the independent variable score, given the other variables are held constant in the model.

Temporal coverage

A third relevant indexes' characteristic is their temporal coverage, which is key for comparisons over time. Temporal coverage is important to understand whether migration policies has been analysed with an historical perspective or with a more contemporary one.

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[6] We checked for multicollinearity and two strong correlations emerged, between developed country and African country (r=-0.60, p=0.000) and EU15 country and OECD country (r=0.61, p=0.000). We decided to include the variables as the results of the other variables do not change with or without those variables. The correlation between income group and OECD country was also moderately high (r=-0.45, p=0.000). When the OECD variable is removed, the effect of income group becomes significant (r=0.17, SD=0.05, p=0.000).

The temporal coverage of existing indexes is limited, as most focus on a small number of years. The most frequent number of years covered is only one year (18/59), and almost half of the countries (42%) cover less than five years - although the average is eleven years. Therefore, the longitudinal perspective is rather weak. Indexes frequently analyse a small number of years or focus on some consecutive years, even though policies are rather constant in the short run (Huddleston et al, 2015).

Several indexes employ a longitudinal approach by encompassing many years, such as the following indexes: CITRIX (Schmid, 2021), 1980-2014; Commitment to Development Index (CGDEV, 2020), 2003-2019; IMPIC (Helbling et al., 2017), 1980-2018; Multiculturalism Policy Index (Banting and Kymlicka, 2013), 1980-2010; MIPEX (Huddleston et al., 2015; Solano and Huddleston, 2020), 2007-2019.

The time frame most covered is 2000-2009 - being 2008 the most frequently analysed year -, while the most recent years are covered to a lesser extent (see Chart 1).

Chart 1. Number of indexes that covers one year
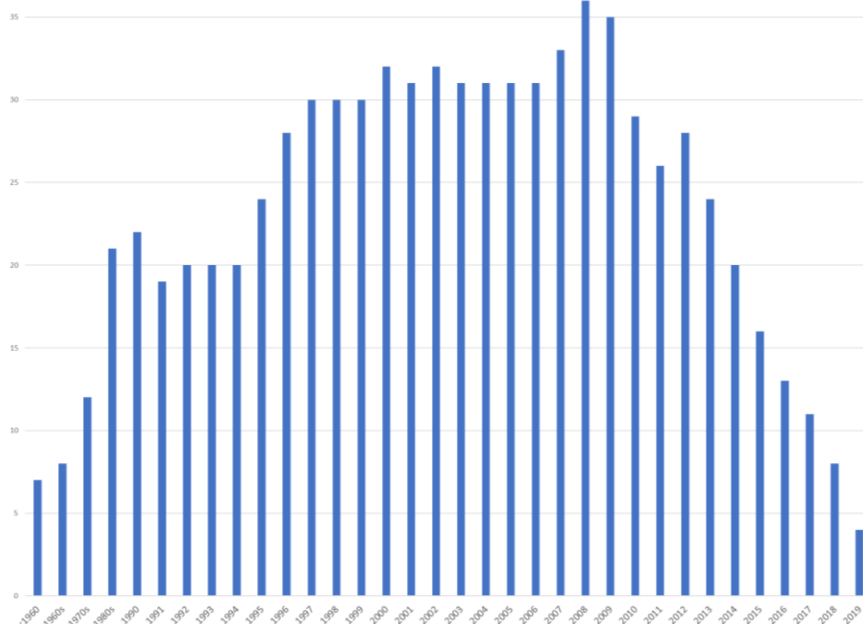
N=67

Furthermore, as indexes have been developed mainly by sociologists and political scientists, it is not surprising that migration policy has been mainly analysed as a contemporary phenomenon. Only six indexes address the policy situation pre-1970s and only three the situation pre-World War II one. A historical analysis would be useful to put into perspective contemporary migration trends and policy responses (Seeleib-Kaiser, 2019). One of the noteworthy exceptions to this trend is the set of indicators developed by Timmer and Williamson (1998), who analysed the development of migration policies for the period 1860-1930 in five countries that were relevant immigration countries at that time (Australia, Argentina, Brazil, Canada, and the United States). Another exception is Peters' set of indicators (2015), which covers immigration policies from the late 18th century through the early 21st century. Indexes applying a more historical perspective, namely the ones covering the period before the 1970s, span a higher number of years, as revealed by the Wilcoxon rank-sum test (z= -3.973, p<0.001). On average 'historical' indexes cover 68 years, while 'contemporary' indexes four years.

The links between thematic, geographical and temporal coverage

Correlations emerge between the indexes' thematic, geographical and temporal coverage (Tables 9 and 10). While the temporal coverage seems to be not linked to the others, the geographical and thematic coverage are positively correlated. The higher the number of policy sub-areas covered by one index, the higher the index is in terms of the number of continents covered and its geographical diversity. The control dimension is more highly correlated to diversity than the integration dimension. This might suggest that integration is seen as an issue that mainly affects the major destination countries in the EU/OECD. Addressing emigration policy is also clearly linked to a wider geographical coverage (Table 10), which confirms that indexes focusing on immigration policy are rather EU/OECD-centric. This finding indicates that emigration is primarily seen as an issue for non-EU/OECD countries.

The positive correlation between the geographical and thematic coverage may seem surprising. Indeed, indexes that focus on one specific sub-topic should be able to widen the geographical scope, as in the case of the Dual Citizenship Dataset covering 200 countries (Vink et al., 2015). Instead, the positive correlation between

the geographical and thematic scope suggests that the choice of topics and countries to be included is linked to the extent of the indexes' overall conceptualization of migration policy (and projects' objectives), rather than simply to projects' constraints (i.e in terms of the project budget or duration).

Table 9. Spearman's correlation – thematic, geographical and temporal coverage

		Thematic coverage				Geographical coverage		
		N. of areas covered	N. of sub-areas covered	Factor 1 *Integration*	Factor 2 *Control*	N. of continents covered	N. of countries covered	Simpson's Index of Diversity (1 – D)
Geographical coverage	N. of continents covered	0.21	**0.39*****	**0.28***	**0.28***			
	N. of countries covered	-0.09	0.11	0.21	-0.08			
	Simpson's Index of Diversity (1 – D)	**0.30****	**0.41*****	**0.29***	**0.43*****			
Temporal coverage	Number of years covered	0.08	0.13	-0.01	0.14	0.13	0.07	0.07

*p<0.05; **p<0.01; *** p<0.001. Note. In bold significant correlations. Correlations between variables within the same kind of coverage (e.g., geographical) are not reported.

Table 10. Geographical coverage by indexes covering/not covering emigration policy (Wilcoxon rank-sum tests).

Emigration policy	Median	Mean	Z	p
Number of continents covered (1-5)				
Not covering emigration policies	3	3	-2.837	**0.01**
Covering emigration policies	5	4		
Number of countries covered				
Not covering emigration policies	21	32	-2.935	**0.01**
Covering emigration policies	45	79		
Simpson's Index of Diversity (1 – D) (0-1)				
Not covering emigration policies	0.38	0.39	-3.488	**0.001**
Covering emigration policies	0.92	0.76		

Notes: Z and p are the test statistic and p-value, respectively, from Wilcoxon rank-sum tests. Significant results reported only. No significant results emerged for governance and immigration. The results are reported here.

Conclusions

This article analyses existing migration policy indicators and indexes, which have been used over the last decades to measure the nature of migration policy frameworks and to compare them across different countries and periods of time.

The article contributes to migration studies by capturing the conceptualisation of migration policies underlying these existing indexes, in terms of their thematic, geographical and temporal coverage. Our analysis reveals that migration policy has been mainly conceptualized as a contemporary phenomenon that concerns the major destination countries in the OECD/EU. This trend follows a general bias in the wider field of migration studies, as shown by recent comprehensive reviews of the field (Levy et al., 2020; Pisarevskaya et al., 2019).[7] Furthermore, this perspective on (im)migration policy is mainly linked to the control of migration (e.g. admission policies) and, when integration is included, this conceptualisation is mainly limited to employment and legal integration (Goodman, 2015), with nationality acquisition (citizenship) as the most frequently mentioned policy area. The development of migration policy indicators seems only weakly linked to the expansion of migration policy research, as the latter has most frequently focused on integration- and asylum-related topics (Solano and Huddleston, 2021).

Developing countries and emigration policies have been largely neglected. As underlined by Palop-Garcia and Pedroza (2019), this under-development of migration policy index scope can be linked to three possible explanatory factors. First, migration scholars and researchers are mainly from organisations and institutions from the developed world (Levy et al., 2020; Pisarevskaya et al., 2019), and immigration is often highest on media and policy debates in these countries (Dennison and Nasr, 2019). Second, availability of funding is higher in developed countries, leading to a bias in research outputs. Third, researchers may find more feasible and methodologically sound to conduct research in countries with relatively harmonized legal and policy systems, as is the case in the EU and OECD.

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[7] See also https://migrationresearch.com/.

While thematic, geographical and temporal gaps persist, the situation has recently improved in terms of the development of the field of migration policy indexes. For example, MIPEX and CDI-migration strand have expanded their scope by including China, India, Indonesia, some Latin-American countries and others (CGDEV, 2020; Solano and Huddleston, 2020). Blair and colleagues (2020) analyzed asylum and refugee policies in more than 90 developing countries. Future research should follow these examples to widen the geographical scope of the analysis – including, for example, developing countries – and address understudied migration policy areas, such as emigration policies and migration governance.

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Appendix. List of indexes covered by the review

(* Indexes that covers the period before 1970)

Index/Set of Indicators	Link
*DEMIG (Determinants of International Migration: A Theoretical and Empirical Assessment of Policy, Origin and Destination Effects) POLICY	https://www.migrationinstitute.org/data/demig-data/demig-policy-1
DEMIG VISA	https://www.migrationinstitute.org/data/demig-data/demig-visa-data
Global Migration Barometer (Accessibility for migrants strand)	https://blogs.worldbank.org/peoplemove/a-new-global-migration-barometer-measures-opportunities-for-migrants
IMPALA (International Migration Policy and Law Analysis)	http://www.impaladatabase.org/
IMPIC (Immigration Policies in Comparison)	http://www.impic-project.eu/
MGI (Migration Governance Index)	https://gmdac.iom.int/migration-governance-indicators
*UN inquiry	https://esa.un.org/poppolicy/inquiry.aspx
MIPEX (Migrant Integration Policy Index)	http://www.mipex.eu/
Ortega & Peri index – 'Tightness of immigration reforms over time'	https://doi.org/10.1093/migration/mns004
Cerna's Index	https://doi.org/10.1111/imig.12158
The Openness Index	https://doi.org/10.1086/694000
Migrant Right Index	https://doi.org/10.1086/694000
Deterrence Index	https://doi.org/10.1163/1571816041518769

Asylum Policy Index	https://doi.org/10.1111/j.1468-0297.2008.02228.x
Multiculturalism Policy Index	https://www.queensu.ca/mcp/
CIVIX - civic integration	https://doi.org/10.1080/1369183100376 4300
Citizenship Policy Index (CPI)	https://doi.org/10.1080/1369183100376 3922
Dumbrava's Citizenship Policy Index	https://www.ceeol.com/search/article-detail?id=230973
Index on strictness of migration policy (frDB)	http://www.frdb.org/page/data/categoria/international-data/topic/immigration/scheda/inventory-of-migration-policies-1990-2005/doc_pk/11028
Index of Citizenship Rights for Immigrants (ICRI)	https://www.wzb.eu/en/research/migration-and-diversity/migration-integration-transnationalization/projects/indicators-of-citizenship-rights-for-immigrants-icri
Legal obstacles to the integration of migrants (LOI)	https://doi.org/10.1080/1369183X.1997. 9976590
Lowell's index for policies on high-skilled workers	https://www.un.org/en/development/desa/population/events/pdf/expert/8/Lowell_pp.pdf
Koning's naturalization policy index	https://doi.org/10.1080/01419870.2011. 556747
Mayda's index	https://doi.org/10.1007/s00148-009-0251-x
Emigrant Policies Index (EMIX)	https://www.giga-hamburg.de/en/data/emigrant-policies-index-emix-dataset

Immigrant Inclusion Index (IMIX)	https://www.unilu.ch/en/faculties/faculty-of-humanities-and-social-sciences/institutes-departements-and-research-centres/department-of-political-science/research/the-immigrant-inclusion-index-imix/
Klugman and Pereira	https://mpra.ub.uni-muenchen.de/19231/
*Timmer and Williamson	https://www.jstor.org/stable/2808023?seq=1
Index of index of fees and economic requirements for naturalisation (ECN index)	https://doi.org/10.1080/14782804.2018.1437025
GLOBALCIT/CITLAW (citizenship laws)	https://cadmus.eui.eu/handle/1814/64595
CITIMP (citizenship implementation) indicators	https://cadmus.eui.eu/handle/1814/64592
Migration Policy Index - Entry (MPI^E)	https://doi.org/10.1016/j.worlddev.2017.02.026
Migration Policy Index - Stay (MPI^S)	https://doi.org/10.1016/j.worlddev.2017.02.026
Migration Policy Index - Integration (MPI^I)	https://doi.org/10.1016/j.worlddev.2017.02.026
Migration Policy Index - Overall (MPI^C)	https://doi.org/10.1016/j.worlddev.2017.02.026
Commitment to Development Index (CDI) - Migration Component - indicator on international conventions	https://www.cgdev.org/topics/commitment-development-index
Vikhrov's visa index	https://doi.org/10.1111/ecot.12115
*Peters's indicators/index	https://doi.org/10.7910/DVN/XTSNW0
Immigration/Citizenship rights index	https://doi.org/10.1017/s0043887114000112
Labour Migration Policy Index (LMPI)	Oxford Analytica, 2008 – link not available

Givens & Luedtke's restrictiveness index	https://doi.org/10.1057/palgrave.cep.6110051
Immigration for employment index (IMMEX)	https://www.migpolgroup.com/index.php/portfolio-item/immex/
Nationalist Immigration and Integration Policy (NIIP)	https://doi.org/10.1080/01402382.2012.665738
Leblang dual citizenship database	https://doi.org/10.1177/0010414015606736
High-skilled migration policy indicators	https://doi.org/10.1007/s13524-017-0559-1
Statelessness index	https://index.statelessness.eu/
World Population Policies Database: migration policy strands	https://esa.un.org/PopPolicy/about_database.aspx
Barrier to Naturalization Index (BNI)	https://www.cambridge.org/core/books/ironies-of-citizenship/C81D143FE2AEE8A3D68A4558D0F23412
*MACIMIDE Global Expatriate Dual Citizenship Database	https://macimide.maastrichtuniversity.nl/dual-cit-database/
Citizenship Regime Inclusiveness Index (CITRIX)	https://www.eui.eu/DepartmentsAndCentres/PoliticalAndSocialSciences/ResearchAndTeaching/Theses/07-01-Schmid-Thesis-of-the-month
*Shin's indicators	https://doi.org/10.1093/isq/sqz033
Dashboard of indicators for measuring policy and institutional coherence for migration and development (PICMD)	https://www.oecd.org/dev/migration-development/knomad-dashboard.htm#Dashboardnew
National Integration Evaluation Mechanism (NIEM)	http://www.forintegration.eu/
Migration and Transnational Social Protection in (post) crisis Europe (MiTSoPro)	http://labos.ulg.ac.be/socialprotection/

IMISEM (Every Immigrant Is an Emigrant)	https://www.giga-hamburg.de/en/project/every-immigrant-is-an-emigrant-how-migration-policies-shape-the-paths-to-integration
Immigration Policy Index	http://www.temperproject.eu/research-areas/impol-database/
Diaspora Engagment Policies	https://doi.org/10.1016/j.polgeo.2008.10.004
Diaspora policies	https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/22569
Electoral Law Indicators	http://globalcit.eu/electoral-law-indicators/
Political Opportunity Structures (POS)	https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/17965
Immigrant Integration Governance (DIIG)	https://doi.org/10.1111/gove.12481
Graeber's citizenship index	https://doi.org/10.1080/14782804.2020.1724531
Hansen and Clemens 's citizenship index	https://doi.org/10.1057/s41295-018-0120-7
Immigrant Rights	https://doi.org/10.1080/03050629.2019.1525137
Immigration Openness	https://doi.org/10.1080/03050629.2019.1525137
*Developing World Refugee and Asylum Policy (DWRAP) dataset	https://immigrationlab.org/working-paper-series/forced-displacement-asylum-policy-developing-world/
Sredanovic' citizenship indicators	https://doi.org/10.1177/0192512115584008