PACES

Making migration and migration policy decisions amidst societal transformations

The implications of welfare generosity and welfare access for migration strategies

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PACES (Making migration and migration policy decisions amidst societal transformation) is a 40-month research project (2023-2026) that examines decisions to stay and migrate over time and space, researches the politics of knowledge in migration policy and seeks to use its insights to inform future migration policies and governance. PACES is carried out by a consortium of 14 partners in Europe, Africa and the USA.

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Abstract

Economic logic suggests that countries offering more generous welfare benefits are likely to be perceived as more attractive destinations by migrants. Whilst the literature concerning the welfare magnet hypothesis predominantly focuses on the level of welfare generosity, what is arguably more important for immigrants, besides the amount of welfare spending, is their effective access to social welfare. The role of accessibility of welfare provision to immigrants in shaping migration decisions remains understudied in the existing literature. This paper aims to explore the link between welfare generosity, immigrant access to social welfare and migration using the newly updated Immigrant Exclusion from Social Programmes Index (IESPI) to gauge immigrants' social welfare access relative to natives, and its effect on migration flows. After constructing a database of bilateral migration inflows (outflows) for 19 (15) advanced economies over the period 1990–2020, we employ panel regression analysis to shed light on the extent to which access to welfare might influence migration journeys of immigrants towards most advanced economies, including possible differences across gender. We find that, even when controlling for welfare generosity and other migration determinants, access to social welfare increases migration inflows, whilst it does not discourage return migration. Moreover, although there is no major difference in the role of welfare access for male and female migrants, African migration is less shaped by access to social welfare. This is in line with the literature that points out significant barriers faced by immigrants in accessing social welfare, and the latter's strong conditionality on immigrant status, amongst other characteristics. Furthermore, whilst the overall social expenditure is not associated with higher migrant inflows, rise in welfare generosity increases return migration from Western economies to Africa. This implies that welfare generosity empowers migrants to be more mobile, rather than locking them in. The current paper sets a basis for further research regarding the role of specific social welfare policies and diverse geographical and policy settings in forming global migration journeys.

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Introduction

Global migration trends are typically presented as a result of unequal living and working conditions across the globe, encouraging individuals to leave the poorer countries in which they reside and migrate to more affluent regions. The main drivers of migration that have been extensively studied include factors such as wage and income differentials, labour demand, origin country development and network dynamics (Massey et al., 1993; Brettell & Hollifield, 2022). Scholars agree that drivers interact and complement each other, with their joint effect resulting in varied migration dynamics across time and space (Aslany et al., 2021; de Haas et al., 2019). Amongst these factors, access to welfare systems and to different types of social benefits has received extensive attention as a specific characteristic of the more affluent receiving economies in the Global North, raising much political salience (Nannestad, 2007; Geddes, 2003; Koning, 2022). Institutionally developed and well-financed welfare states, including education and health care systems, set the main migration destinations apart from poorer countries where these institutions remain underfinanced or still inaccessible for many strata of the society (Esping-Andersen, 1990; Geddes, 2003).

Standard economic models of migration have operationalised welfare states in receiving countries as part of the cost-benefit calculation of an individual considering migration. They also implicitly assume that potential migrants are aware of welfare benefits and that they can access them, and this directly shapes their decisions regarding where to migrate. In other words, welfare policies are seen as shaping migrant decisions concerning favourite destinations, but also as impacting the monetary benefits migrants can enjoy after having successfully moved, which raises the incentives to migrate (Borjas, 1999; Giulietti, 2014; Barrett & Maître, 2013; Nannestad, 2007). The welfare magnet hypothesis was pioneered in a study by Borjas (1999), who investigated the relative attractiveness of US states conditional on their welfare generosity and found significant effects. The hypothesis, which implies a direct relationship between decision to migrate and access to welfare benefits, has been tested mainly in the wealthy Western democracies (Brochmann & Dølvik, 2018; Brücker et al., 2002; Geddes, 2003; Razin & Wahba, 2015). Whilst the theory is linked to individual-level decisions, it is interesting that most studies investigating the link between welfare and migration adopt a macro-level perspective, looking at indicators such as aggregate social expenditure or the level of unemployment benefits to capture cross-national differences in welfare generosity and their effect on migration (Giulietti et al., 2013; Giulietti & Wahba, 2013; Razin & Wahba, 2015). The consensus in the literature to date is that the role of welfare in migration is relatively small compared to other migration determinants, with mixed results in terms of the welfare magnet argument (Kahanec & Guzi, 2022; Jolivet, 2024).

There is also a growing body of research which has studied the relevance of welfare states in origin countries. Welfare policies are conceived as playing an important role in changing the macro-level environment in which people make migration decisions, as well as people's individual motivations, aspirations and capabilities to migrate (Kureková, 2013; Adepoju, 2008; Bakewell et al., 2024). Welfare states also occupy a developmental role, e.g. in the

ambition to secure more inclusive economic growth or via skill-formation industrial policy to sustain the development of leading complex sectors (Seekings, 2015). From a macro-perspective, this implies a link between development, welfare states and changing incentives to migrate or to stay—something convincingly documented in several works which adopted a historical perspective. The studies show how the emergence of welfare provision in countries of origin projected in changes of migration patterns at the community or the country level (Jolivet, 2020; Vezzoli, 2020; Khoudur-Kasteras, 2008). In a review study regarding access to social protection in origin countries and migration flows, Hagen-Zanker and Himmelstine (2013) concluded that the relationship between migration motives (decisions) and availability of welfare at origin is complex and non-linear. Availability of social protection at the origin can increase as well as decrease migration, depending on factors such as the design of the programme, other livelihood alternatives available at the origin, and the availability of social protection.

Whilst the literature concerning the welfare magnet hypothesis predominantly focuses on welfare generosity, what is equally important for immigrants is their effective access to these benefits, that is, immigrants' inclusion in welfare. Differences in access—that is, greater or smaller inclusiveness of migrants relative to natives in different countries—might constitute one of the factors explaining the measured differences in welfare take-up within countries (for different immigrant cohorts) and across countries. Most to-date research pertaining to immigrant welfare access focuses on a single country, a specific welfare policy area or a single reform (Blume & Verner, 2007; Drinkwater & Robinson, 2013; Koning, 2021). Recent times have seen a growing body of research studying immigrant welfare inclusion comparatively across countries or time. These works document a substantive degree of differentiation in immigrant access to welfare provision relative to natives across the advanced economies and over time (Koning, 2022; Eugster, 2018). The existing differences might reflect deeper economic and sectoral characteristics, but also philosophical and cultural features underpinning the structures of different welfare systems across the advanced economies and the related fiscal and socio-economic models underpinning them (Esping-Andersen, 1990; Sainsbury, 2006; Saar et al., 2022; Guzi et al., 2021).

The role of immigrants' *access* to social and welfare rights in destination countries in explaining migration patterns, and in shaping decisions of migrants on their migration journeys, remains understudied. This paper further explores the link between immigrants' access to social welfare policies and migration flows at the level of countries (macro-level). We study whether greater inclusion of immigrants in social rights leads to more migration, whilst considering variations in welfare generosity. Our analysis relies on aggregate data concerning migration flows (inflows and outflows) and the Immigrant Exclusion from Social Programmes Index (IESPI) to gauge immigrants' formal access to social welfare relative to natives. The IESPI dataset gathers systematic comparative data regarding inclusiveness of social welfare systems annually from 1990 to 2023 and for a range of 22 Western economies (Koning, 2022). This enables us to conduct a systematic comparative analysis which spans 19 OECD countries and other advanced economies over the period 1990–2020, shedding light on the extent to which immigrant inclusion in social programmes can be linked to global migration journeys.

This paper is situated within a larger body of research prepared within the Horizon Europe project PACES, which studies decision-making of migrants with a focus on African migration to Europe. One of PACES' key objectives is to identify how migration and non-migration policies, such as social welfare policies, can, more broadly, either facilitate migration or enable sustainable and desirable 'staying'. The project endorses the temporal multilevel analysis framework (TMA), considering micro as well as macro-analytical levels (Vezzoli et al., 2024). PACES research is focused on African migrations to the European Union, along the whole migration journey, that is, including emigration, transit and return migration within the EU, whilst it pays central attention to the temporal dimension which is crucial for contextualised analysis of migrant decision-making. Although our empirical analysis is constrained by the available aggregate data, we nevertheless try to follow PACES' broader conceptual framework and analytical ambitions in multiple ways. First, we theorise and empirically test the different roles that social welfare inclusion might play for male and female migrants; second, we consider global migration patterns but also zoom-in specifically on African migration to European countries; and, third, not only inward migration (inflows) is considered, with outward migration (outflows) also taken into account. Finally, unlike most studies regarding welfare and migration, we are able to move beyond cross-sectional analysis and construct a database spanning three decades (1990–2020).

The main academic and scientific contribution of this paper lies in (a) analysing global bilateral patterns of migration inflows and outflows over time conditional on changes in immigrant social welfare inclusion, whilst (b) linking these to selected migrant characteristics, namely gender, and (c) zooming in on African migration to Europe. Our research more broadly contributes to a growing body of literature which seeks to understand the role of institutions in shaping migration motives (Bergh et al., 2015; Migali, 2018; Devitt, 2018; Huber, 2015; Guzi et al., 2021). To the best of our knowledge, we are the first to study welfare generosity and welfare access as related yet distinct factors in a comparative and longitudinal framework. Our study is also unique in adopting the gender perspective, its regional lens on Africa, and in studying not only inflows but also return migration. African migration happens within specific migration policy contexts and we are therefore particularly interested in studying whether African migration dynamics differ in their sensitivity to welfare access and welfare generosity.

In the following sections we review existing literature regarding welfare, social rights and migration, and subsequently present our data, methodology, analysis and results. Concluding remarks include a discussion on the broader implications of our results for future research and policy-making in the area of immigrant social welfare inclusion and the complex relationship between generous welfare states and immigrants' access to welfare.

Welfare state in migration research: between welfare generosity and welfare access

Welfare states in Western democracies represent a key tool for assisting individuals in labour market (re)integration, and in weathering social and economic hardship. Relative to advanced economies, welfare states in the Global South remain less developed and underfinanced, but are expanding and consolidating (Römer et al., 2024; Nguyen et al., 2024). Welfare systems are defined as sets of institutions and policies that directly or indirectly intervene in the functioning of labour markets in addressing various market failures (Devitt, 2011; Eugster, 2018; Kureková, 2013; Bakewell et al., 2024; Hagen-Zanker & Himmelstine, 2013; Sirovatka et al., 2019). The social investment paradigm furthers this understanding to seeing welfare systems as tools for achieving sustainable and inclusive growth under conditions of demographic change, ageing and climate change; moreover, such conceptualisations commonly include access to education and healthcare as part of the welfare regime (Morel et al., 2011).

Whilst social welfare spending is commonly used as an aggregate indicator on welfare-migration research, it has been increasingly acknowledged that welfare systems are complex regimes with several functions and comprise a multitude of policy instruments (Kureková, 2013; Koning, 2021; Duman et al., 2022). Advanced welfare systems are highly regulated, whereas access to specific social programmes, such as social insurance (unemployment benefits, pensions, active labour market policies) or social assistance (minimum income schemes, family benefits) is conditioned on various eligibility criteria. Even for the native-born, the right to draw on such programmes is a function of many factors, such as previous legal employment, history of social security contributions, age, labour market status, and family status. Within these complex regulatory environments, some benefit types are granted based on needs assessment, i.e. are means-tested (e.g. social assistance), whilst others are given based on universal principles (e.g. universal health care access) or on a contributory basis (e.g. contributory unemployment benefits).

Recent years have seen growth in the academic literature regarding welfare systems as a potential pull factor of immigration (Borjas, 1999; De Jong et al., 2005; Razin & Wahba, 2015). Comparative large-N studies tend to show that the impact of welfare generosity on migration is—if found—negligible (Giulietti et al., 2013; Pedersen et al., 2008). Migration theories propose a diversity of factors influencing migration patterns, with the most significant role attributed to income differences, geographical proximity, migrant networks, and migration policy (Barrett & McCarthy, 2008; Brettell & Hollifield, 2022; Massey et al., 1993). Sending-country characteristics, factors, and policies, including welfare policies, may also play a role (Koettl et al., 2006; Kurekova, 2013; Bakewell et al., 2024).

Some interpretations of the welfare magnet hypothesis anticipate that welfare generosity will influence not only the levels, but also the selectivity of migration, with low-skilled migrants being attracted to more generous welfare systems whilst skilled migrants are deterred from generous welfare contexts (Borjas, 1999; Razin & Wahba, 2015). Amongst

the first studies to test the welfare magnet-selectivity argument in a quasi-experimental research design is that from Agersnap et al. (2020), who exploited a series of immigrant-targeted welfare benefit reforms in Denmark aimed at reducing the inflow of refugees. The authors showed that the net flow of immigrants fell after the benefits reduction (by approximately 5,000 people per year), and that the subsequent reversal of the policy towards a more inclusive set-up reversed the effect. The authors also provided evidence that the drop in immigration is driven entirely by asylum- and family-based immigration, and that immigrants coming on work or study visas were immune to the reforms. From the perspective of our study, it is relevant that the aforementioned authors showed both the attracting and repelling effects of welfare access policy change and indicated that welfare inclusiveness elasticity should appear in both directions (inflows and outflows). Also notable is the study by De Jong et al. (2020), who studied locational choices of intra-EU immigrants between 25 countries in relation to social expenditure on three specific welfare programmes—unemployment, family and old-age benefits. They found that higher spending on family benefits positively impacted locational choices of young adults moving together with children, and higher spending on old-age benefits corresponded to a higher migration propensity of individuals close to or above retirement age. Contrastingly, unemployment spending was found to negatively impact locational choices in general, and those of working-age adults in particular. Their study focused on within-EU mobility, but is informative in confirming the crucial role of life-course subtypes in relation to expected utility of various welfare programmes. Their results also highlight the importance of further disentangling the general social welfare spending measure when studying the welfare–migration link.

Closely linked to the welfare magnet hypothesis is the political discourse regarding welfare overuse by immigrants. At a country level, data show that, in some countries, immigrants rely more on welfare relative to native-born citizens, whilst in others less so (Barrett & McCarthy, 2008; Jakubiak, 2020). Regarding poverty rates specifically, immigrants are more exposed to a risk of poverty than natives, whilst the gap varies across the EU countries (Barcena-Martin & Perez-Moreno, 2017; Blume et al., 2007). In terms of actual welfare take-up in receiving countries, those studies which document higher reliance of migrants on welfare compared to natives explain it by distinct immigrants' socioeconomic and cultural characteristics, including lower skills, family structure, age, or a lack of social and cultural capital which constrains their labour market integration (Zimmermann et al., 2012; Hansen & Lofstrom, 2003; Zimmermann et al., 2008; Jakubiak, 2020). Some of the key factors explaining differences in welfare use between immigrants and natives include their country of origin (less or more developed regions) and variations in qualifications across different migrant cohorts or age (Blume et al., 2007; Huber & Oberdabernig, 2016; Jakubiak, 2020). Importantly, migrants tend to rely less on public support with time as they gain the country-specific knowledge, skills and ties which help them integrate (Blume & Verner, 2007).

In addition to these micro-level characteristics, immigrants resorting to welfare might be shaped by more structural factors, such as migration policy determining migration status (temporary or permanent, legal or illegal, etc.), labour market regulation, and the structure of the welfare state in the host country (Giulietti & Wahba, 2013; Kaczmarczyk, 2013;

Agersnap et al., 2020). In essence, immigrant integration and the related need to rely on welfare are influenced by various factors. Countries may strategically juggle their policy mix to sustain broader economic objectives that migration might be seen to fulfil. In fact, strong institutional complementarities between minimalist welfare provisions, open migrant admission policies, and underdeveloped integration policies have been proposed (Bommes & Geddes, 2000; Menz 2003, 2009; Ruhs, 2011; Sainsbury, 2006).

In response to some of the literature on welfare magnets and welfare overuse, a growing body of research has offered systematic evidence that, in fact, immigrants face multiple barriers in accessing welfare systems in countries of destination (Kahanec et al., 2013; Oso & Martínez-Buján, 2022; Shutes & Walker, 2017; Koning, 2021). Advanced economies often place additional requirements on immigrants' access to different schemes based on criteria related to immigrant status, type of labour migration scheme, citizenship, and country of origin (Carrera, 2005; Curtis et al., 2017; Kvist, 2004; Römer et al., 2024). Moreover, welfare systems are complex bundles of policy interventions and institutions, the impact of which varies over migrants´ life-course (Andrejuk et al., 2021; De Jong et al., 2020; De Jong & De Valk, 2020). These factors result in a fluidity of inclusion and exclusion for different immigrant groups, meaning that immigrants and their families face different barriers across countries and over time (Hemerijck et al., 2013; Sainsbury, 2012). This is the case even with respect to intra-EU labour mobility, where equal access to social rights should be guaranteed to EU citizens; nevertheless, these citizens also encounter various barriers and face discretion (Kureková, 2013; Voivozeanu & Lafleur, 2023; Ratzmann, 2022). Exclusion of different immigrant groups of non-EU origin in accessing welfare in different destination countries is well documented (Østergaard-Nielsen, 2003; Koning & Banting, 2013; Koning, 2022).

The knowledge regarding differences in immigrants' access to social welfare has grown, and recent scholarship includes not only relatively narrowly focused studies on a single country, a specific policy or a single reform, but also comparative policy analysis that evaluates immigrants' social inclusion or exclusion in a wider comparative context across countries and over time (Sainsbury, 2012; Eugster, 2018). Amongst the most comprehensive attempts is that of Edward Koning (2021, 2022), who assembled the Immigrant Exclusion from Social Programs Index (IESPI) to study differentiation in benefit extension across 20 Western welfare states and over time, covering seven social policy areas. His analysis found large differences, amongst welfare states, time periods, and social programmes, in the level of immigrant inclusion relative to native-born citizens. He argued that the aggregate trend of immigrants' access to social programmes in Western welfare states in the past decades has not been uniformly exclusionary, and documented both more inclusion and exclusion at the level of specific social policies he covered. Another systematic comparative dataset is the Social Rights Dataset (ImmigrSR), which maps immigrants' social rights for 39 countries globally, covering countries in five global regions, and for different categories of migrants (Römer et al., 2024). Similar to IESPI, the ImmigrSR database is longitudinal (1980–2018), but systematically covers only two social policy programmes (social assistance and contributory unemployment benefits). It confirms significant variation between these regions, but also signals convergence between the

Global North and Global South, which is a relevant finding from the perspective of migration flows.

To the best of our knowledge, there is a limitation when it comes to our understanding of the role of immigrant welfare inclusiveness as a factor explaining migration decisions or broader migration patterns. The exception is the study by Kahanec and Guzi (2022), who provided some evidence confirming a relationship between better accessibility of social assistance for immigrants and larger immigrant inflows in the European context. Agersnap et al. (2020), who adopted a quasi-experimental design to test both inclusion and exclusion of asylum seekers in Denmark, come perhaps the closest to establishing a causal effect of welfare inclusion/exclusion on immigrant inflows and outflows. Compared to theirs, our work differs by using the IESPI score, which includes a broad range of social rights. This resonates with a more granular conceptualisation of welfare states (cf. Jolivet, 2024). Our bilateral migration flows database measures legal economic migrants, and we are not able to distinguish between different immigrant types. Conversely, we map global migration patterns (inflows and outflows) and specifically test the role of changes in welfare inclusion over time with a focus also on gender and on African migration to the EU.

Gender is a significant factor in migration studies as gender structures the immigrant experience for men and women (Brettell, 2017). This is due to cultural assumptions, social norms and gendered roles that might underpin aspirations and capabilities of female migrants differently than those of males. Labour markets can also be gendered, as some sectors require skills attributed more to women than men, e.g. domestic work, care work or segments of the service industry. Migration policies are, in effect, also strongly gendered (Briddick, 2020). For example, family reunification policies in European countries historically separated the right of residence from the right to employment, essential creating barriers for migrant women admitted as dependents of a spouse to work (Zlotnik, 1990), and many states continue to apply this principle. It is also well established that women face multiple disadvantages in the labour market generally, and this is particularly so for female migrants.

The main relevance of these findings for the purpose of this study is that women might need more extensive social welfare access, due to their multiple vulnerabilities and intersecting disadvantages (Bilecen et al., 2019). We are not aware of any studies analysing gender-conditioned differential propensity to rely on welfare, as several main social benefit types are household-defined, rather than considering men and women separately. Yet, there are certain types of benefits, such as maternity support, that are gender-specific. Interestingly, in their welfare magnet study, Levine and Zimmerman (1999) specifically showed that woman-headed single households are not responsive to differences in welfare benefits amongst the US states, suggesting no distinct migration behaviour linked to gender. There is also evidence showing that differentiation in social rights access between native-born and immigrants might be furthered along gender lines (Phillips et al., 2024). Some studies document that EU citizen-worker status is designed in a way that makes female intra-EU migrants invisible and leaves them facing difficulties in accessing needed social support in different contexts of need and precarity (Shutes & Walker, 2017). In our analysis, we focus

on gender as a specific micro-level factor and explore whether male and female migration responds distinctly to changes in immigrant social rights inclusion or exclusion.

Before moving to our empirical analysis, we feel the need to comment on an important assumption we are making related to immigrants' social rights access, and that is an implied belief that immigrants are informed of differences in social rights and act upon this knowledge when choosing one destination country over another. Whilst there is, on the one hand, some evidence that migrants are not well informed of their social rights and have little knowledge regarding welfare state characteristics (e.g. access to public health care, see Dzúrová et al., 2014), other studies focusing on asylum seekers find that migrants are quite knowledgeable about welfare programmes (Migge & Gilmartin, 2011; O'Donnell et al., 2007). There are reasons to believe that individuals might possess information that helps them also evaluate the elements of social rights. Some categories of migrants (e.g. better educated) are shown to make rational and well-informed decisions with respect to their migration journeys. Furthermore, critical information concerning countries of destination is often carried by diaspora and networks, and access to information in general has clearly been enhanced in recent years due to digitalisation (Serra Mingot & Mazzucato, 2018). Furthermore, there has been a growth in information campaigns in the countries of origin focusing on conveying information to potential migrants (Pagogna & Sakdapolrak, 2021). For example, Agersnap et al. (2020) referred to information campaigns of the Danish government in origin countries about the reform leading to a loss of access to benefits in Denmark, and the conditionality attached to it. In any case, country-specific knowledge often comes with integration into the host society and changing needs, e.g. job loss or having a child (Seibel, 2019, 2021; De Jong & De Valk, 2020). This makes us assume that social welfare inclusion/exclusion should be particularly demonstrable when looking at outflows of migration in relation to immigrant social rights restrictions.

Data description

We combine data from various sources for this project. Our key measure of social system inclusiveness, the IESPI score, is constructed for 22 countries. Unfortunately, detailed bilateral migration flow statistics are not available for Ireland, Malta, or the United Kingdom, meaning these countries are excluded from the analysis. The final sample includes 19 countries and spans 1990–2020. The choice of study period is given by the availability of data. Summary statistics of variables used in the model are documented in Table A1 of the Appendix.

Bilateral migration data

Bilateral migration flow statistics are collected from multiple institutions. The primary source is the *OECD International Migration Database*, which includes data on annual bilateral migration inflows and outflows, distinguished by gender. To enhance our dataset, we complement the OECD statistics with data from the *DEMIG Country-to-Country (C2C) Database* (DEMIG, 2015), which offers more detailed migration flow statistics for the 1990s. Additionally, we include migration flow data from the national statistical offices of Finland,

Portugal, and Sweden for the 1990s, as these statistics are not fully available in either of the databases. It is important to emphasise that all our data cover legal migration. Migration statistics are collected from population registers and residence permit data. Registration criteria for migrants vary considerably across countries and therefore the migration statistics are not perfectly comparable between countries. Additionally, the data do not cover undocumented migrants.

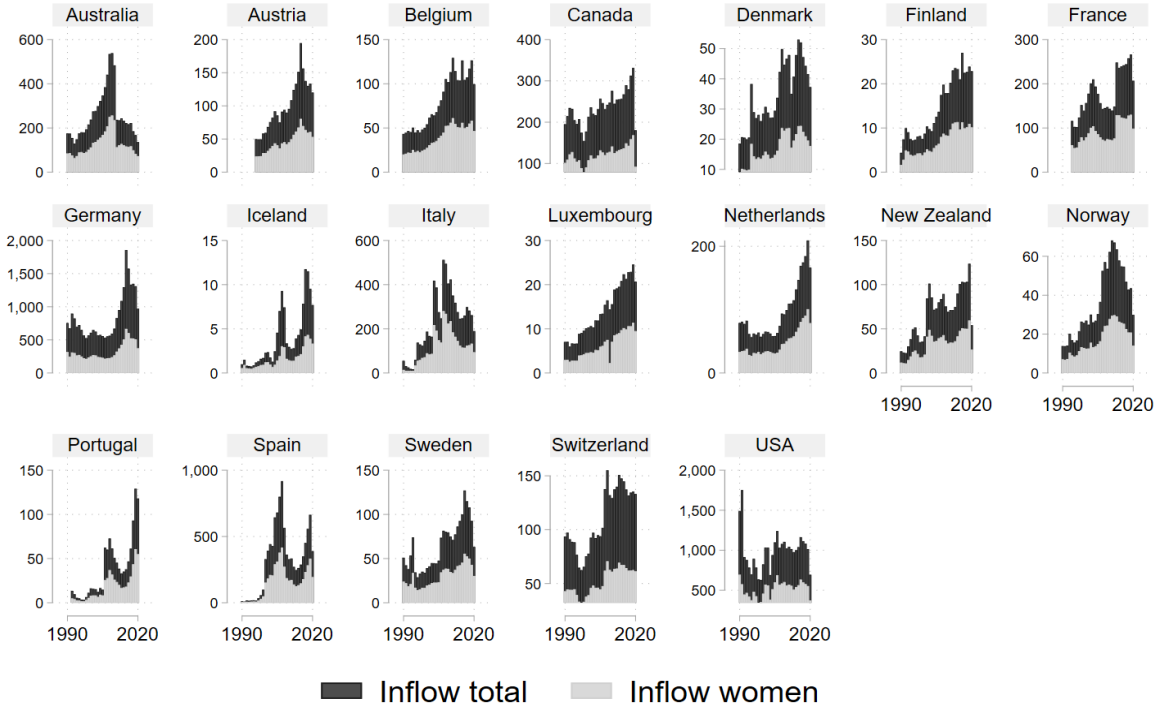
Statistics on bilateral migration stock are sourced from the *United Nations Global Migration Database* (UN, 2020), which provides estimates of the number of international migrants, disaggregated by gender and distinguishing 231 countries of origin. In most cases, migration statistics are obtained from population censuses. These estimates are presented in five-year intervals from 1990 to 2020, with values for intermediate years interpolated.

The final estimation sample comprises migration flow and stock statistics between 19 destination countries and 186 source countries over 31 years.[1] Although the sample is not perfectly balanced due to the unavailability of migration flow data for all years across 19 countries, it includes nearly 90,000 data points. The database includes flows between Western economies (e.g. from Germany to the United States) as well as flows from the Global South (e.g. from Nigeria to the United States). In general, migration returns (outflows) are less well recorded than arrivals (migrant inflows). Moreover, outflow statistics are not available in four countries: Canada, France, Portugal, and the United States. Therefore, the sample on migrant returns is smaller, covering 15 destination countries, and includes nearly 64,000 data points. Migration patterns for inflows, outflows and stock for the period 1990–2020, aggregated by destination countries and detailed by gender, are illustrated in Figures 1–3.[2]

[1] In the final sample, we include migration flows from 186 origin countries. Countries with a population below 10,000 as of 1990, as well as those with a total cumulative inflow of fewer than 1,000 migrants over the entire study period, were excluded.

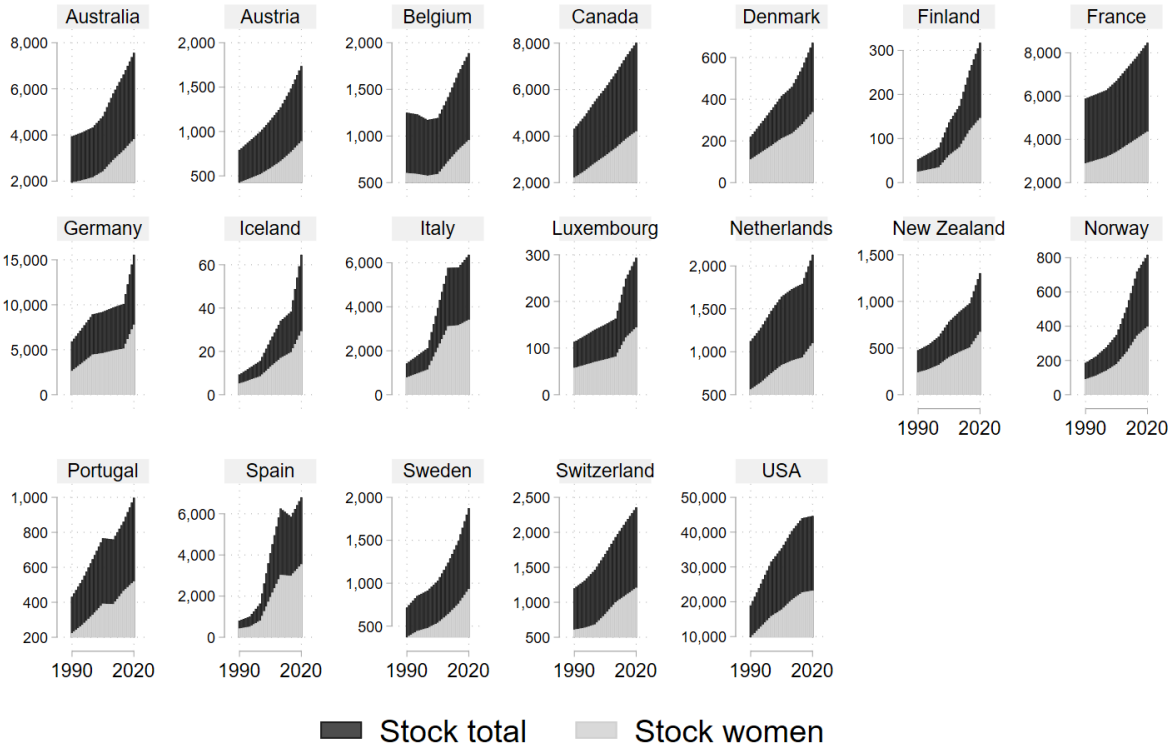
[2] The migration statistics are well defined. The final sample includes a few zero flows: 12.6% for inflows, 4.8% for stock, and 21.2% for outflows.

Figure 1 Sum of migrant inflows (in thousands)



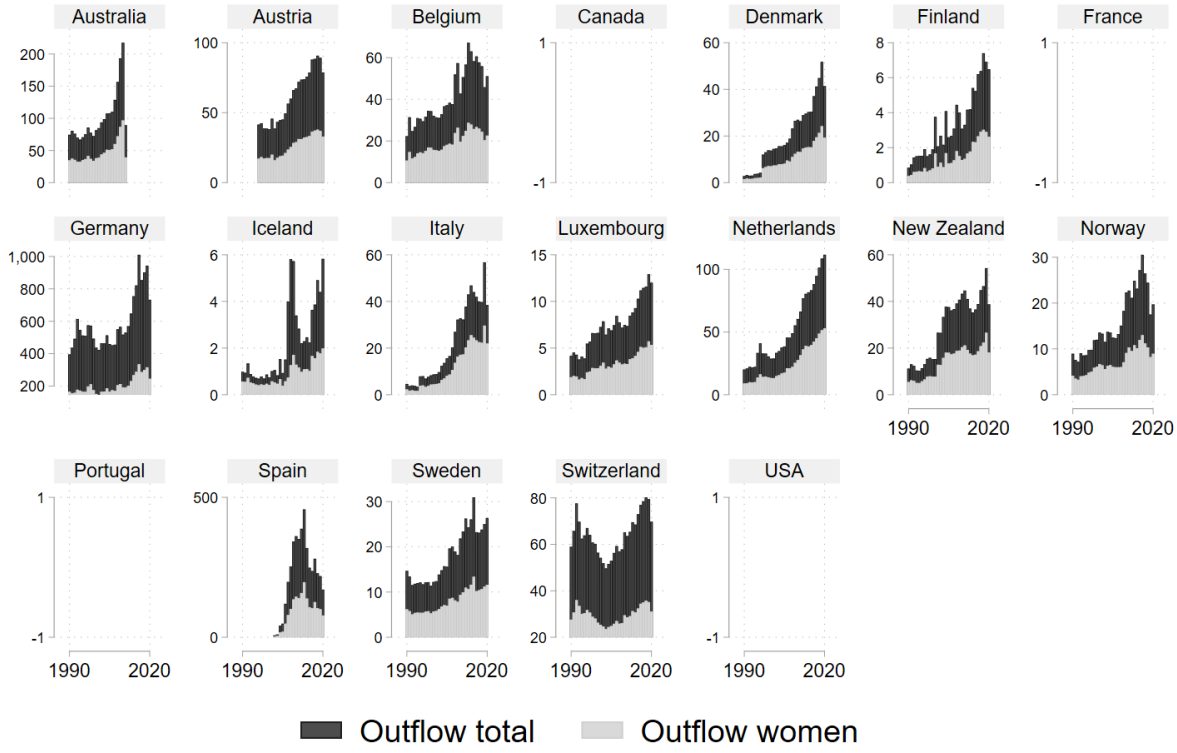
Source: OECD (2024), DEMIG (2015), own elaboration

Figure 2 Sum of migrant stocks (in thousands)



Source: UN (2020)

Figure 3 Sum of migrant outflows (in thousands)

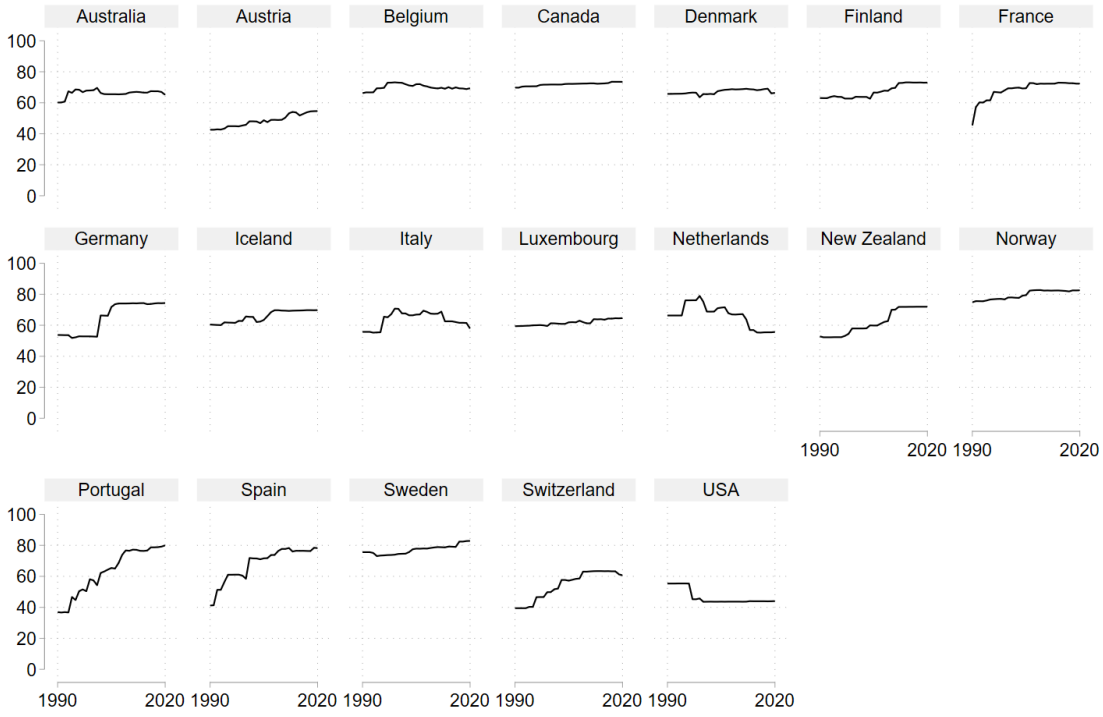


Source: OECD (2024), DEMIG (2015), own elaboration

The measure of welfare inclusiveness towards immigrants

We use the IESPI (*Immigrant Exclusion from Social Programs Index*) dataset, compiled by Koning (2020, 2021, 2024), which measures the level of immigrant inclusion in accessing social programmes. The index is constructed for 22 Western welfare states that are also key immigrant-receiving countries. The IESPI assesses immigrants' social rights using 32 separate indicators, which are aggregated into seven different welfare programmes: contributory pension benefits, tax-paid pensions, public healthcare, contributory unemployment benefits, housing benefits, social assistance, and active labour market policies. Differences in access to social programmes between native-born citizens and immigrants typically depend on the residence status, duration of residence, location of residence (e.g. conditions for exporting benefits), integration success, or the exclusivity of social benefits. The IESPI effectively captures how much more difficult it is for immigrants, compared to native-born citizens, to access social programmes. The data (i.e. legislation effective in the destination country) underlying the coding of the index consider different categories of migrants, but a summary score reflects the overall approach of the country from a legal perspective. It does not reflect other factors that might mediate the access, such as the quality of bureaucracy, administrative discrimination, or the language

Figure 4 Welfare access (IESPI summary score)



Source: Koning (2024)

Note: The score shows the differentiation between immigrants and native-born citizens in granting access to social programmes from 1990 to 2020. The IESPI summary score is calculated as the average of all seven programme categories. Higher scores indicate a more inclusive welfare system for immigrants.

proficiency of migrants, but measures the formal degree of differentiation to social rights of immigrants relative to natives, as defined in effective legislation.

Figure 4 illustrates the differentiation between immigrants and native-born citizens in accessing social programmes from 1990 to 2020. The IESPI summary score is calculated as the average of all seven programme categories. [3] The scale of the original IESPI index is

[3] IESPI components: *Tax paid pension* policy assumes the access to (means-tested or universal) tax-paid pension based on residence and status requirement and conditions of export possibilities. *Contributory pension benefit* describes the status requirement, conditions of export possibilities and minimum contribution period. *Health care availability* is based on status and residence requirement, and other services increasing the accessibility (e.g. translation services, existence of culturally sensitive care providers). *Contributory unemployment benefits* assume status and integration requirements, conditions of export possibilities and minimum contribution period. *Housing benefits* describe integration, residence, and status requirements for rent subsidies, housing allowances, and/or access to social housing. *Social assistance* policy is based on integration, residence, and status requirements for means-tested programmes and any consequences related to welfare uptake.

reversed, meaning that higher scores indicate fewer restrictions on immigrants' access to social programmes, reflecting a more inclusive welfare system.

The measure of welfare generosity

A commonly used indicator of welfare generosity in the literature on welfare magnets is total social expenditure, measured as a percentage of Gross Domestic Product (GDP). For this analysis, we focus on public spending on social programmes, delivered either in cash or in kind. Data for social expenditure across nine social areas (see Table 1) are sourced from the *OECD Social Expenditure Database* (OECD, 2024). We construct two indicators: i) total welfare generosity and ii) welfare generosity split into three welfare components (old-age benefits, health, and other), as outlined in Table 1 and presented in Figure 5. The three welfare components have fairly similar levels of average expenditure, but target different population groups and different labour market risks.

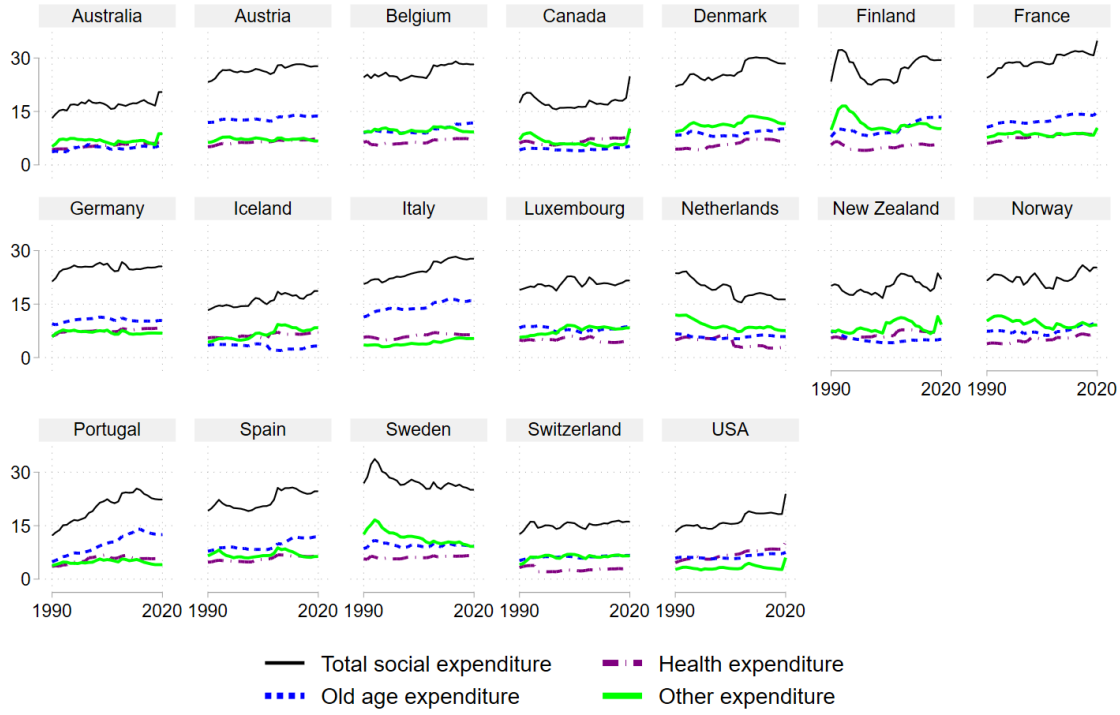
Table 1 Welfare components

OECD defined policy areas	Welfare components	Average expenditure (% GDP)
Total Social Expenditure	Total expenditure	22.1
Old age	Welfare expenditure old-age	7.4
Survivors		1.0
Health	Welfare expenditure health	5.9
Incapacity	Welfare expenditure other	2.7
Family		2.3
Active labour market policies		0.7
Unemployment		1.1
Housing		0.3
Other social policy areas		0.7

Source: OECD (2024), own elaboration

Active labour market policies describe residence and status requirements for active labour market policies, as well as access and availability of language programmes, and employment assistance.

Figure 5 Welfare spending (percentage of Gross Domestic Product)

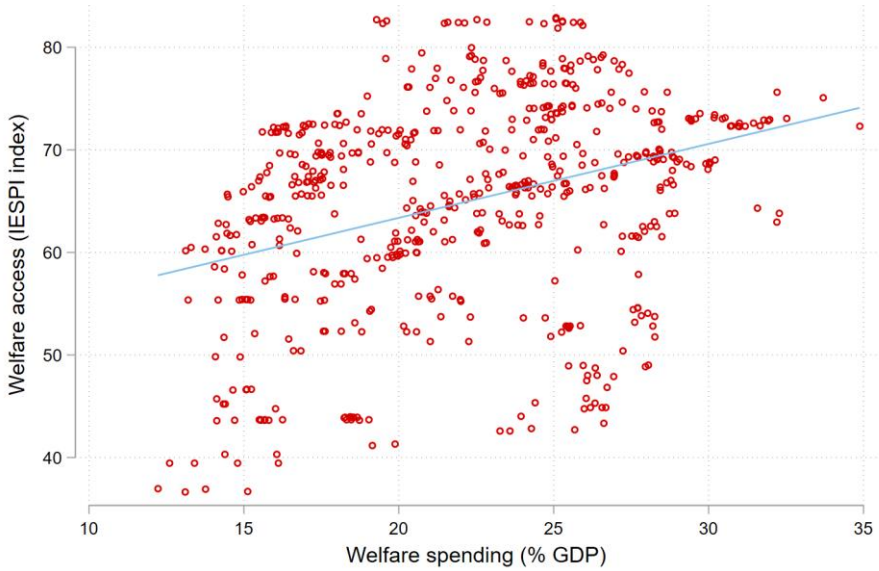


Source: OECD

The relationship between welfare generosity and the inclusiveness of social programmes towards migrants is positive (Figure 6).[4] On average, welfare spending in our set of 19 countries increased from 19.5% to 24.4% of GDP between 1990 and 2020. During the same period, the welfare policy inclusiveness (measured by the IESPI score) rose from 57 to 68. This suggests that countries in our sample have increased welfare spending but have also become more inclusive in their social programmes towards migrants. The key objective of this paper is to explore whether changes in social welfare programmes regarding inclusivity/exclusivity attract higher migration inflows or incentivise outflows.

[4] This relationship is also confirmed by Römer and Bjerre (2022) on a smaller sample of observations in their study regarding the drivers of immigrant exclusion.

Figure 6 Scatter plot of welfare access and welfare spending



Source: Own elaboration

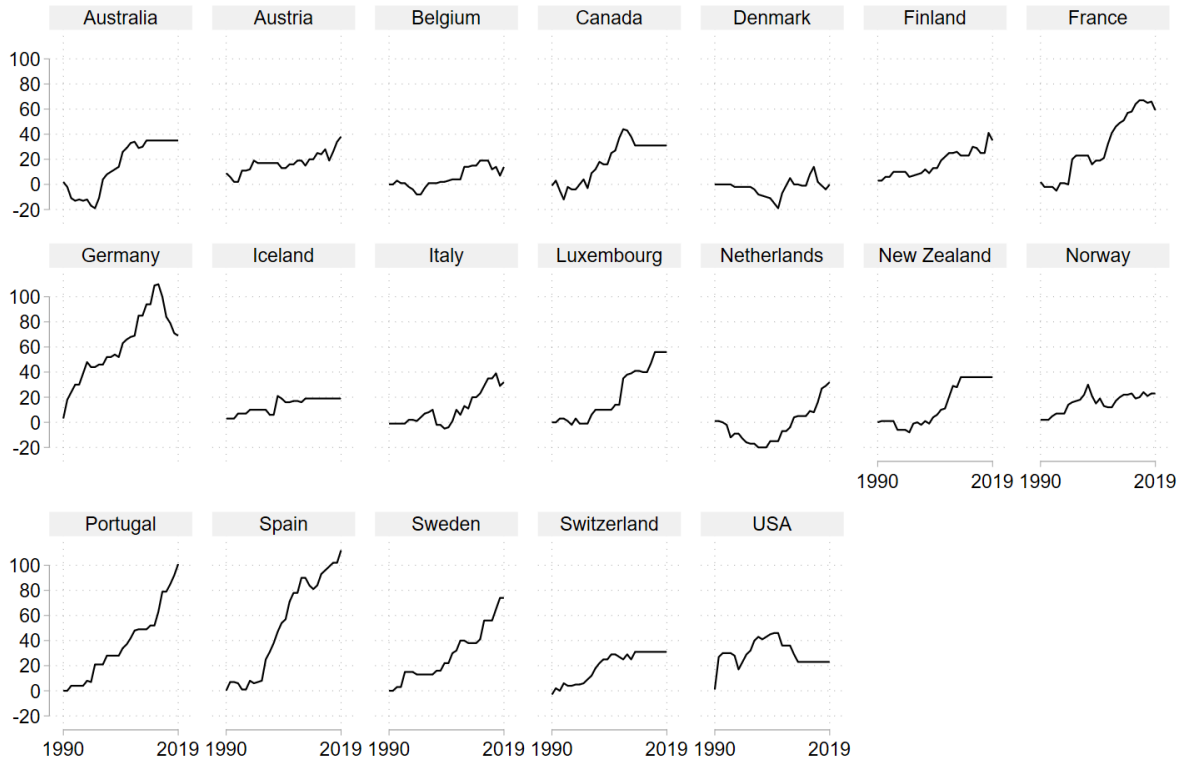
Note: The scatter plot shows each dot as a country-year observation, with a linear fit line indicating the overall trend across the data points.

Immigration admission policy

Governments introduce regulations to control the flow of migrants. In order to measure the changes in immigration policy we rely on the DEMIG POLICY and POLMIG databases (Haas et al. 2014). The DEMIG (2015) migration policy database tracks changes measured from 1945 to 2014. The POLMIG database compiled by Kovacevic and Mara (2021) extends the DEMIG POLICY database to 2019. Importantly, each policy change is assessed as to whether it made the existing policy framework more or less restrictive. The magnitude of policy change is stated in qualitative terms that we use to construct a weighted index of policy change. We assign weights to qualitative assessment of policy change as follows: 1="fine tuning", 2="minor change", 3="Mid-level change", 4="Major change". We combine policy changes (number of changes and the degree of change) to construct the cumulative index of migration policy change. The DEMIG index is set at zero in 1989, and higher (lower) values in subsequent years indicate the measures intending to expand (reduce) the rights of immigrants (see Figure 7). Hence positive values indicate liberalization (reduced restrictiveness), and negative values indicated de-liberalization (increased restrictiveness) in the migration policy. The DEMIG database conceptualizes higher (lower) restrictiveness as reduction (expansion) of rights to immigrants, and not as greater (smaller) selectivity of immigrants (conceptualization used in Helbling et al. (2020), for example). Figure 7 illustrates the level of liberalization of migration polices based on policy changes that deal

with the *legal entry and stay*. Relative to 1989, which is a reference year, all countries have liberalized their migration polices, although the patterns are varied.

Figure 7 Level of liberalisation of migration policies



Source: DEMIG (2015) and Kovacevic and Mara (2021), own elaboration.

Note: Measure is based on policy changes that deal with the *legal entry and stay*. The magnitude of policy change is stated in qualitative terms that we use to construct a weighted index of policy change. We assign weights to qualitative assessment of policy change, as follows: 1="fine tuning", 2="minor change", 3="Mid-level change", 4="Major change". We combine policy changes (number of changes and the degree of change) to construct the cumulative index of migration policy change. The index is set at zero in 1989 and higher (lower) values in subsequent years indicate the measures intending to expand (reduce) the rights of immigrants. Positive values indicate liberalisation (reduced restrictiveness) of the migration policy.

Macroeconomic indicators

Macroeconomic variables such as GDP per capita in PPP international dollars, unemployment rates and population size are sourced from World Bank databank.[5] These are standard variables used in similar models explaining migration flows.

Results of regression analyses

In line with the literature on the determinants of migration (e.g. Mayda, 2010; Gorinas & Pytliková, 2017; Adserà & Pytliková, 2015) we estimate an equation similar to the gravity model:

$$\frac{M_{ijt}}{P_{it}} = \alpha + \beta_1 ln\left(\frac{S_{ijt-1}}{P_{it-1}}\right) + \beta_2 ln(GDP_{jt-1}) + \beta_3 ln(GDP_{it-1}) + \beta_4 \mathrm{U}_{jt-1} + \beta_5 \mathrm{U}_{it-1} + \beta_6 ln(\frac{P_{jt-1}}{P_{it-1}}) + \beta_7 Policy_{it-1} + \theta_{ij} + \tau_t + \varepsilon_{ijt} \quad (1)$$

The dependent variable in our analysis is defined as the gross flow of migrants from the origin country *j* to the destination country *i*, divided by the population of the origin country in a given year.[6] We control for existing migration networks by including the total foreign population from the origin country residing in the destination country divided by the population of the origin country in a given year. The ethnic network facilitates the integration in the destination and thus effectively lowers migration costs (Pedersen et al., 2008). Our econometric model assumes that rates of migration to a destination are influenced by differences in wages, employment rates between origin and destination countries, and the costs of migration. Economic differences between the country of origin and destination are proxied by GDP per capita and their unemployment rates U_{it} and U_{jt}, respectively. The relative population sizes of the receiving and sending countries $\frac{P_{jt}}{P_{it}}$ account for demographic developments. To test our hypothesis, we add two key variables of interest: welfare access and welfare spending. Additionally, to control for country unobserved characteristics, we include country-pair fixed effects θ and add year dummies τ to account for period-specific changes.[7] In light of this, estimates should be interpreted as within origin-destination country estimates.

To account for what information was available to the potential migrant at the time when the decision whether to move or not was made, the explanatory variables are lagged by one year. More importantly, there might be a problem of reverse causality if migration flows

[5] Data from World Bank database accessed in November 2024: GDP per capita, PPP (constant 2021 international $) (table NY.GDP.PCAP.PP.KD), total unemployment rate (% of total labour force) (table SL.UEM.TOTL.NE.ZS) and total population (table SP.POP.TOTL).

[6] Note that authors in migration studies construct the dependent variable differently, which may affect the results. We follow Mayda (2010) and Adserà and Pytliková (2015) for the model specification.

[7] We have checked that our conclusions remain valid when the less restrictive specification of the model is estimated, including year, origin and destination country fixed effects.

impact both earnings and employment. Lagging the economic explanatory variables and treating them as predetermined is one way to reduce the risks of reverse causality in the model. Importantly, there might be reverse causality issues in the case of policy variables such that migration liberalisation and welfare changes may be influenced by migration. Therefore, we lag those policy variables as well.

Migration inflows globally

Migration statistics are distinguished by gender, and so we estimate the model using total migration flow and then separately for flows of women and men. The estimated coefficients follow the expected patterns (Table 2). In line with existing research, we confirm that economic factors in origin and destination countries, migration networks, as well as migration policies, matter in explaining migration inflows. Migration is a costly and risky endeavour that can be facilitated by the existing migrant networks (Beine et al., 2009). We confirm that the migration flows into countries with larger stocks of migrants from the same origin are indeed greater. Conversely, the improvement of the economic situation in the origin country reduces the motivation for migration. The research on international migration has found a negative impact of income at origin on migration flows (Pedersen et al., 2008; Guzi & Mikula, 2022), which is also confirmed in our analysis. According to the estimate in Table 2, Column 1, a 10% increase in the level of per worker GDP in the origin country reduces the migration by 5 emigrants per 1,000,000 individuals of the origin country's population (significant at the 10% level). Simply, a 10% increase in the origin country's per worker GDP implies a 3.5% reduction in the migration rate (as the mean of the dependent variable is 14 migrants per 100,000 individuals). Similarly, favourable labour market conditions (e.g. lower unemployment) in the destination countries attract more migrants. The liberalisation of migration policy in destination countries leads to higher migration flows (Mayda, 2010; Ortega & Peri, 2013).

One key result is that the welfare access variable is positive and highly significant. On average, an increase of the IESPI index by one standard deviation (value of 10) is associated with an increase in migration by 5.6 migrants per 100,000 individuals. The magnitude of the effect on welfare access is higher for male migrants than for female migrants. Additionally, overall welfare spending is found to be negatively related to migration flows but significant only to male migrants. This finding suggests that increasing welfare spending deters some male migrants but is not relevant to female migrants. This might cast some light on the mixed results of studies that investigate welfare generosity, as our finding indicates that inclusiveness and generosity—whilst correlated—have different effects. Omitting one of these indicators in the analysis therefore risks misspecification of the model.

Estimates based on disaggregated components of welfare spending reveal more nuanced findings. When examining the components of social expenditure, it is increasing spending on other social benefits (incapacity, family, and unemployment benefits are the largest components) which particularly attracts migrants the most. Conversely, increasing expenditure on old-age pensions from public sources has no relation to female migrants

but it does reduce male migration. The increasing spending on health care is associated with reduced migration flows of both genders. This pattern may be linked to population ageing, which places pressure on public finances and leads to higher taxes, potentially deterring migration.

Table 2 Predication of migration inflows

	Inflow total	Inflow females	Inflow males	Inflow total	Inflow females	Inflow males
	(1)	(2)	(3)	(4)	(5)	(6)
Migration stock total	8.66***			9.22***		
	7.46			7.83		
Migration stock female		5.36***			5.61***	
		7.83			8.08	
Migration stock male			5.22***			5.54***
			7.46			7.84
Population ratio	3.03	-0.13	2.26	1.1	-0.85	1.12
	0.88	-0.09	1.11	0.35	-0.65	0.61
Origin GDP	-4.89*	-2.42*	-2.54*	-4.71	-2.35	-2.42*
	-1.69	-1.65	-1.74	-1.63	-1.61	-1.66
Destination GDP	6.21	3.71	5.1	6.57	4.83	5.06
	0.81	0.96	1.24	0.79	1.17	1.12
Origin unemployment	0.01	0.01	0.01	0.01	0.01	0.01
	0.08	0.18	0.11	0.07	0.18	0.11
Destination unemployment	-1.23***	-0.50***	-0.70***	-1.42***	-0.59***	-0.81***
	-4.92	-4.68	-4.8	-5.65	-5.41	-5.55
Liberalisation of migration policy	0.09***	0.05***	0.04***	0.09***	0.04***	0.04***
	3.74	3.55	3.4	3.41	3.15	3.06
Welfare access	0.56***	0.24***	0.33***	0.62***	0.26***	0.37***
	5.36	5.14	5.47	5.45	5.28	5.52
Welfare expenditure	-0.31	-0.04	-0.28**			
	-1.25	-0.33	-2.1			
Welfare expenditure old-age				-1.48**	-0.4	-1.01**
				-2.23	-1.43	-2.56
Welfare expenditure health				-2.17***	-0.95***	-1.34***
				-3.79	-3.25	-4.64
Welfare expenditure other				1.41***	0.70***	0.74***
				4.97	5.05	4.98
Constant	-92.16	-34.04	-75.72	-71.85	-37.18	-60.66
	-1.08	-0.83	-1.59	-0.88	-0.92	-1.35
Country pair FE	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
N	87161	87161	87161	87161	87161	87161

r2	0.72	0.74	0.69	0.72	0.74	0.69

Source: Own elaboration

Note: OLS estimation of migration flows from 186 origin and 19 destination countries, 1990–2020. Total social expenditure (SOCX) is split into welfare components, as outlined in Table 1. Country-pair fixed (3,144 categories) and year dummies (30 categories) are included. All explanatory variables are lagged by one year. t statistics in parentheses, *p<0.1; **p<0.05; ***p<0.01.

Inflows from African countries

Next, we test whether migration flows from African countries are more sensitive to welfare system characteristics. To do so, we limit the sample to bilateral migration flows originating from African countries.[8] The estimated coefficients in Table 3 confirm the large effect of migrant stock, which is consistent with the interpretation that migrant networks matter. Macroeconomic variables (GDP and unemployment) are insignificant, whilst the liberalisation of migration policy is found to increase migration. The estimates on welfare variables are different in comparison to Table 2. Relative to other migrants, African migrants are more attracted to countries with higher total social expenditure, whilst welfare access is insignificant. The positive effects of welfare spending are mainly driven by the increasing expenditure on other social benefits (including social assistance, active labour market policies, family benefits, housing, etc.). The magnitude of the effect on total welfare spending is larger for African female migrants than for African male migrants, but this is reversed for disaggregated welfare components where the effect is stronger for male than for female migrants. We conclude that, compared to other migrants, flows from African countries are more sensitive to the level of welfare spending than to the inclusivity of the welfare system. These results point to different mechanisms forming migration decisions for African migrants.

Whilst this finding deserves thorough further investigation, we believe it could be attributed to several factors. Although our whole sample also covers bilateral migration within the EU, where access to welfare is liberalised for intra-EU migrants and information is relatively available, African migrants have restricted access to labour markets in countries covered in the analysis. This is also reflected in different migration routes, with a significant share of African migrants coming through refugee and family migration streams, which might be less driven by considerations of welfare access. The migrants from African countries may care less about access to welfare programmes, since the welfare systems in their countries are less developed. Finally, knowledge and information on welfare state structures and changes in benefit access might be less likely to reach African migrants.

[8] Alternatively, we interact welfare variables with a dummy variable which equals one for bilateral migration flows originating from African countries. We checked that this method yields very similar results.

Table 3 Predication of migration inflows from African countries

	Inflow total	Inflow females	Inflow males	Inflow total	Inflow females	Inflow males
	(1)	(2)	(3)	(4)	(5)	(6)
Migration stock total	4.55**			4.52**		
	2.26			2.12		
Migration stock female		2.30**			2.24*	
		2.06			1.91	
Migration stock male			3.74**			3.87**
			2.55			2.54
Population ratio	1.75	0.9	0.33	2.71	1.78	0.37
	0.45	0.48	0.15	0.59	0.81	0.14
Origin GDP	1.87	1.15	0.89	1.86	1.14	0.91
	0.56	0.62	0.58	0.56	0.62	0.6
Destination GDP	4.79	4.89	0.8	9.06	7.32	3.16
	0.54	1.07	0.16	0.82	1.26	0.54
Origin unemployment	0.01	0.01	0	0.01	0.01	0
	0.1	0.17	-0.05	0.11	0.2	-0.07
Destination unemployment	-0.25	-0.02	-0.21	-0.3	-0.03	-0.25*
	-1.09	-0.19	-1.6	-1.35	-0.3	-1.95
Liberalisation of migration policy	0.08***	0.04**	0.04***	0.07**	0.03**	0.04**
	2.71	2.29	2.82	2.53	2.06	2.56
Welfare access	0.1	0.05	0.05	0.09	0.04	0.05
	0.92	0.99	1.01	0.92	0.85	1.17
Welfare expenditure total	0.65***	0.37***	0.27**			
	2.69	2.79	2.42			
Welfare expenditure old-age				1.35	0.89*	0.48
				1.51	1.88	1.13
Welfare expenditure health				0.15	0.23	-0.19
				0.47	1.43	-1.07
Welfare expenditure other				0.62***	0.20*	0.45***
				2.98	1.96	3.76
Constant	-113.23	-87.14	-32.19	-172.52	-124.94	-59.12
	-0.93	-1.44	-0.44	-1.06	-1.51	-0.66
Country pair FE	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
N	23323	23323	23323	23323	23323	23323
r2	0.73	0.73	0.7	0.73	0.73	0.7

Source: Own elaboration

Note: The sample is limited to bilateral migration flows originating from African countries. Country-pair fixed (844 categories) and year dummies (30 categories) are included. All explanatory variables are lagged by one year. t statistics in parentheses, *p<0.1; **p<0.05; ***p<0.01.

Migration outflows: globally and to African countries

We proceed by estimating the determinants of migration outflows (or return flows) between 15 wealthy destination countries and 186 origin countries (i.e. the direction of migration is now from a destination to an origin country). Return migration and its determinants constitute a less studied topic in the literature, and this is particularly the case with respect to the role of welfare state generosity and access. We assume that migrant outflows data include migrants returning from their current destination country to their country of origin. The same model specification as that employed for estimation of migrant inflows (Equation 1) is used, but the dependent variable is now defined as the number of outgoing migrants relative to the population of the origin country. All other variables are defined as before. The results are presented in Table 4 (all migrant outflows) and Table 5 (migrant outflows to African countries) and—as for the two models of migrant inflows—point to specificities of returns to African countries (Table 5).

In both models, migrant stock is a significant factor. The return migration is larger when there are more migrants in the country. The influence of macroeconomic variables aligns with expectations: less favourable labour market conditions in the origin reduce return migration when returns globally are considered (Table 4). Contrary to expectations, higher unemployment at destination (country of stay) slightly reduces returns.

In general, returns to African countries are less sensitive to macro-economic variables. One exception is that return migration (particularly to African countries) is positively influenced by GDP levels in the current destinations. Notably, African migrants move back home more during periods when the economy is growing. This might signal that migrants return after having accumulated resources facilitated by economic growth in the destination country. The GDP levels in the origin countries are found insignificant in both specifications. In line with arguments in past research, liberalisation of migration policy increases outflows and circularity, but this is not the case for returns to African countries. One interpretation is that flows between African countries and wealthy Western economies have been, and remain, strictly regulated, whilst policies between other groups of countries (e.g. towards the former Eastern bloc) have been, in the studied period, significantly liberalised, resulting in increased mobility within Europe (Razin & Wahba, 2015).

Results pertaining to welfare generosity and returns are particularly notable. Total welfare spending increases return migration, and this seems to be driven particularly through higher spending on health and other social benefits. Importantly, this means that the increasing welfare spending is not encouraging migrants to stay indefinitely or preventing migrants from returning home. One exception is that greater public spending on old-age pensions decreases return migration. Higher returns to Africa specifically—counterintuitively to the welfare magnet argument—are linked to growing rather than retrenched welfare states. Spending on old-age pensions plays no role in the dynamics, but more outflows are associated with higher spending on health and other social benefits. This

would imply that more generous welfare states empower migrants to be more mobile, rather than locking them in (cf. Ortensi & Barbiano di Belgiojoso, 2022).

The role of welfare access is more nuanced for the migration outflows. Access to welfare programmes does not significantly impact return migration, with one exception: better welfare inclusivity reduces return migration amongst African women. This confirms our expectation that women might be more attached to welfare rights due to higher vulnerabilities they face. The aforementioned seems to hold specifically for African migrant women, who enter Europe often via the family reunification route or as asylum seekers; this, in many countries, implies difficulties when it comes to accessing the labour market and subsequently possible higher reliance on welfare.

Table 4 Predication of migration outflows

	Outflow total	Outflow females	Outflow males	Outflow total	Outflow females	Outflow males
	(1)	(2)	(3)	(4)	(5)	(6)
Migration stock total	4.12***			4.28***		
	5.81			5.85		
Migration stock female		2.32***			2.36***	
		5.89			5.9	
Migration stock male			3.10***			3.20***
			6.01			6
Population ratio	6.24***	1.66**	3.86***	5.40***	1.40*	3.29***
	2.92	2.13	2.87	2.79	1.94	2.72
Origin GDP	-0.55	-0.47	-0.09	-0.51	-0.46	-0.06
	-0.45	-0.76	-0.14	-0.42	-0.75	-0.09
Destination GDP	8.12*	3.57	6.55***	0.33	1.04	1.51
	1.82	1.6	2.81	0.07	0.5	0.61
Origin unemployment	-0.16**	-0.08*	-0.08*	-0.16**	-0.08*	-0.08*
	-1.97	-1.93	-1.83	-1.96	-1.93	-1.82
Destination unemployment	-0.33*	-0.07	-0.23*	-0.35*	-0.08	-0.26*
	-1.7	-0.99	-1.92	-1.69	-1	-1.95
Liberalisation of migration policy	0.07***	0.03***	0.04***	0.08***	0.03***	0.05***
	2.96	2.75	2.87	3.09	2.9	2.98
Welfare access	0.06	0	0.06	0.02	-0.01	0.03
	0.61	0.06	1.06	0.2	-0.24	0.63
Welfare expenditure	0.08	0.07	0.01			
	0.54	1.04	0.12			
Welfare expenditure old-age				-1.13***	-0.32**	-0.79***
				-2.84	-2.23	-3.06
Welfare expenditure health				0.71**	0.28**	0.38**
				2.37	1.98	2.35
Welfare expenditure other				0.26**	0.12**	0.17**
				2.2	2.21	2.54
Constant	-164.45***	-57.35***	-121.33***	-61.96*	-24.3	-54.60***
	-4.29	-3.44	-5.11	-1.93	-1.64	-2.97
Country pair FE	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
N	62863	62863	62863	62863	62863	62863
r2	0.69	0.66	0.71	0.69	0.66	0.71

Source: Own elaboration

Table 5 Predication of migration outflows to African countries

	Outflow total	Outflow females	Outflow males	Outflow total	Outflow females	Outflow males
	(1)	(2)	(3)	(4)	(5)	(6)
Migration stock total	1.21**			1.21**		
	2.51			2.38		
Migration stock female		0.16			0.12	
		1.26			0.96	
Migration stock male			1.44***			1.45***
			2.92			2.84
Population ratio	2.81*	0.86**	1.85	2.73*	0.91**	1.73
	1.91	2.11	1.58	1.78	2.17	1.41
Origin GDP	-0.35	-0.04	-0.29	-0.35	-0.04	-0.29
	-0.83	-0.39	-0.82	-0.84	-0.43	-0.82
Destination GDP	4.37***	0.74***	4.09***	3.09***	0.47*	3.12***
	3.65	2.6	3.58	2.86	1.86	3.03
Origin unemployment	0.01	0.01	0.01	0.01	0.01	0.01
	0.71	1.2	0.44	0.72	1.23	0.45
Destination unemployment	0.05	0.01	0.05	0.05	0.02	0.04
	0.87	0.58	1.04	0.84	1.01	0.85
Liberalisation of migration policy	0	0	0	0	0	0
	0.31	1.36	-0.04	0.44	1.53	0.07
Welfare access	-0.03	-0.01**	-0.01	-0.03*	-0.01**	-0.02
	-1.29	-2.17	-0.72	-1.7	-2.47	-1.07
Welfare expenditure total	0.12***	0.04***	0.07**			
	2.94	4.08	2.11			
Welfare expenditure old-age				-0.05	0.03**	-0.09
				-0.53	2.2	-0.9
Welfare expenditure health				0.27***	0.10***	0.15**
				2.84	3.43	2.17
Welfare expenditure other				0.10***	0	0.09***
				2.6	0.12	2.83
Constant	-79.81***	-17.94***	-66.21***	-63.71***	-15.37***	-53.24**
	-3.37	-2.92	-3.38	-2.59	-2.67	-2.58
Country pair FE	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
N	16848	16848	16848	16848	16848	16848
r2	0.62	0.6	0.6	0.62	0.6	0.6

Source: Own elaboration

Conclusion

Our analysis uncovers a complex relationship between welfare access, welfare generosity, and migration flows, highlighting the need for further research. We use the sample of bilateral migration flows to 19 wealthy countries and migration outflows from 15 of those 19 countries between 1990 and 2020. Consistent with existing literature, we confirm that migrants tend to favour destination countries offering better employment opportunities and that migrant networks and liberalisation of migrant admission policies facilitate migrant inflows as well as outflows.

We proposed theoretical arguments suggesting that research studying the welfare–migration nexus needs to consider not only welfare generosity but also welfare access. Migrants face various difficulties in accessing welfare, and countries covered in our analysis adopt, over time, policies that are more or less inclusive in terms of immigrants' welfare access relative to natives. Indeed, our analysis confirms that welfare access independently shapes migration patterns and is a factor shaping migrant decisions, controlling for welfare generosity and other main migration determinants. Our approach also demonstrates usefulness of studying welfare generosity at a more granular level. Whilst the findings show that the overall social expenditure is not associated with higher migrant inflows (that would confirm the welfare magnet hypothesis), results are more informative when three welfare components are considered. When looking at the sensitivity of migration flows to specific components of welfare spending, we find that migrants are more attracted to countries that allocate greater resources to other social benefits, such as support for individuals facing illness, disability, or low income. Contrastingly, increased spending on pensions and healthcare—the largest components of welfare budgets in Western societies—appears to reduce migration inflows. A plausible explanation is that more welfare-generous countries often have higher taxes, which may deter some migrants. When analysing migration by gender, we observe little variation in male and female responses to changes in welfare access and welfare generosity.

The novelty of our research lies in emphasising the importance of access to social programmes in shaping migration flows. We find that, even when controlling for welfare generosity and other migration determinants, access to social welfare increases migration inflows, whilst it does not discourage return migration. Moreover, there is no major difference in the role of welfare access for male and female migrants when migrant inflows globally are considered. To further explore these dynamics, we examined the sensitivity of migration flows from African countries to welfare system characteristics. Unlike other migrant groups, African migrants are more attracted to countries with increased overall welfare spending, whilst access to social programmes is unrelated to migration inflows from African countries. We attribute this result to the fact that African migration to wealthy Western economies via legal labour migration is constrained, with a significant share of African migrants coming through refugee and family migration streams, which might be less driven by considerations of welfare access. Additionally, knowledge regarding welfare state structures and changes in benefit access might be less likely to reach African migrants. This finding underscores the nuanced relationship between migration flows and welfare

characteristics, emphasising the importance of considering the diverse origins and motivations of migrant groups.

Return migration and its connection to welfare characteristics constitute an underexplored topic in the literature. A key finding from our analysis is that higher welfare spending and improved access to welfare programmes do not generally prevent return migration. However, an exception is observed in the case of women returning to African countries: better access to welfare programmes reduces their outflows. Overall, return migration to Africa is associated with more rather than less generous welfare states, which implies that welfare states empower migrants to be more mobile, rather than locking them in. We also find that returns to African countries are induced at times of economic growth.

This study faces several limitations, which we list below, including partial remedies we have adopted to deal with respective weaknesses. First, the present analysis is constrained by data availability: 19 destination countries are considered for inflows and 15 countries for outflows. At the same time, due to the panel design of the dataset, we were able to collect a considerable number of observations, with only a relatively small number of missing data. To the best of our knowledge, this exceeds most databases used in similar studies. Second, the focus of the paper is on legal migration, whilst the dynamics of irregular migration flows are beyond the scope of this study. Third, despite using the best available data, definitions of international migrants are not consistent across countries, which may introduce discrepancies. By using a fairly restrictive method which includes country fixed effects, we hope that these country specific features are corrected for with
the statistical technique. Fourth, past works regarding welfare magnet hypotheses have often been calibrated to migrants with different skill levels (Borjas, 1999; Razin & Wahba, 2015). In addition to previous empirical demonstrations, there are theoretical reasons to expect that individual differences in skills are a major differentiating factor of welfare needs. Unfortunately, our data did not allow us to make this distinction. Conversely, our analysis considers the role of gender, which has not been studied in previous similar works, and so ads a novel dimension to research on the welfare–migration nexus that can be further explored. Fifth, we estimate the model using bilateral panel data, which enables the inclusion of a rich set of country-pair fixed effects to control for origin-specific variables that are difficult to measure. Additionally, we relate migration flows to lagged values of explanatory variables to mitigate the risk of reverse causality. However, our results may still suffer from endogeneity, which could confound the relationship between migration and welfare characteristics.
Future research should focus more on how welfare characteristics influence migration decisions across different regions and types of social programmes. Nonetheless, it is essential to remember that, whilst welfare characteristics play a role, migration flows are driven by numerous factors, with income inequalities, favourable economic conditions, migrant networks and migration policies significantly influencing migration decisions (de Haas et al., 2019; Nishimura & Czaika, 2023). Importantly, our findings support earlier works showing that decision-making with respect to return migration is not a mirror image of immigration. This is also the case with respect to the role of welfare generosity and welfare access in shaping migrant decisions along migration trajectories.

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Appendix

Table A1 Summary statistics

	Mean	SD	Min	Max
Inflow of migrants per 100,000 population	13.8	74.8	0.0	3344.2
Inflow of male migrants per 100,000 population	7.0	38.9	0.0	1776.2
Inflow of female migrants per 100,000 population	6.8	37.0	0.0	1567.9
Outflow of migrants per 100,000 population	5.3	35.3	0.0	2570.4
Outflow of male migrants per 100,000 population	3.1	21.2	0.0	1287.3
Outflow of female migrants per 100,000 population	2.2	14.7	0.0	1283.1
Stock of migrants per 100,000 population	2.8	2.2	0.0	11.0
Stock of male migrants per 100,000 population	2.3	2.0	0.0	10.1
Stock of female migrants per 100,000 population	2.3	2.1	0.0	10.4
Origin GDP per Capita PPP	9.3	1.2	6.2	12.1
Destination GDP per Capita PPP	10.9	0.3	10.2	11.9
Unemployment in origin country	8.1	6.2	0.0	38.8
Unemployment in destination country	7.1	3.7	1.5	26.1
Liberalisation of migration policy	22.2	24.3	-20.0	112.0
Welfare access (IESPI score)	65.6	10.0	36.7	82.9
Welfare expenditure	22.2	5.0	12.6	34.9
Welfare expenditure old-age	8.4	3.3	2.0	16.4
Welfare expenditure health	5.8	1.4	2.1	10.4
Welfare expenditure other	7.9	2.7	2.6	16.6

Source: Own elaboration