

Welfare Migration

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Abstract

The *welfare magnet hypothesis*, also referred to as *welfare shopping* or *welfare tourism*, that migrants make location choices based on the provision of welfare benefits in alternative destinations, has resonated in the academic as well as public discourse on migration. This chapter summarizes theoretical models behind the welfare magnet hypothesis and reviews the empirical evidence on welfare-induced migration. The literature is inconclusive on the matter. Whereas there are theoretical arguments why welfare might matter for migration flows and several studies find a small positive association between welfare and migration, other studies find no such effects. In particular, some studies show that controlling for the endogeneity of welfare in the welfare-migration nexus reduces or eliminates the effect of welfare generosity on immigration. On the other hand, recent quasi-experimental studies demonstrate some effects of welfare on the location choices of asylees and refugees. Exploring a unique European dataset, this chapter contributes to this literature by providing some evidence that better accessibility of social assistance for immigrants is associated with larger immigrant inflows. Overall, the consensus in the literature is that the effects of welfare on migration are relatively small compared to other drivers of migration. The chapter concludes with highlighting the broader implications of the welfare magnet hypothesis and provides guidance for future research about it.

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Introduction

The notion that an expected economic gain may incentivize migrants to choose places with better economic prospects dates back to some of the oldest texts humankind has produced (e.g., Hamon and Strine 2017). Since Sjaastad's (1962) ground-breaking contribution, the decision to migrate has been modelled by economists as a choice between countries providing better or worse economic opportunities. In a generalized setting, Bertoli and Fernandez-Huertas Moraga (2013) study the choice among a range of alternative locations. Concerned about their expected incomes in receiving countries, migrants may have an economic rationale to factor in the generosity of the welfare system in the receiving country in their migration decisions.

The question of whether locations with more generous welfare attract immigration was first empirically studied by Borjas (1999), who coined the term *welfare magnet* for the hypothesis that migrants make location choices based on the provision of welfare benefits in alternative destinations. He found that the location choices of immigrants in the US were affected by the dispersion in the generosity of welfare benefits across US states. De Giorgi and Pellizzari (2009) find a similar effect in Europe, albeit their estimates indicate that the effect is relatively small. Exploring the variation of welfare generosity across European Union (EU) member states and accounting for the potential endogeneity of welfare spending, Giuliatti et al. (2013) cast doubt on the welfare magnet hypothesis that welfare generosity attracts immigrants.

From a different perspective, the welfare provision of sending countries may also affect migration flows. Whereas most European countries experienced booming emigration in the 1890s and 1900s, Bismarck's Germany, having introduced the first social security program in the 1880s, had one of the lowest emigration rates and the most rapid fall in migration during that period. Khoudour-Casteras (2008) shows that the introduction of social benefits (providing insurance against sickness, work accidents, old age, and disability) effectively reduced emigration from Germany before World War I. Kureková (2013) finds that more generous welfare systems in the sending countries in Central and Eastern Europe reduced east-west migration after the EU's eastern enlargement.

The *welfare magnet* hypothesis, also referred to as *welfare shopping* or *welfare tourism*, has resonated in the public discourse on migration, especially following large migration-related events, such as the EU's eastern enlargements in the 2000s or the European migration crisis in the mid-2010s. Following the EU's eastern enlargements, significant east-west migration flows ensued and several countries have restricted access to social protection to prevent the perceived threat of intra-EU "welfare tourism" (Kahanec and Zimmermann, 2010; Kahanec and Pytliková, 2017; Black et al., 2010). The economic and financial crisis of the late 2000's spurred welfare state reforms in the name of austerity, reducing welfare benefits and increasing their conditionality and sanctions. In the public discourse, migrants have often been depicted as a

burden on the welfare system. In Belgium, migrants had to prove their deservingness to authorities to keep their residency and social protection rights (Lafleur and Mescoli 2018), while migrants judged to be taking advantage of welfare systems were expelled from France (Parker and López Catalán 2014). The Brexit referendum resulting in the UK's secession from the EU is another example of how immigration has been problematized and politicized in the public discourse, driven by – and itself driving – a negative public stance towards their rights as EU citizens.

The literature, however, recognizes that migrants constitute a mobile stratum of labor, and labor mobility contributes to allocative efficiency across and within countries (e.g., Kahanec and Zimmermann 2016). Migrants tend to move from locations where their skills are less productive to locations where they are more productive, generating economic gains (Dustmann and Preston 2019; Guzi and Kahanec 2015). The higher mobility of migrant workers proved beneficial in lowering overall unemployment in the EU during the economic and financial crisis of 2008 (Jauer et al. 2019; Arpaia et al. 2016; Kahanec and Guzi 2017). Migrants enter occupations, industries, and areas with labor shortages and growing wage premia (Amuedo-Dorantes and De la Rica 2010; Røed and Schøne 2012; Guzi et al. 2018) and enter countries with stronger economies and labor markets (Kahanec et al. 2016; Guzi and Mikula 2021). Labor mobility contributes to economic efficiency and plays an important role in reducing economic inequalities within and between countries (Kahanec and Zimmermann 2014; Guzi et al. 2021). Liebig and Mo (2013) and Dustmann and Frattini (2014) argue that immigrants in OECD members contribute to the economic growth and public budgets of the receiving countries.

The focus of this chapter is on whether the welfare state affects migration decisions by acting as a pull-factor of immigration and how welfare generosity influences the scale and composition of migration. The remainder of the chapter is organized as follows. Section 2 summarizes theoretical models behind the welfare magnet hypothesis. Section 3 presents some stylized facts before reviewing empirical evidence on welfare-induced migration in the literature. Section 4 provides some evidence that accessibility of social assistance for immigrants correlates with immigrant inflows. The chapter concludes in section 5 by presenting broader implications of welfare magnet hypothesis and providing guidance for future research.

2. Theoretical underpinnings of the welfare-migration nexus

The neoclassical theory of migration

The basic model of the neoclassical theory postulates that migration is caused by differences in income levels between countries and labor markets (Sjaastad 1962). According to that model, individuals choose to relocate to maximize their net economic return on human capital. In

particular, potential migrants evaluate and compare their expected income and other benefits at alternative destinations and deduct pecuniary and nonpecuniary costs of relocation, including the costs of moving, learning a new language and culture, and losing old social ties. Rational migrants choose to move to the destination with the highest expected income if the net benefits of doing so exceed those obtained from even the best of alternative moves or staying at the original location. This way, increased labor migration can help to equalize wage levels across regions and countries (Harris and Todaro 1970). Income in destinations depends on labor income (determined by the value of human capital) and non-labor income (includes transfers from government). Thus, both the earnings opportunities and welfare generosity affect the probability of migration. Individuals more prone to receive welfare are likely to place more weight on the welfare generosity of a location when considering migration. The underlying assumption is that migrants are knowledgeable about income levels and welfare programs in alternative destinations at the time of making their migration decisions.

The Roy-Borjas model

The Roy-Borjas model is the baseline framework explaining migrants' self-selectivity by skill level (Borjas 1987; Roy 1951). Considering two countries, one with higher and one with lower income inequality, the model predicts that less skilled migrants will migrate from the country with high income dispersion to a country with a more compressed wage distribution (as they expect to benefit from the welfare state instruments and other factors compressing the lower tail of income distribution), while more skilled migrants will move in the opposite direction, from more equal to more unequal economies (as they expect to benefit from the longer upper tail of the income distribution). A direct corollary is that generous welfare states can be expected to attract predominantly negatively self-selected migrants, i.e., those with below-average skills (Borjas 1999; Razin and Wahba 2015).

The new economics of migration

An alternative framework, proposed by Stark and Bloom (1985), views migration as a strategy to diversify income risk within families. According to this framework, welfare systems in the destination country reduce the cost of migration by providing insurance against income risks: Households have incentives to send their members abroad if welfare schemes in the destination country protect them against the risks of income loss. Similarly, welfare systems in the country of residence discourage people from emigrating (Czaika 2015; Khoudour-Casteras 2008; Palmer and Pytliková 2015).

The life course perspective of migration and the welfare state

The sociological life course approach views migration as the interplay of individuals' life courses with social structures and institutions (Wingens et al. 2011). Welfare systems differ in how they protect people in different stages of their lives. For instance, a welfare system may guarantee generous pension entitlements but provide little support in the case of unemployment. An analysis of the welfare-migration nexus should therefore consider the generosity of welfare in areas for which migrants become eligible at various stages of their lives (De Jong et al. 2020). Generous welfare programs that cannot be accessed by immigrants either due to their life stage or other eligibility criteria will have a weak influence on their location decisions.

Based on qualitative interviews with European migrants in the Netherlands, De Jong and de Valk (2020) argue that, in their migration motives, migrants: do not explicitly mention reference to the welfare system; are satisfied with the welfare system in the origin country before migration; obtained most information about the welfare system arrangements in the destination once a welfare need arose; and could not compare welfare generosity in the origin and destination country because they only experienced the specific arrangements in one of these countries. The authors conclude that the stage in one's life is what affects people's considerations for intra-European migration, more than welfare state arrangements.

3. Empirical evidence on the welfare-migration nexus

Empirical analysis of the welfare magnet hypothesis may suffer from several identification problems. The problem of omitted variable bias is typically attenuated by including a set of fixed-effect dummy variables when using bilateral migration flows data (e.g., destination and origin-year fixed effects). The most restrictive specification includes a full-set of dyadic origin-destination dummies that absorbs all possible time-invariant bilateral factors that affect migration flows from a specific origin to a specific destination (Ortega and Peri 2013). The identification strategy then relies on within-country, within-year, or within-dyad variation, depending on the specification used.

The problem of reverse causality arises when welfare and immigration are simultaneously codetermined. In particular, it is not straightforward to distinguish from available data whether access to social assistance affects immigration, or conversely, whether immigration affects welfare accessibility and generosity. There are several situations in which establishing causality is difficult. For instance, destination countries may adjust their welfare provision in response to immigration flows. Reverse causality may also result through a mechanical channel: when migrants' use of welfare differs from that of natives, immigration leads to higher or lower welfare spending per capita. If immigrants have different productivity than natives, an additional effect on the share of welfare expenditures in Gross Domestic Product (GDP) will arise through the impacts of immigration on GDP per capita. Gaston and Rajaguru (2013) use long-term data on OECD countries and show that a greater influx of migrants modestly increases welfare

spending. Giulietti et al. (2013) suggest that immigration may increase welfare generosity in receiving countries in the European Union.

The problem of reverse causality is approached in several ways in the literature. One strategy is to use exogenous variation through external instruments for welfare generosity. Razin and Wahba (2015) use legal origin to instrument welfare generosity in the host country. Giulietti et al. (2013) adopt the two-stage least squares framework using the number of political parties in the ruling parliamentary coalition (which varies not only across, but also within countries over time) as the instrumental variable, arguing that social expenditure is likely to be higher (lower) in countries where coalitions are composed of more (fewer) political parties. Another strategy is to apply the Arellano-Bond dynamic estimator for panel data (Arellano and Bond 1991) to explicitly take into account endogeneity (e.g., as in Giulietti et al. 2013 and Peridy 2006). Several studies explore a quasi-experimental setup to identify the relationship as causal (Agersnap et al. 2020; Kaushal 2005; Dellinger and Huber 2021).

Evidence from the United States

Social welfare in the United States is highly decentralized and provided by various organizations at the federal, state, local and private levels, which results in considerable variation in welfare provision across US states. Using 1980 and 1990 US Census data, Borjas (1999) explores this variation and shows that immigration to the United States gravitated towards states offering higher levels of welfare benefits.

Borjas (1999) proposes that this tendency is explained by migration costs. Migrants, especially those newly arrived, have already incurred migration costs upon arrival to the US, and thus they are likely to be more responsive to income differentials and move to more welfare-generous states. Conversely, natives are yet to incur migration costs when making the decision to move, or not, across locations with different social welfare provision. Therefore, ceteris paribus, they are less likely to respond to variation in welfare provision than immigrants. Some of the limitations of Borjas (1999) were that his evidence was based only on a relatively small number of states (Nannestad 2007) and that the US census data do not distinguish legal immigrants from illegal, while only legal immigrants are allowed to receive welfare benefits (Kaushal 2005). A study by Zavodny (1999) maintains that the network effect dominates the location decision of newly arriving migrants to the United States. Because earlier cohorts of migrants are concentrated in states with generous welfare systems and new migrants choose to locate in states with large foreign-born populations, Zavodny (1999) argues that inference about the welfare magnet effect can be spurious.

Other studies explore the welfare magnet hypothesis for natives across states within the US and obtain mixed results. Research based on earlier data finds evidence of the impact of welfare

variation between states on the mobility patterns of women with children (Blank 1988; Enchautegui 1997; Gelbach 2004). Later research by Levine and Zimmerman (1999) based on panel data and a quasi-experimental approach contests evidence on the welfare magnet hypothesis by looking at poor single women with children who are the most likely candidates for welfare benefits. Welfare changes adopted in the early 1990s in the United States limited the access to and duration of benefits, thus potentially reducing the incentives for welfare migration. In 1996, access to means-tested federal benefits was made available to new immigrants only after five years of residency in the US. Many states reinstated benefits to poor immigrant families who had been denied benefits under federal law, providing a natural experiment for research. Kaushal (2005) concludes that changes in welfare generosity at the state level provide weak evidence in favor of the welfare magnet hypothesis. The effect of access and generosity of social programs on location decisions are particularly insignificant for single low-skilled immigrant women who are economically the most vulnerable group with the highest risk of becoming dependent on means-tested programs. Such weak effects of welfare generosity on migration do not contradict evidence that migrant households may rely more on cash benefits and other types of welfare programs, and that their spells of reciprocity may be longer (Borjas and Hilton 1996).

Empirical evidence from Europe and other advanced economies

The United States provides a rather homogenous environment for migration between states. As welfare programs vary minimally in a single country, some researchers exploit variation in welfare generosity and migration patterns across countries in order to test for the welfare magnet hypothesis. One of the first studies to test the hypothesis using international data is Pedersen et al. (2008). The authors compile data on annual migration flows into a broad set of OECD countries from 129 different origins between 1990 and 2000. The most important predictors of migration flows are network effects, income per capita, geographic distance, and linguistic closeness. The social expenditure (as a share of GDP) is used as a broad measure of welfare generosity. Support for the welfare state magnet hypothesis is weak and not robust across different estimation methods. The welfare magnet hypothesis is not confirmed in models that specifically account for the migration policy and for the type of welfare state in the destination countries.

The EU eastern enlargements in 2004, 2007 and 2013 created a single labor market of 28 countries with free movement of labor and relatively large variation in welfare state provision. The considerable variation in welfare state arrangements across European states motivated several studies. De Giorgi and Pellizzari (2009) study the issue of welfare migration in the 15 countries prior to EU pre-enlargements (EU-15) using the European Community Household Panel from 1994 to 2001. Using individual data is an advantage in that the effects of the socio-economic background of immigrants can be controlled. One disadvantage is that the low number of migrants in the panel may lead to imprecision of estimates. The authors use the average

benefit replacement rate as the measure of welfare generosity, which measures the relative amount of unemployment benefits compared with average wages. The results from conditional logit models confirm the robust welfare magnet effect on the size of migration flows from outside the EU-15, albeit the effect is small. The authors calculate that the effect of wages is on average three times larger than that of benefits. Welfare generosity is therefore much less important in determining the location decisions of migrants than labor market conditions (characterized by the unemployment rate and the average wage).

Peridy (2006) tests the welfare magnet hypothesis using bilateral migration flow between 18 European countries as destinations and 67 source countries from 1993 to 2002. He applies a dynamic panel data estimator to deal with the endogeneity problem and finds statistically significant welfare magnet effects on both migration flows originating from developed and developing countries, although the estimates are again of small magnitude.

The study by Warin and Svaton (2008) finds positive correlations between migration flows into the EU-15 countries from 1990 to 2004 and the amount of money spent on social expenditure (expressed in terms of purchasing power parity per capita). However, the study rejects the welfare magnet hypothesis when different welfare domains are considered (disaggregated expenditure on unemployment, family and old-age benefits) and migration flows are distinguished by different origins.

Exploring variation in the European Union, Giulietti et al. (2013) test for the welfare magnet hypothesis distinguishing between EU and non-EU migrant inflows to 19 European countries from 1993 to 2008. They measure welfare generosity by unemployment benefit spending as a share in GDP. Adopting a two-stage least square framework with the number of parties in the ruling coalition as the instrument, the study corrects for the potential endogeneity of welfare provision with respect to migration flows and rejects the welfare magnet hypothesis for migrant inflows.

Skupnik (2014) exploits the duration of temporary restrictions on the freedom of movement from new to old Member States following the EU's eastern enlargements. Using public social expenditures to GDP and net replacement rate in the sensitivity analysis as measures of welfare generosity, the author concludes that welfare generosity did not significantly affect migration flows from new to old member states. The study documents that lifting restrictions on the freedom of movement for workers had a strong impact on migration behavior, in line with Kahanec and Pytliková (2017) and Palmer and Pytliková (2015).

Agersnap et al. (2020) exploit a policy change in Denmark aimed at reducing the inflow of refugees. The reform implemented in 2002 reduced welfare benefits for non-EU immigrants by about 50% and legislated full eligibility only after 7 years of residency. The largest benefit cut

applied to married couples with children. The policy was repealed in 2012 and reintroduced again in 2015. In all years, the welfare entitlement for natives or EU immigrants remained unchanged, which allowed the authors to study the effects of this policy change in a quasi-experimental research design. The authors show that the net flow of immigrants fell after the benefits reduction (by about 5,000 people per year) and that the subsequent repealing of the policy reversed the effect almost correspondingly. The authors also provide evidence that the drop in immigration is driven entirely by asylum- and family-based immigration.

Austria was one of the countries heavily affected by the inflow of refugee migration in 2015. The substantial influx of refugees stimulated political debates on the sustainability of the large welfare state and resulted in significant cuts to welfare assistance available to refugees in three federal states. Austria distributes asylum seekers randomly across its nine federal states. After recognition of their asylum status, the refugees can then move freely and gain full access to the labor market. Asylees affected by welfare cuts could increase their income from welfare assistance by approximately 50% when moving to another federal state. Dellinger and Huber (2021) use administrative records on all asylees to study their response to differences in welfare across Austrian federal states and find that such differences significantly affect the mobility of asylees.

Migrant surveys containing information about migrants' histories can be used to study welfare effects on migration decisions. Jakubiak (2019) uses data from the Immigrant Citizen Survey collected between 2011 and 2012 in four European countries to study the welfare magnet effect on non-European migrants. The author finds that welfare generosity is associated with mobility more strongly for females, larger households, and the lower educated.

Welfare generosity measures are generally only available for advanced economies. Hence, the role of welfare generosity in the country of origin on outmigration is typically not addressed in the literature. The few exceptions include Peridy (2006), who uses the ratio of social public spending on education and health in the destination and origin country in some models, and Kureková (2013) and Palmer and Pytliková (2015), who provide evidence that more generous welfare systems lowered out-migration from the respective new EU member states following EU eastern enlargements.

The welfare-induced selectivity of migration

Theoretical arguments predict that some welfare benefits attract low-skilled migrants more strongly than their more skilled counterparts, as the likelihood that they will draw these benefits is higher. Brücker et al. (2002) find that, in Europe, the sorting of immigrants by skill with

respect to welfare generosity is indeed negative: high-skilled migrants tend to go to countries with low benefits and taxes, while the low-skilled are more likely to be found in countries with higher levels of social welfare benefits.

To test whether welfare generosity induces a negative sorting of immigrants by skill, studies rely on cross-sectional data from the Docquier and Marfouk (2005) database, which includes the number of migrants residing in 30 OECD countries in 1990 and 2000 by their origin and education level. Using this data, Beine et al. (2011) find that social expenditure (as a share of GDP) attract migrants in general and unskilled migrants more. The authors highlight that more than 70% of the variability in migration flows is explained by diaspora effects, and diasporas help the migration of the low-skill more than the migration of the high-skilled.

The interactions between migration policy, welfare generosity and the skill composition of immigration is explored in the study by Razin and Wahba (2015) using data collected by Docquier and Maarfouk (2005). To address potential endogeneity concerns, the authors use the legal origins to instrument welfare generosity in the host country. Consistently with the Roy-Borjas hypothesis, the authors show that in the single European market with free movement of labor, generosity of welfare attracts primarily unskilled migrants and attract less their more skilled counterparts. Under a restricted-migration policy, as represented by migration into the EU, the authors show that welfare generosity increases the inflows of high-skilled immigrants from outside of the EU.

Jackson et al. (2013) use stock data on immigrants distinguishing their educational attainment for 19 OECD destinations and 91 sending countries. The authors rely on the overall welfare generosity index from the Comparative Welfare Entitlements Dataset constructed for most OECD countries for the years 1970-2010. Estimating a system of equations to control for the potential problem of endogeneity, the authors find that more generous unemployment benefits and income assistance programs increase immigration but attract less high- skilled migrants. In addition, they provide evidence that higher education and health spending increases high-skilled immigration, but has no effect on the overall size of immigration. On the other hand, according to this study, retirement benefits and income taxes have negative effects on immigration.

4. Measuring the welfare-migration nexus

This section looks at measures of migration and welfare in advanced economies, provides some key descriptive statistics, and highlighting the importance of welfare accessibility in the welfare-migration nexus.

Measuring migration

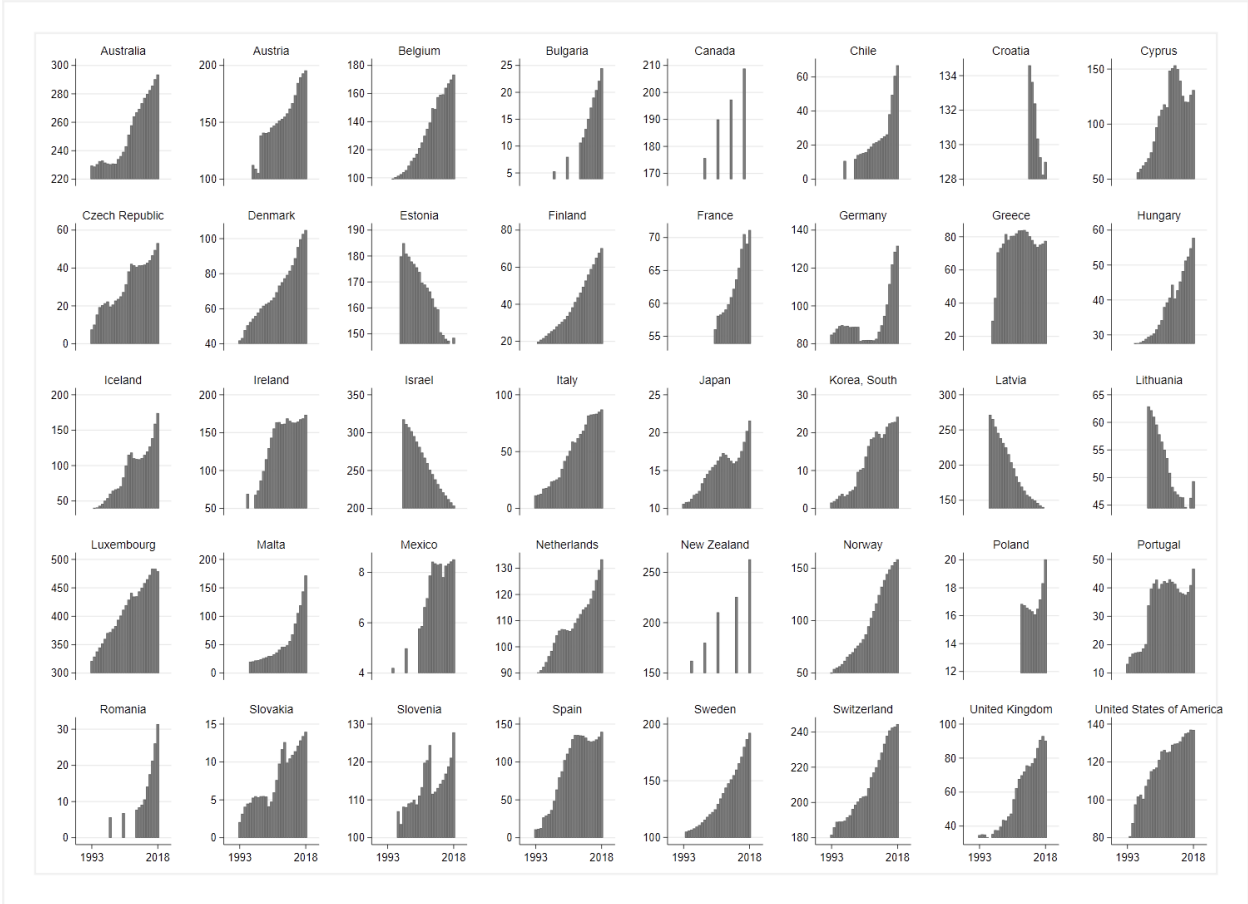
The migration situation of a country can be described by the number of immigrants living in the country at a given point in time (migration stocks) and by the number of migrants entering or leaving the country per unit of time, e.g. year (migration flows). The number of migrants leaving a country is equally important, but this statistic is not reported with accuracy in the majority of countries. Migration flows represent people moving for various motives, including family, work and career opportunities, education, retirement, health issues, political preferences, oppression or persecution, or climate change and environmental degradation. Data are sourced from the Organisation for Economic Co-operation and Development (OECD) International Migration Database and the Eurostat database. Generally, immigrant populations can be defined based on the citizenship of the person or on the country of birth; differences observed between the two statistics are primarily due to naturalization. In many countries, migration statistics are consistently collected relying on one of the two main definitions of immigrants. In our dataset, immigrants are recognized by foreign citizenship in Cyprus, Czechia, France, Germany, Greece, Italy, Japan, Latvia, Luxembourg, Malta, Portugal, Slovakia, South Korea, Switzerland, and the United Kingdom; and by the country of birth in Austria, Australia, Belgium, Bulgaria, Canada, Chile, Croatia, Denmark, Estonia, Finland, Hungary, Iceland, Ireland, Israel, Lithuania, Mexico, the Netherlands, New Zealand, Norway, Poland, Romania, Slovenia, Spain, Sweden, and the United States.

Figures 1 and 2 depict trends in immigrant stocks and migration flows in the sample of 40 EU and OECD countries from 1993 to 2018. In absolute numbers, the immigrant population in these countries doubled from 60 million in 1995 to 120 million in 2018. Growth in the immigrant population was faster than the overall population growth; the average share of immigrants in the population increased from 56 to 100 foreigners per 1,000 population (refers to a weighted average by the population size of countries in the sample, except for Croatia and Poland for which the earliest migration data is available only in the late 2000s). During the studied period, Australia, Austria, Canada, Israel, Luxembourg, New Zealand, Sweden, and Switzerland hosted the largest immigrant populations per 1,000 residents. The observed migration trends varied across OECD countries: several countries recorded a fall in the number of immigrants in their populations, including Estonia, Israel, Latvia, and Lithuania, while the share of immigrants increased more than five times over the studied period in Bulgaria, Chile, Czechia, Italy, South Korea, Malta, Slovakia, and Spain.

Temporary drops in migration flows during the economic and financial crisis of the late 2000s suggests a degree of sensitivity of migration flows to economic fluctuations. Countries that experienced the highest increase in unemployment (e.g., Iceland, Ireland, Latvia, Lithuania, and Spain) show a drop in the magnitude of migration inflows by more than a third in 2009 and 2010 relative to the preceding years 2007 and 2008. In contrast, after the economic and financial crisis, immigration increased in labor markets that were less severely affected by the crisis (e.g., Australia, Belgium, Canada, Germany, Mexico, the Netherlands, Norway, Portugal, and

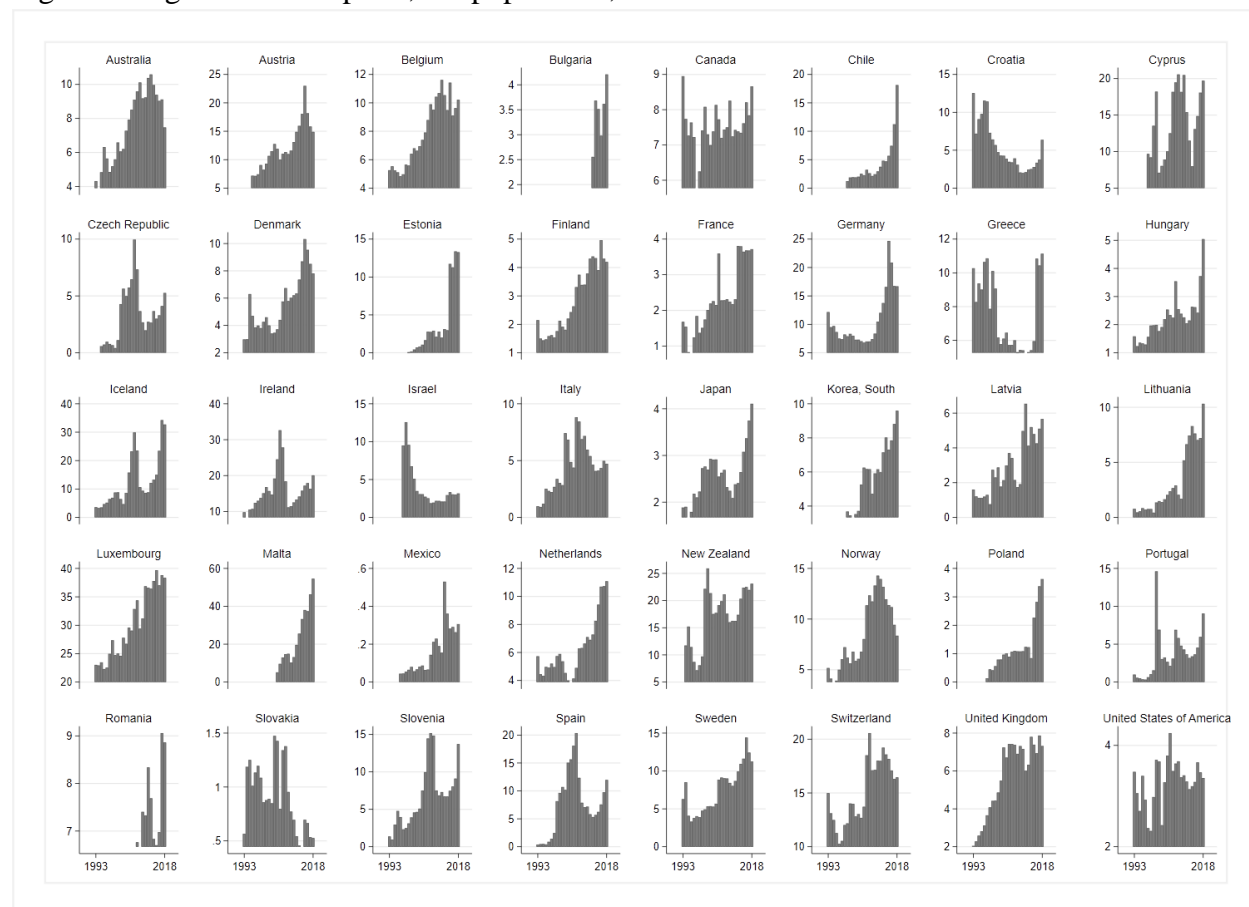
Romania). The temporary surge in migration inflows in Austria, Germany and Sweden in 2015 and 2016 reflects the mass influx of asylum-seekers in the late 2010s.

Figure 1 Migration stock per 1,000 population, 1993-2018



Source: OECD International Migration Database and Eurostat database

Figure 2 Migration flows per 1,000 population, 1993-2018



Source: OECD International Migration Database and Eurostat database

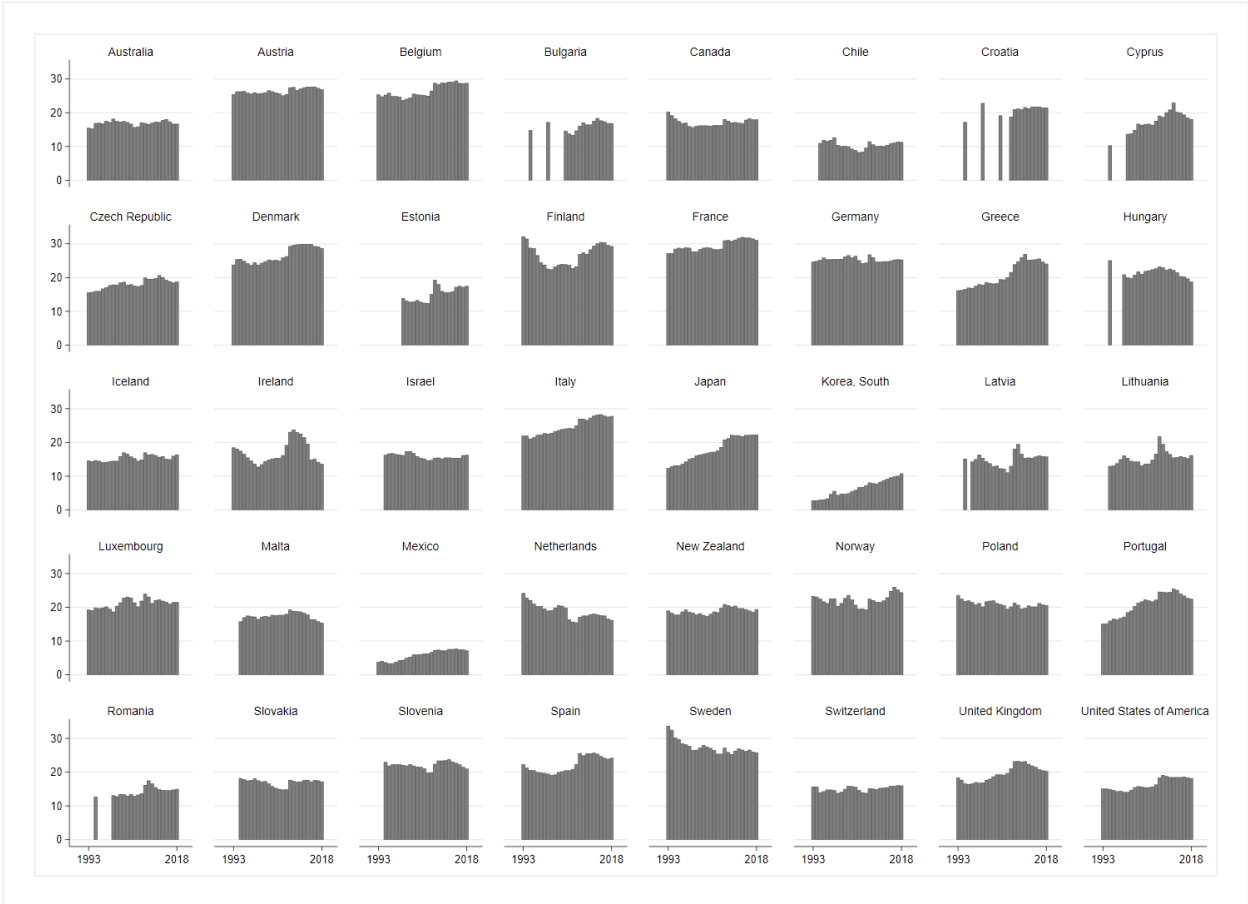
Measuring welfare generosity and accessibility

While measuring migration trends is, at least conceptually, relatively straightforward, measuring welfare and its generosity and accessibility is more complex. Although the modern welfare state is European in origin, as the first comprehensive social insurance system was introduced in the late 19th century in Germany, over time welfare states have developed into different forms and varieties across the world (Esping-Andersen 1990; Van Kersbergen and Vis 2012). Welfare states differ in how well they protect against social risks and in how they redistribute income or wealth; they also differ in their accessibility by and generosity towards immigrants. The large variation in both benefit types and eligibility criteria makes it difficult to compare welfare generosity consistently across countries and over time.

A common indicator of welfare generosity used in the literature on welfare magnets is social expenditure as a percentage of GDP taken from the OECD Social Expenditure Database and World Social Protection Database (ILO, 2017). This measure, proxying welfare generosity, comprises both public and private expenditure on all social benefits provided in cash and in kind.

The indicator aggregates public and private social expenditure and is an internationally comparable indicator of social policy. Figure 3 contrasts differences in the level of social expenditure relative to GDP across countries and over time. The late 1990s and early 2000s showed some tendencies of reducing spending on welfare programs in some welfare-generous countries (e.g., Finland, the Netherlands, Norway, Sweden) but not in others (e.g., Belgium, France, Germany). Welfare spending increased after 2009, likely due to stabilization efforts in response to the economic and financial crisis, and have moved downward more recently, likely due to austerity measures adopted in response to the sovereign debt crisis triggered by the stabilization efforts. Eventually, in all countries except for Hungary, Ireland, Lithuania, Malta, and New Zealand, the share of social expenditure in GDP is higher in 2018 compared to 2008. The coefficient of variation calculated over the sampled years indicates a continuous convergence of welfare spending among the OECD countries since 1993.

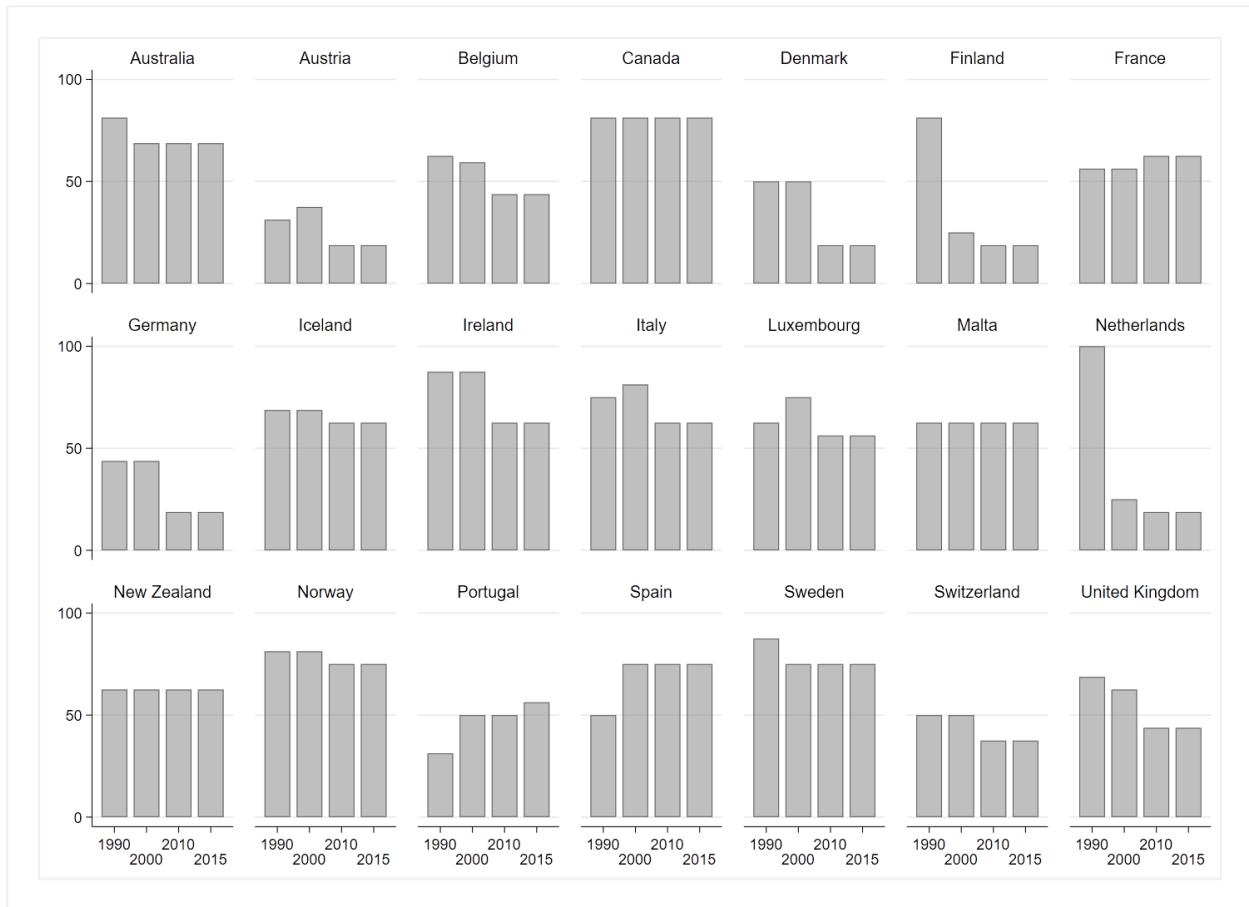
Figure 3 Social expenditure (% GDP), 1993-2018



Source: OECD Social Expenditure and Eurostat database and World Social Protection Database

While the literature on the welfare magnet hypothesis focuses on welfare generosity, what is also likely to matter for immigrants, besides the level of welfare spending, is their ability to effectively access it. Several studies identify barriers to social welfare integration of immigrants (Kahanec et al. 2013; Zimmermann et al. 2012; Schmitt and Teney 2019). Duman et al. (2022) show that the inclusiveness of social welfare benefits for immigrants affects their labor market integration. Whether it also attracts more immigration is an empirical question. The analysis may shed light on this question using the dataset compiled by Koning (2021) – the IESPI index (Immigrant Exclusion from Social Programs Index) measuring the extent to which it is more difficult for immigrants than native-born citizens to access social welfare programs in 21 developed countries at four different points in time: 1990, 2000, 2010, and 2015. IESPI also captures whether benefits available to migrants are equally generous compared to what is available to natives and whether there is welfare assistance exclusively available to migrants. IESPI covers several areas of welfare: tax-paid pensions, healthcare, contributory unemployment benefits, contributory pensions, housing benefits, social assistance, active labor market policies. It also provides a comprehensive index of all these areas. The role of welfare accessibility on immigration is demonstrated here by assuming the accessibility of social assistance programs by immigrants. Figure 4 shows the indicator for immigrants' access to social assistance programs in 21 countries. The scale of IESPI is reversed so that higher scores indicate a more inclusionary welfare system towards immigrants relative to native-born citizens.

Figure 4 Immigrants' access to social assistance programs, 1990-2015



Source: Koning (2021)

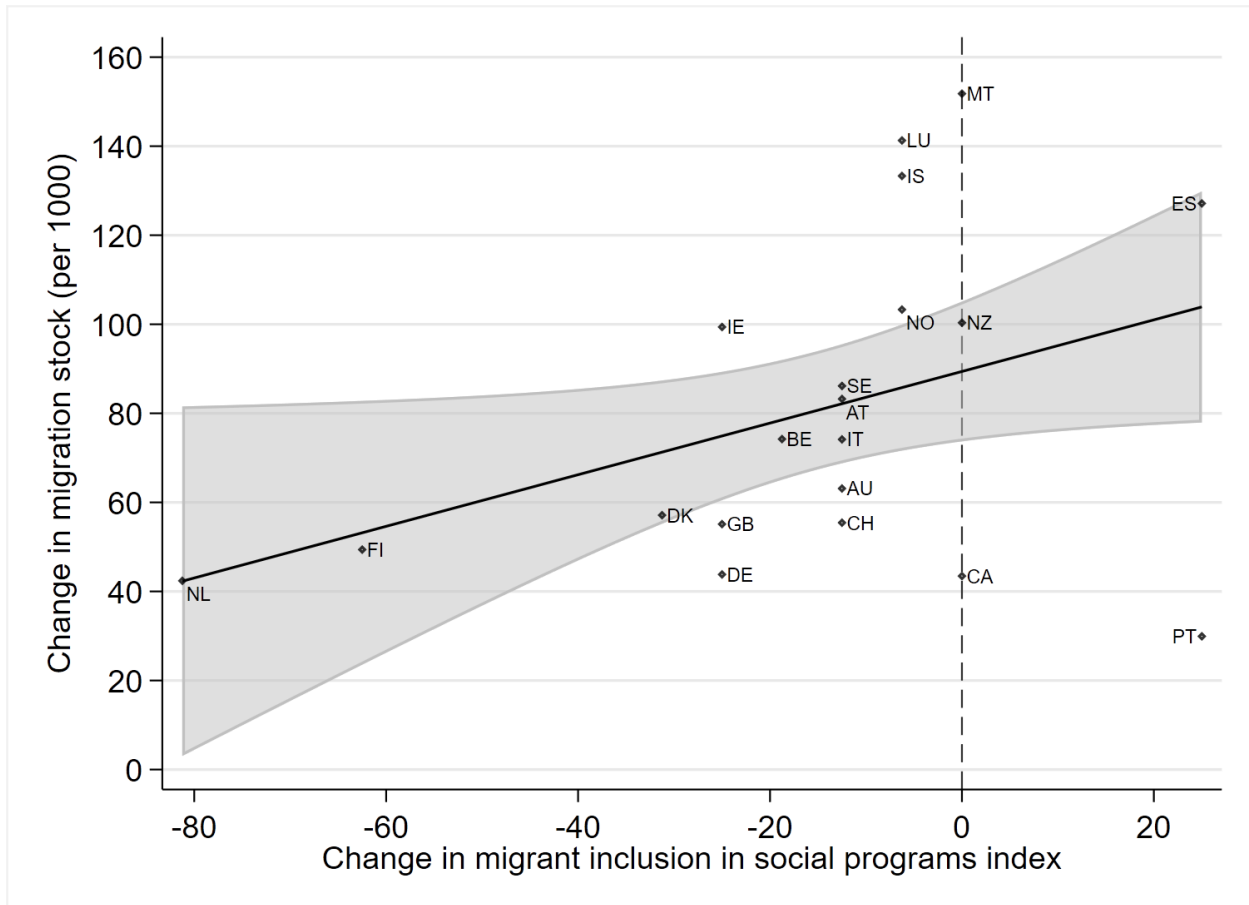
Note: The score refers to differentiation between immigrants and native-born in granting access to social assistance at four different points in time: 1990, 2000, 2010, and 2015. Higher scores indicate a more inclusionary welfare system towards immigrants.

The relationship between migration and welfare

Whereas the literature on the role of welfare generosity on migration is relatively rich and is discussed above, much less is known about the role of accessibility of welfare benefits. The data presented above covering a relatively long time-horizon and broader set of countries with different welfare arrangements, illustrate the role of welfare accessibility on the welfare-migration relationship. Figure 5 plots the change in migration stock against changes in access to welfare assistance. The scatterplot is complemented with a bivariate OLS regression line and the 90% confidence intervals are calculated from that model. Based on the sample of 38 countries (all OECD and EU countries, except for Colombia, Croatia, Poland and Turkey), Figure 5 suggests there is a positive association between immigrants' access to welfare assistance and

immigration across the 21 countries with IESPI data, although the relationship is clearly subject to a high degree of statistical uncertainty.

Figure 5 Changes in immigration stock and migrant inclusion in social assistance programs, 1993-2018



Source: Authors' elaboration

Note: OLS linear fit and the 90% confidence intervals are plotted. The slope of line is significant at the 90% level (t-stat=1.80).

We further study the pattern observed in Figure 5 by estimating a simple dynamic panel data model with several potential confounding factors. The dependent variable is migration flow measured per 1,000 population. The indicator of welfare access is taken from Koning (2021) and refers to differentiation between immigrants and native-born in granting access to social assistance. Values in the missing years are filled with values in the nearest available years, but the results do not change when interpolated values are used instead. Destination-specific control variables include the percentage of migrants within the population as a proxy of migrant networks, GDP per capita from the World Bank (2021a) as a measure of income prospects of potential migrants; and the unemployment rate obtained from the World Bank (2021b).

Destination fixed effects are included in the model to control for any omitted time-invariant,

country-specific confounding factors; year fixed effects control for year-specific effects invariantly affecting all countries.

Table 1 presents results. The estimate on welfare access implies its positive association with immigrant inflow. The calculated elasticity is around 0.3, implying that a 10% increase in accessibility (e.g., by 6 points from the mean value of 60) results in a 3% increase in immigration. In line with the literature, the effect of GDP per capita is positive and the effect of the unemployment rate is negative, indicating a preference of migrants for more affluent countries with better employment prospects. Diaspora effects play the usual role, as migrants are more likely to choose countries with a larger share of migrants in the population (e.g., Beine et al. 2011; Giuliatti et al. 2013).

Table 1 Determinants of migration flows

	Coef.	S.E.
Welfare access	0.048***	0.011
Migrant stock	0.076***	0.016
GDP pc (log)	22.751***	6.223
Unemployment rate	-0.540***	0.085
Constant	-251.402***	66.237
Year FE	Yes	
Country FE	Yes	
N	451	
r2	0.86	

Source: Authors' elaboration

Note: Dependent variable is the migration flow measured per 1,000 population. OLS estimates and standard errors reported, ***p < 0.001.

5. Summary

Economic instincts suggest that countries providing more generous or accessible welfare benefits are likely to be seen by migrants as more attractive destinations. Given that migrants' feet tend to be looser than those of natives, as migration costs are largely sunk for them and ties to a location in the destination country are not yet established, the hypothesis that migrants tend to respond to

economic opportunities, and variation in welfare in particular, and do so even more flexibly than natives, is an appealing one (Guzi et al. 2018). Similar economic arguments can be made about the impacts of welfare provision on a country's magnetism vis-à-vis low- and high-skilled workers. The argument holds that countries providing more generous means-tested welfare attract relatively more low-skilled migrants, who are more likely to be in need of and eligible for such benefits. Conversely, more skilled migrants with high earnings potential may prefer countries with lower income taxes and less welfare provision.

On the other hand, when deciding to migrate, migrants may not know enough about the destination country's welfare system for its parameters to play any role in how they decide. From another perspective, it may be the host country's overall level of development and quality of life, political stability and security, and democracy and good governance, rather than its welfare system, which may be the principal driving force behind country's attractiveness to immigrants and which may also be driving the generosity of its welfare provision. Many other factors – be they economic, social, political, environmental or other – may play more significant roles than welfare benefits in the decision of where to migrate. For illustration, speaking the destination country's language and having relatives there may be an attractor several magnitudes larger than the possibility to obtain welfare support. Indeed, some qualitative studies in which migrants are interviewed reveal that migrants are more interested in job security and decent pay than welfare benefits. For some migrants, a permanent employment contract is worth “far more than all the social security arrangements put together” (Kremer 2016: 406).

Ultimately, the overall effect of welfare on migration is an empirical question. The literature is not conclusive on the matter. The consensus in the empirical literature is that international migration is significantly driven by structural factors such labor market opportunities, international economic inequalities, as well as conflicts and environmental changes in origin countries. Several early studies found statistically significant effects of welfare on migration, but they were found to be small compared to other drivers of migration (e.g., Borjas 1999; Peridy 2006; De Giorgi and Pellizzari 2009). Giulietti et al. (2013), on the other hand, find no effect of welfare generosity on immigration to the enlarged European Union after controlling for the endogeneity of welfare in the welfare-migration nexus. More recently, Agersnap et al. (2020) explore a policy change enabling them to model the welfare-migration nexus in a quasi-experimental setup in Denmark, while Dellinger and Huber (2021) study administrative data in Austria to identify a significantly positive impact of welfare provision on the location choices of refugees and asylees. This chapter contributes with some evidence that better accessibility of social assistance for immigrants is associated with larger immigrant inflows.

Given this diverse evidence, the welfare magnet hypothesis remains an interesting subject of study. Whereas overall there seems to be no evidence of statistically and economically significant systematic welfare magnetism for immigrants, for some groups of migrants, such as those in the most vulnerable position, including asylees and refugees, welfare may play a more

significant role in their location choices. Further research is needed to evaluate the role of accessibility of welfare provision to immigrants, as there is an indication that it may also play an important role.

A number of challenges and opportunities exist for future empirical research aiming to test the welfare magnet hypothesis. It would be helpful to be able to distinguish how welfare affects migrant flows for immigrants with different status and under different immigration policies. Causality needs to be taken seriously in empirical studies testing the link between welfare systems and immigration. Another fruitful area of further research is the interaction of migration policy and migrants' welfare rights (Ruhs 2013). Less is known about the sensitivity of migration decisions to different forms and types of welfare support and services. Given the predictions of the Roy-Borjas model, more research is needed on welfare magnetism for different types of immigrants by skill, age, gender, and other socio-demographic characteristics. The role of welfare provision in source countries remains largely understudied in the literature. Finally, another exciting areas for additional research, is the the interaction of welfare state arrangements with return migration and circular migration patterns.

As for the broader implications, regardless of whether welfare attracts immigration or not, welfare systems provide immigrants with a safety net and a decent living standard in the event of adverse social or health situations, economic hardship, unemployment, or retirement. This safety net enables and empowers immigrants economically and socially, for example by being able to invest in their own skills and the human capital of their children, to find a suitable and lasting job rather than taking the first possibility that arises, and to avoid falling into precarious employment. It also enables them to take measured risk when exploring entrepreneurial business opportunities and reduces vulnerability to social and economic deprivation that may result in various health problems and social ills. Thus, an effective and fair welfare system enables and reinforces the benefits of immigration for host economies.

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