



*Edited by*

Eugenia Vella · Jordi Caballé · Joan Llull

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# Understanding Migration with Macroeconomics

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ISBN 978-3-030-40980-7      ISBN 978-3-030-40981-4 (eBook)  
<https://doi.org/10.1007/978-3-030-40981-4>

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# 1

## Introduction

Eugenia Vella

The UK Independence Party (UKIP), the Front National party led by Marine Le Pen in France, and the Alternative für Deutschland party in Germany all gained prominence in their respective countries with anti-immigration platforms. Anti-immigration positions have underpinned, among others, the Brexit vote in 2016 in the UK and policies of the Trump administration in the United States. In sending countries, such as Southern and Eastern European countries, emigration has been a public concern, too.

In parallel to this political importance of migration, the economics of migration has developed as a major research field (see e.g. the books by Zimmermann and Bauer 2002; Mueller and Mills 2013; Borjas 2014; Chiswick and Miller 2014; Bansak et al. 2015; Borjas et al., 2019; Borjas and Chiswick 2019). There exists an extensive amount of academic work on the microeconomic aspects of migration. Yet, there is still a shortage

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of books specifically dealing with the macroeconomics of migration, even though there are macroeconomic factors that can help to explain why migration has become such a debated and contentious topic. Natives often view immigrants as posing threats to jobs and driving down wages. There is also the view that immigrants are a fiscal drain for the host economy, especially when, unable to secure a job, they benefit from public services without contributing. Natives also have a tendency to perceive unemployed immigrants as indulging in illegal and criminal activities. Conversely, others recognise that immigrants help the host economy grow through a variety of channels: by providing a different set of skills and being complementary to the local labour force, by easing labour supply shortages, and by stimulating aggregate demand in the economy through their demand of goods and services. The fiscal contribution of immigrants is more significant when immigrants are younger than natives, especially of working age, and occupy high-skilled positions.

In the economics of migration, there is already a number of studies with a microeconomic focus. Topics of interest include the effects of migration on wages and employment, both for immigrant and native workers (e.g. Borjas 2003; Ottaviano and Peri 2012; Dustmann et al. 2010), the impact of immigration on public finances (e.g. Borjas 1999; Storesletten 2000; Dustmann and Frattini 2014), on productivity (e.g. Peri 2012), on prices and the composition of demand (e.g. Lach 2007; Cortes 2008), and on house prices (e.g. Saiz 2003; Sá 2014). Yet, the links between migration and macroeconomic aggregates, such as per capita GDP, remain little explored.

This book aims to fill this gap by providing a brief but multifaceted overview of the macroeconomics of migration as a research field. This book is an edited collection of, but not limited to, contributions from participants in a workshop on the macroeconomics of migration that took place at the University of Sheffield in June 2018. The chapters analyse, both empirically and theoretically, the challenges that international migration poses both for sending and receiving countries. They touch upon several current debates related to the labour market effects of migration for natives, taxation and emigration, migration and the informal economy, migration and business cycles, and brain waste. This book thus provides a first step to a comprehensive synthesis of the macroeconomics of migration. In addition, this book aims to connect the macroeconomics



of migration with the rest of the field of migration studies. To this end, the last chapter, which is co-authored by a historian and a political scientist, evaluates the new insights that this book offers for the other disciplines in that field, including history, sociology, and political science. This chapter also offers suggestions on the way to enhance further interdisciplinary collaboration between macroeconomics and other disciplines in the field of migration studies. The authors of the volume include both academics from several countries—including the UK, France, Spain, Austria, Greece, and Cyprus—as well as practitioners from the Central Bank of Ireland and the New South Wales Treasury in Australia. Finally, the book targets not only academics, but also practitioners and policymakers who wish to take a closer look at the macroeconomic effects of migration and learn about the current challenges posed by immigration or emigration.

This introductory chapter offers an overview of the recent migration trends by focusing on European countries for two reasons. Firstly, there has been a gradual convergence in labour mobility between Europe and the United States in recent years, reflecting both a fall in interstate migration in the United States and a rise in the role of migration in Europe (Beyer and Smets 2015). Secondly, the literature on Europe so far is less developed than the literature on the United States. This chapter then summarises the state of the art in the macroeconomics of migration up to now, before synthesising the findings of the various chapters included in this volume.

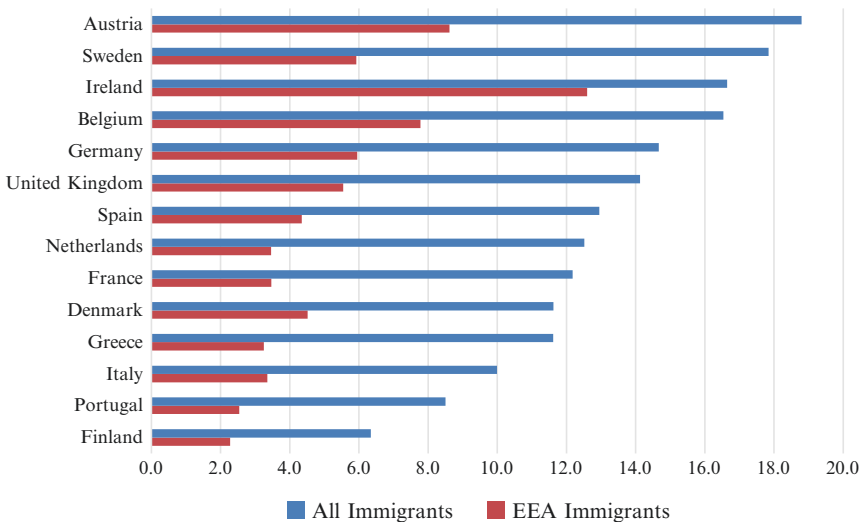
## 1.1 Recent Migration Trends in European Countries

Based on data from Eurostat, this section highlights three recent migration trends in Europe.<sup>1</sup> First, the share of immigrants increased between 2009 and 2017 in the 15 older European Union (EU) member states, with the exception of peripheral countries. Second, following the unfavourable socioeconomic conditions created by the Great Recession and subsequent debt crisis, many peripheral countries shifted away from being host countries to being sender countries. Third, although

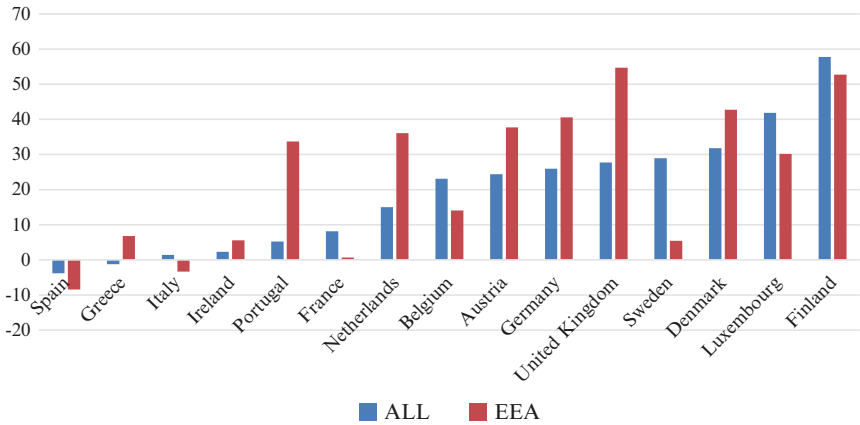
immigrants tend to be younger compared to natives, their level of educational attainment relative to that of natives varies among the EU15 countries.

According to the data for 2017 presented in Fig. 1.1, Austria displays the largest share of immigrants (i.e. foreign-born) in its population among the EU15 countries.<sup>2</sup> Nearly 19% of Austria’s population are foreign-born, with just under half of them born in the European Economic Area (EEA).<sup>3</sup> In the UK, immigrants amount to around 14% of the population. The share of EEA immigrants in the overall British population equals 5.5%, that is nearly 40% of immigrants. In Greece, 11.6% of the population are immigrants, with a bit less than 30% among them being EEA immigrants. The reason is the proximity of Greece to major emigration countries in the Middle East and North Africa.

Next, Fig. 1.2 shows the percentage change in the share of immigrants in EU15 countries between 2009 and 2017. Finland experienced the fastest increase in the share of immigrants in the overall population, with an increase of 58% in 8 years. The UK experienced the fastest increase concerning EEA immigrants. Their share in the British population



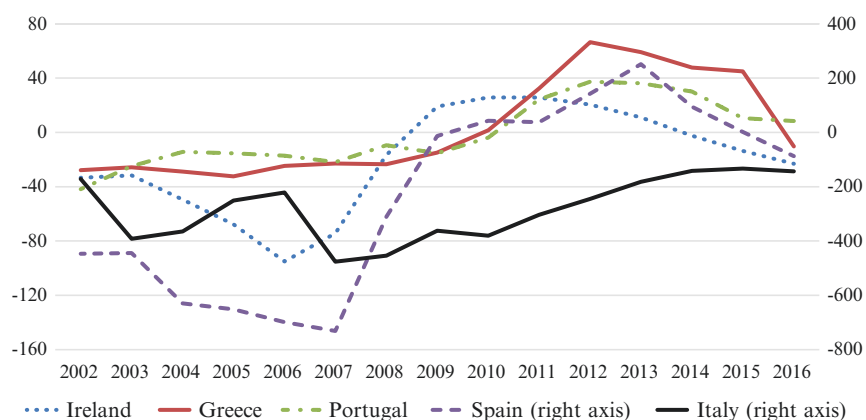
**Fig. 1.1** Population share (%) of immigrants in EU15 countries (except for Luxembourg), 2017. (Source: Eurostat)



**Fig. 1.2** Percentage change in immigrant population share in EU15 countries, 2009–2017. (Source: Eurostat)

climbed from 3.6% in 2009 to 5.5% in 2017. However, following the Brexit vote, this trend started to reverse. Data from the UK’s Office for National Statistics (ONS) show that net long-term migration from the EU amounted to only 101,000 in 2017—the lowest figure since 2013. By contrast, Fig. 1.2 shows that Spain and Greece experienced a decrease in the foreign-born share of the population from 2009 to 2017 and other peripheral countries experienced the smallest change in immigrant share. The reason is that, following the Great Recession and subsequent debt crisis, there was a particularly strong surge in unemployment in Europe’s peripheral countries, such as Portugal, Italy, Ireland, Greece, and Spain, for example. There was also a policy course of austerity measures, which included taxation, cuts to social benefits, and restrictions to recruiting new public sector employees. In these unfavourable economic conditions, the pattern of migration flows in these countries changed. Those recent hosting countries of immigration experienced a surge in emigration of workers looking for more favourable employment opportunities, often in the so-called core countries of Europe. In Spain and Greece, as a result of the crisis, both natives and recent immigrants were among the emigrants.

Figure 1.3 takes a closer look at the case of peripheral countries. In these countries, immigration outweighed emigration until the crisis, when this trend reversed. By 2011, Ireland, Greece, Portugal, and Spain all experienced higher outflows than inflows. Inflows remained higher than outflows in Italy, but with a significantly decreasing difference. There are at least two factors behind the Italian case. Italy's unemployment rate was not as dramatically affected as the other countries' (see Table 1.1). Also, the Italian government granted significant reductions of the taxable employment income to highly skilled workers in an effort to incentivise the entry and return of such workers. From 2016, immigration outstripped again emigration in Ireland, Greece, and Spain. Besides the recovery after the Great Recession, this recent trend has also to do



**Fig. 1.3** Net migration flows (outflows-inflows) for Europe's peripheral countries in thousands of people, 2002–2016. (Source: Eurostat)

**Table 1.1** Unemployment rates in Europe's periphery (% active population), annual averages

	2009	2010	2011	2012	2013	2014	2015	2016
Ireland	12.6	14.6	15.4	15.5	13.8	11.9	10.0	8.4
Greece	9.6	12.7	17.9	24.5	27.5	26.5	24.9	23.6
Spain	17.9	19.9	21.4	24.8	26.1	24.5	22.1	19.6
Italy	7.7	8.4	8.4	10.7	12.1	12.7	11.9	11.7
Portugal	10.7	12.0	12.9	15.8	16.4	14.1	12.6	11.2

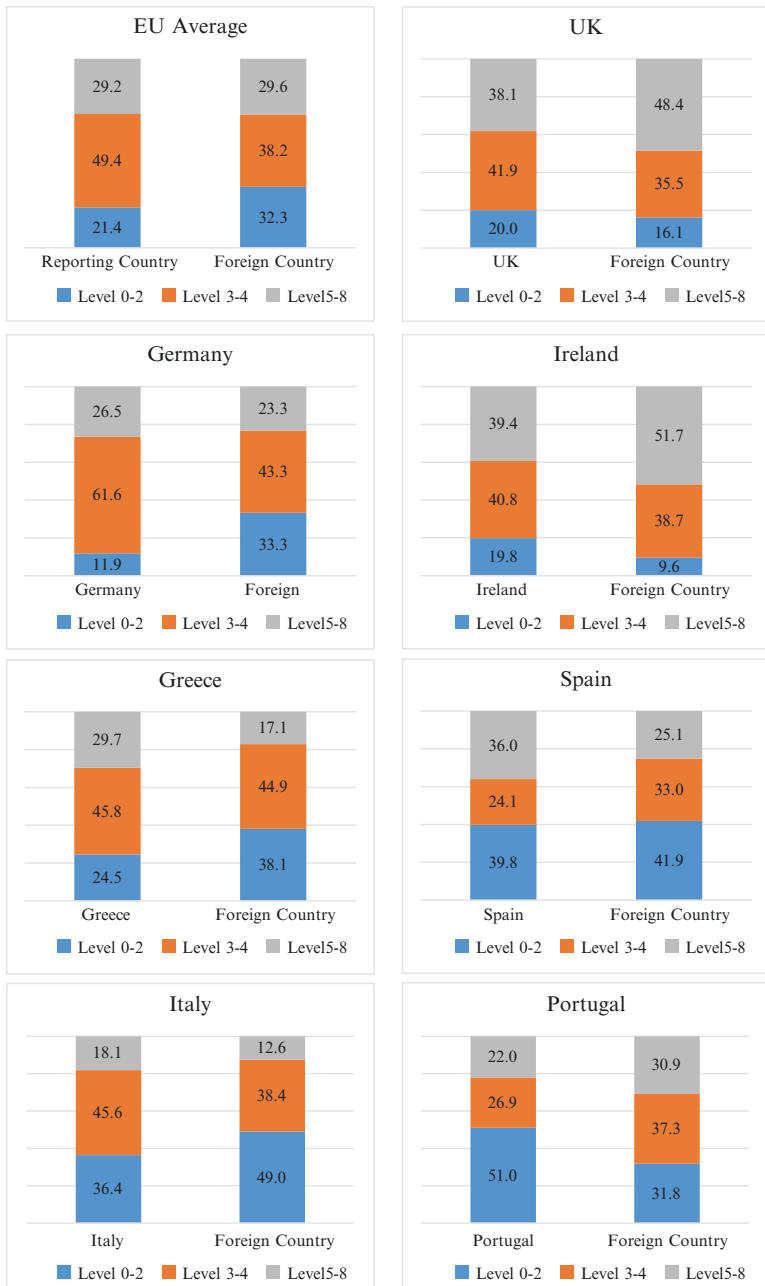
Source: Eurostat

with the large surge in immigrants from the Middle East and North Africa. The Mediterranean is the gateway for Europe and, as a result, Spain, Italy, and Greece (along with Cyprus) have been the main recipients of those migrants.

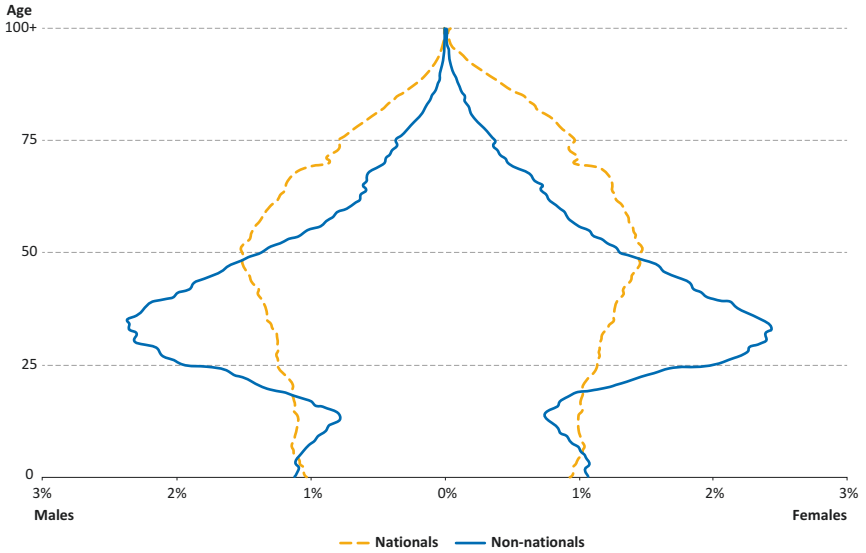
As far as the educational profile of migrants is concerned, Fig. 1.4 compares educational attainment between native-born and foreign-born in 2017. At the EU level, we can see that on average immigrants appear to be less educated than natives. Around 32% of immigrants have not attained more than a level of lower secondary education, compared to 21% of natives. In Greece, Italy, and Spain, immigrants' levels of education are even lower. In a striking contrast, in Portugal and Ireland, immigrants are better educated than natives. In Portugal the level of education of the native population is lower than at the EU level. In Ireland, nearly 52% of immigrants have attained tertiary education. At the EU level, a similar share of immigrants and natives have attained a tertiary level of education. Yet, immigrants are often—at least initially—underemployed. An OECD report has found that overqualification is more prevalent among recent immigrants than settled immigrants (OECD 2017). Finally, migrants are typically younger than natives (Fig. 1.5).

What follows presents additional evidence on immigrants in Germany and the UK—Europe's most important destination countries. Germany is the second largest immigration country in the industrialised world, after the United States. According to Eurostat data for 2017, immigrants represent 14.7% of the country's total population. Using data from Germany's Federal Statistics Office (DESTATIS), Figs. 1.6 and 1.7 show the substantial increase in arrivals of migrants from Europe's periphery including Eastern and Southern countries. These flows resulted from the adverse labour market conditions in these countries in the aftermath of the Great Recession and from the recent enlargement of the EU to some Central and Eastern European countries.

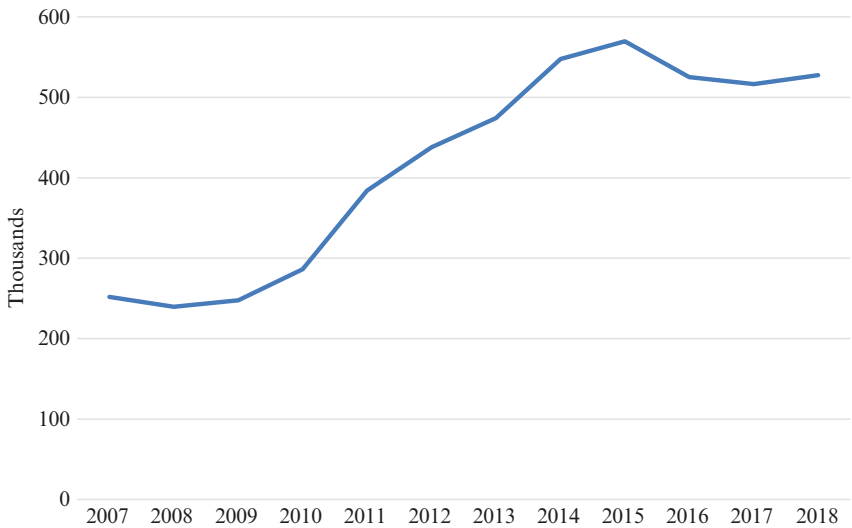
In addition, as a result of the Syrian civil war, Europe experienced large migration flows from that country, in addition to flows from other war-torn countries, including Afghanistan and Iraq. Germany received the greatest number of asylum applications. Table 1.2, using UN Refugee Agency data, shows the evolution of the number of refugees in Germany since 2013. This cohort of refugees enters the German labour market.



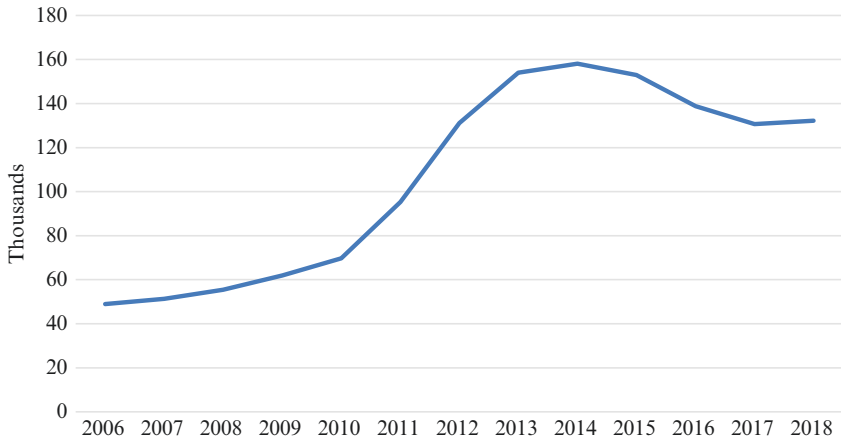
**Fig. 1.4** Education attainment by country of birth, 2017. Note: Level 0–2: less than primary, primary and lower secondary education; Level 3–4: upper secondary and post-secondary non-tertiary education; Level 5–8: tertiary education. (Source: Eurostat)



**Fig. 1.5** Age structure of the national and non-national populations (%), EU28, 1 January 2016. (Source: Eurostat)



**Fig. 1.6** Sum of migration inflows (in thousands) to Germany from Romania, Bulgaria, Poland, Romania, Slovakia, Latvia, Hungary. (Source: Destatis)



**Fig. 1.7** Sum of migration inflows (in thousands) to Germany from Portugal, Ireland, Greece, Spain. (Source: Destatis)

**Table 1.2** Number of refugees in Germany

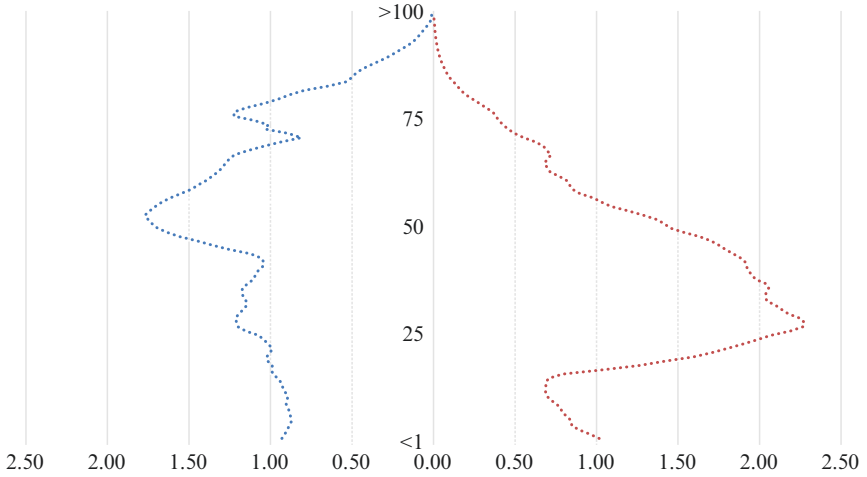
Year	Number of refugees
2013	187,600
2014	217,000
2015	316,100
2016	669,400

Source: UN Refugee Agency (UNHCR)

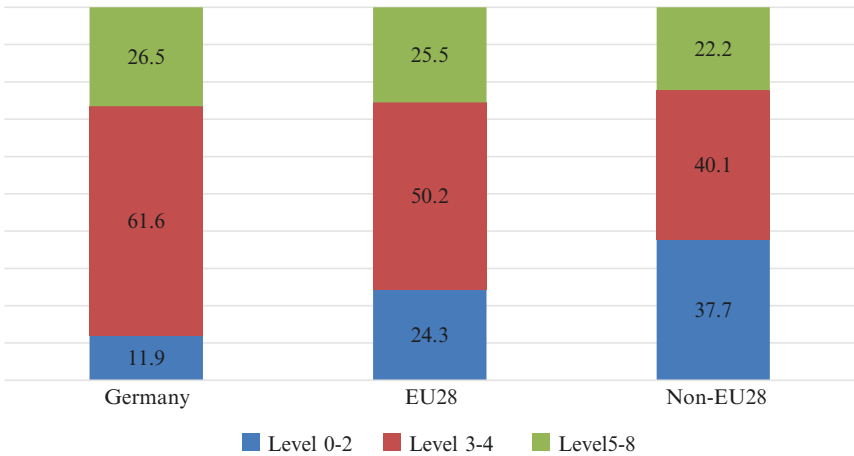
Figure 1.8 provides evidence that immigrants in Germany are younger than natives. A large proportion of non-nationals are around the 30-year-old age bracket, that is more than 23% of non-nationals are between 25 and 35 years of age, against close to 13% of the national population.

Figure 1.9 breaks down educational attainment in Germany by country of birth and shows that immigrants are less educated than natives. Just below 12% of those born in Germany have attained lower secondary education or less, while the corresponding figures for the EU28 and non-EU28 born are 24% and 38% respectively. Table 1.3 shows a slight increase in educational attainment among foreign-born in Germany between 2008 and 2017. The proportion of those with, at most, lower secondary education has declined and the proportion of those with tertiary education has increased. Although German natives also tend to have





**Fig. 1.8** Age structure of the national (left) and non-national (right) populations (%), Germany, 2017. (Source: Eurostat)



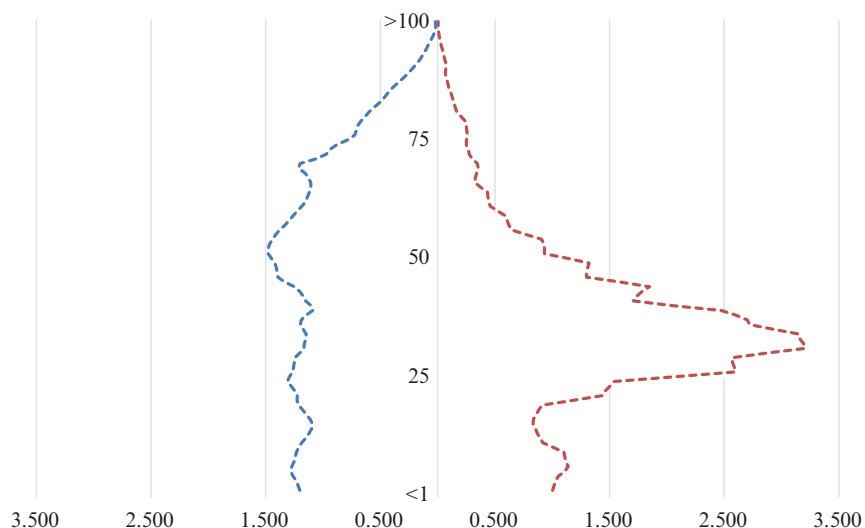
**Fig. 1.9** Educational attainment in Germany by country of birth, 2017. Note: Level 0–2: less than primary, primary and lower secondary education; Level 3–4: upper secondary and post-secondary non-tertiary education; Level 5–8: tertiary education. (Source: Eurostat)

**Table 1.3** Educational attainment of foreign born (% population), Germany

	2008	2017
Level 0–2	37.6	33.3
Level 3–4	44.4	43.3
Level 5–8	18.0	23.3

Source: Eurostat

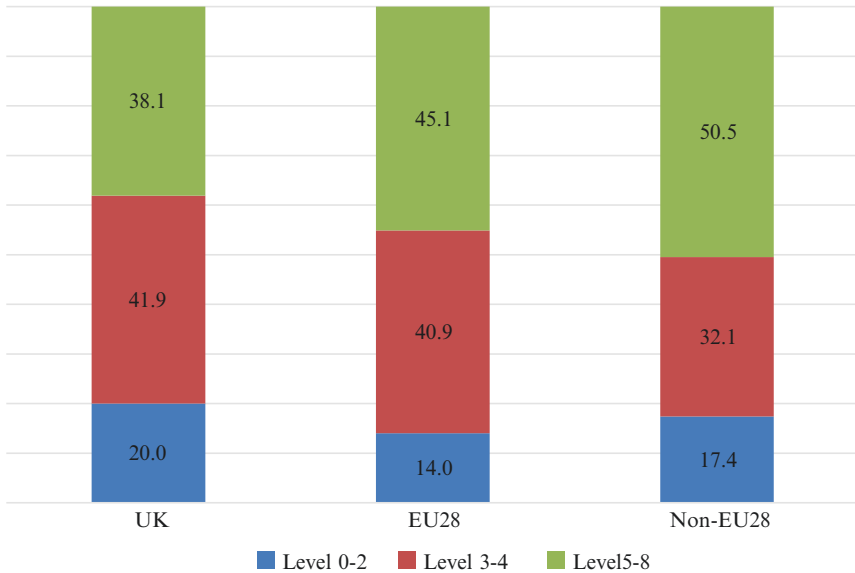
Note: Level 0–2: less than primary, primary and lower secondary education; Level 3–4: upper secondary and post-secondary non-tertiary education; Level 5–8: tertiary education



**Fig. 1.10** Age structure of the national (left) and non-national (right) populations in the UK, 2017. (Source: Eurostat)

higher educational attainment, the increase is not as significant as in the case of immigrants.

In the UK, the share of immigrants was just above 14% of the population in 2017. Figure 1.10 compares the age structure of nationals (left) and non-nationals (right) in the UK. A larger share of the non-nationals is aged between 25 and 35 than in the national population: 31.5% against 13.2%.



**Fig. 1.11** Educational attainment in the UK by country of birth, 2017. Note: Level 0–2: less than primary, primary and lower secondary education; Level 3–4: upper secondary and post-secondary non-tertiary education; Level 5–8: tertiary education. (Source: Eurostat)

Compared to those born in the UK, both EU28 and non-EU28 born are less likely to be categorised among the least educated. Moreover, immigrants are more likely to have attained tertiary-level education (see Fig. 1.11). However, although immigrants have on average attained a greater level of education, this is not correlated with being employed in an appropriate skill-level occupation (Dustmann et al. 2013).

To sum up, among the EU15 countries, the share of immigrants in the population has increased between 2009 and 2017. Due to unfavourable socioeconomic conditions following the Great Recession, this has not happened in certain European peripheral countries, where migration outflows outweighed inflows. In Italy, fiscal policies, in the form of tax cuts, incentivised the retention or the return of high-skilled workers. Immigrants in Europe typically are younger and possess a lower level of education than natives. The UK, Ireland, and Portugal are exceptions as far as educational attainment is concerned. In the UK, both EU and

non-EU immigrants are more educated than natives. In Germany—the largest recipient of immigration in Europe—immigrants are not as highly educated as German natives, but the trend is that the share of highly educated immigrants is increasing over time.

## 1.2 The State of Art in the Macroeconomics of Migration

While a number of studies have analysed the impact of immigration on employment and wages with disaggregate data, a systematic investigation of the effects of immigration on standard macroeconomic variables is still missing. The amount of immigration literature using macroeconometric models is limited, partly due to the absence in many countries of reliable quarterly series for net immigration over a sufficiently long period of time.

Using a Structural Vector Autoregressive (SVAR) estimation, Furlanetto and Robstad (2019) have recently proposed a new identification scheme that enables to disentangle immigration shocks from other macroeconomic shocks. They do so by imposing sign restrictions on a sample of Norwegian quarterly data over the period 1990–2014. Notably, immigration is an endogenous variable in the model and can respond to the state of the economy. The authors find that an exogenous immigration shock lowers unemployment, has a positive effect on prices and on public finances in the medium run, no impact on house prices and household credit, and a negative effect on productivity. Other recent contributions include Kiguchi and Mountford (2019) who provide an analysis based on US annual data. They show that a shock to the working population (coming from immigration but could also be due to domestic factors) results in a temporary reduction in GDP and consumption per capita. D’Albis et al. (2016) use monthly data for France over the period 1994–2008 in a SVAR model where identification of shocks is based on a recursive scheme. The results indicate that immigration responds significantly to France’s macroeconomic conditions and increases GDP per capita. Two other analyses focus on New Zealand—a country for which detailed data on immigration flows is available. In the first, McDonald

(2013) studies the effect of an immigration shock on house prices in a SVAR identified with a recursive scheme. He shows that an immigration shock has a strong positive effect on house prices and construction activity, thus boosting aggregate demand even more than aggregate supply. The second study, by Armstrong and McDonald (2016), extends the previous set-up to include a second immigration shock associated with fluctuations in unemployment in Australia—New Zealand's main neighbouring country. The results indicate that higher net immigration in New Zealand due to a higher unemployment rate in Australia leads to a higher unemployment rate in New Zealand, whereas higher net immigration for other reasons reduces unemployment in New Zealand.

Emigration from OECD countries to the rest of the world is routinely missing from this literature. More generally, there is a prevailing research focus on immigration rather than emigration, which can be partly explained by the absence of comprehensive data in emigration countries and by the fact that policies can influence immigration rates more easily than emigration rates. A notable exception is the study by Docquier et al. (2013), which constructs a database that provides bilateral migrant stocks by education level for 195 origin/destination countries for 1990 and 2000. The authors find that emigration had a negative effect on the wages of the less educated natives, ranging between 0% and -7%, and increased inequality within countries.<sup>4</sup> This study also documents that positive selection on skills and education characterises emigration from both poor and OECD countries.

Finally, regarding the macroeconomic determinants of migration, for which existing literature is still very limited, Lewis and Swannell (2018) have recently estimated a gravity model of the determinants of migration flows using pairwise data from around 160 origin countries to 35 advanced economy destinations over the period 1990–2013. When they interact the various explanatory variables with freedom of movement, they find that the elasticities of migration with respect to macroeconomic variables are not constant across country pairs. Under freedom of movement, the response to macroeconomic variables is stronger, and the response to distance and historical migrant stocks is weaker. However, the elasticity with regard to linguistic and historical variables remains constant. Migration flows are also higher to (from) destinations (origins)

with stronger (weaker) expected GDP growth. In addition, greater labour market flexibility in destination countries is associated with higher inward migration.

In the macroeconomic theory with a focus on migration, reviewed more extensively in Chap. 7, earlier contributions include that by Canova and Ravn (2000), who studied the macroeconomic impact of unskilled migration in the neo-classical growth model, and that by Bentolila et al. (2008), who showed how immigration flattens the slope of the New Keynesian Phillips curve in Spain. In a two-country setting, Mandelman and Zlate (2012) have proposed a Dynamic Stochastic General Equilibrium (DSGE) model with immigration studying the role of remittances for business cycles in Mexico. More recent contributions, building on stylised DSGE models with net migration, include Bandeira et al. (2019), Smith and Thoenissen (2019), and Lozej (2019) with a focus on Greece, New Zealand, and Ireland, respectively, while Hauser and Seneca (2019) study the US case.

### 1.3 An Overview of the Chapters in This Volume

The contributions of this volume analyse, using empirical and theoretical methodologies, the effects of international migration in sending and receiving countries. The topics included touch upon several important issues in the current debates related to the labour market effects of migration for natives, the bi-directional relation between taxation and emigration, migration and the informal economy, business cycle amplification from migration, and brain waste.

The chapters are grouped in two main sections. The first section presents empirical evidence on topics such as the impact of immigration on productivity, the macroeconomic and fiscal consequences of migration in OECD countries, and brain waste. The authors of the chapters in the second section use as a workhorse (and also extend) the search and matching model, both in continuous and discrete time, to study topics related to the labour market effects of migration and its interaction with

taxation. The chapters in the second section perform both steady-state and DSGE analysis, considering both Real Business Cycle and New Keynesian channels.

Starting with the section of the book on empirical evidence, the chapter by Lull ties the volume to the recent burgeoning literature on the microeconomic effects of immigration, coming mostly from labour economics. Lull presents a cross-country analysis of the impact of immigration on productivity and employment. The chapter begins by discussing how the large existing literature on the microeconomic effects of immigration informs the content presented here and how its findings can help solve existing disagreements within that literature. In terms of methodology, push-distance interactions provide relevant and exogenous variation for identification. The results obtained suggest that one percentage point increase in the immigrants' share in the population reduces GDP per capita by 2%, the employment rate by 0.89 percentage points, and average hours worked by 1.28%, while the unemployment rate rises by 0.55 percentage points. Back-of-the-envelope calculations based on a simple production framework provide a structural interpretation of these results. Estimates imply a semi-elasticity of native wages to immigration of  $-0.7$  if the extensive margin of labour supply is ignored and  $+0.12$  on the wages of those who remain working. The effect on immigrant wages is unambiguously negative.

In the next chapter, d'Albis and Boubtane provide empirical evidence on the macroeconomic and fiscal consequences of international migration for OECD countries. The authors use a panel of 19 countries over the period 1980–2015 to study the effects of increases in the net migration rate on per capita GDP and on both the employment rate and the share of working age in total population. Their main econometric tool of analysis is the SVAR model. Moreover, they study the effect of exogenous changes in fiscal balance by decomposing the effects of net taxes and public spending. The empirical evidence is discussed using recent findings of the theoretical literature.

In the last chapter of the first section, Barker discusses the economics of migrants experiencing brain waste. Brain waste, including underemployment, occurs when the country hosting a skilled migrant fails to fully recognise the skills of the worker. The workers experience a skill-job

mismatch, relatively higher unemployment, or weaker powers in the labour market including lower wage levels. The problem of brain waste is of a varying severity across migrant host nations, influenced by migration policy and profile of the economy. The chapter presents a rich set of stylised facts with a focus on Canada as a destination economy for migrants.

The second section of the book offers a collection of essays using as a workhorse the search and matching model to study topics related to the labour market effects of migration and its interaction with taxation. In the first chapter of this section, Chassamboulli discusses recent research on the effect of immigration policies on job creation on the basis of a search and matching model in continuous time. New findings show that various types of immigrants can have a positive impact on employers' incentives to post vacancies and create new jobs, which benefits also competing natives. Policies that restrict the presence of foreign workers in the labour market are less beneficial to natives than policies that do not decrease immigration, but instead shift its composition towards the types of immigrants that benefit the natives the most. This chapter explores one such policy combination that eliminates illegal immigration but allows for foreigners to enter on temporary work permits. Chassamboulli shows that this policy can help attenuate the negative job creation effect of fewer illegal immigrants in the market.

In the following chapter, Kyrkopoulou and Palivos examine the interaction between the informal sector of the economy and undocumented immigration. For this purpose, they use a search and matching model in continuous time, with a formal and an informal sector. Native workers can work in both sectors, whereas undocumented immigrants can work only in the latter. Both native workers and firms choose optimally the sector in which they operate, balancing costs and benefits, for example, taxation versus unemployment benefits and severance payments in the case of workers and taxation and auditing versus subsidies in the case of firms. The chapter analyses and compares the effects of three types of policies, namely deterrence, incentive, and immigration policies, while also considering combinations of these policies.

The next chapter by Bandeira, Caballé, and Vella is motivated by the fiscal austerity measures implemented in peripheral countries of Europe during the recent debt crisis and the surge in emigration that these



economies experienced. They make use of a small open economy model in discrete time, with search and matching frictions and sticky prices, in a DSGE framework. The authors first show that a negative productivity shock increases the job search abroad of the unemployed, with a positive short-run impact on the unemployment of stayers, while it also reinforces the negative consumption effects of the shock and therefore can lead to higher unemployment costs over time. They then study a particular type of fiscal consolidation: the one carried out through an increase in consumption tax rates. The goal is to shed light on the macroeconomic links between VAT hikes and emigration. The results indicate that VAT hikes induce a fall in private consumption demand, which reduces labour demand and increases emigration. The departure of emigrants reinforces the fall in internal demand and employment relative to an economy without labour mobility. This implies that, over time, the unemployment costs of tax-based consolidation are reinforced by emigration. However, these effects are significantly smaller than in the case of labour income tax hikes.

Continuing in a DSGE framework, Lozej studies in the following chapter the business cycle amplification resulting from migration using a search and matching model in discrete time. The chapter presents results to a positive productivity shock and a positive shock to matching efficiency, with both increasing the attractiveness of the economy as host for immigrants. Migration interacts with the domestic labour market through the increase in labour supply from immigration when labour market conditions improve and, consequently, labour market tightness increases. The chapter argues that this leads to an amplification mechanism when there are search frictions, because it becomes more profitable for firms to post vacancies when labour supply is abundant. Unlike in the standard Beveridge curve relationship, the number of searching workers in the labour market and the number of vacancies can move in the same direction, which leads to a sharp increase in employment and aggregate output. Compared to an economy where there is no migration, such mechanism can lead to a substantial amplification of business cycle fluctuations, which can also become more persistent.

Finally, in the last part of this book, a historian and a political scientist, Comte and Kyriazi respectively, evaluate the new insights that the

contributions in this volume offer through the research methods of macroeconomists for other disciplines, namely history and political science. They show that macroeconomic research could help to develop the economic history of migration, the history of the European Union, and the history of the conflicts surrounding immigration. Conversely, they propose integrating in macroeconomic analysis the historical and political construction of labour markets. They detail how increasing politicisation of migration in the context of gradually eroding political borders calls for innovative thinking that transcends disciplinary boundaries. Last, they point to a number of ways in which macroeconomic findings could be more firmly anchored in their political and historical context and offer suggestions on how interdisciplinary collaboration can be enhanced through common projects on current debates in the field of migration studies.

**Acknowledgements** Financial support through the EU Horizon 2020 Marie Skłodowska-Curie Grant 798015 (EuroCrisisMove) is gratefully acknowledged. Harvey Stafford provided excellent research assistance for Section 1.1 of this chapter.

## Notes

1. Eurostat's population statistics contain data on the stock and flows of migrants. Net migration statistics are also provided by taking the difference between the change in total population and the estimated change in the natural population, that is the change due to mortality and natality. The major advantage of this statistic is that it is available for the majority of EU countries and there is an extended time series. At the same time, certain limitations arise due to the fact that estimation of population changes depended on each country's administrative records, which are not always up to date. Therefore, statistical adjustments are often required (e.g. census-related revisions). Eurostat population statistics also contain comprehensive statistics (often since 2008) of the population by either citizenship or country of birth. This statistic directly captures migration and not on a residual basis. However, this statistic is again not without

- limitations. Administrative records are often inaccurate, and furthermore, said records suffer from impact comparability.
2. Luxembourg is omitted due to its population of less than 1 million, which leads to a large immigrant share.
  3. The European Economic Area unites EU member states with Iceland, Liechtenstein, and Norway (the EFTA) to form the ‘single market’, enabling the free movement of goods, services, capital, and people. Note that this statistic excludes the reporting country.
  4. For additional studies focusing on emigration, rather than immigration, see the review of the literature in Chap. 7.

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