Chapter 3. The contribution of recent refugee flows to the labour force

This chapter looks at the labour market impact of recent refugee inflows towards European countries, drawing lessons from past experience and looking beyond the most recent developments to account for the ongoing process of refugees’ labour market entry. It offers a rigorous assessment of the potential impact of recent refugee inflows on the working-age population and labour force of European countries up to 2020, taking into account the specificity of refugees and their interactions with the labour market. Although such an exercise does not provide a definitive response to the hopes or concerns regarding the labour market impact of refugees, it will at least help to frame expectations.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
3. THE CONTRIBUTION OF RECENT REFUGEE FLOWS TO THE LABOUR FORCE

Introduction

The world refugee population has increased significantly in the recent years, from 11.1 million in mid-2013 to 18.5 million in mid-2017. During this period, the refugee population in OECD countries has tripled, from 2 million to 5.9 million, while it has doubled in the European Union (from 920,000 to 2.1 million).

In a number of OECD countries, this rapid increase has sparked a public debate on the potential economic impact of these large inflows. Some have emphasised the fiscal costs associated with hosting an increasing number of refugees, or the risk that they reduce job opportunities for natives in host countries. By contrast, others have suggested that refugees may help slow down population ageing, alleviate labour shortages in specific sectors and generate new business opportunities.

Although attempts have been made to evaluate rigorously some of these arguments, this debate is often fuelled by extreme views extrapolating from dramatic events or anecdotes. Moreover, looking at the economic and labour market impact only through the lens of recent, large arrivals may be misleading because of the time involved in processing a large number of asylum applications and initiating the integration of the refugees who are going to stay in the host country.

This chapter focuses on the labour market impact of recent refugee inflows towards European countries, drawing lessons from past experience and looking beyond the most recent developments to account for the ongoing process of refugees’ labour market entry. It provides an analysis of the contribution of refugees to the dynamics of the working-age population and the labour force. Looking at the supply of labour is a prerequisite for a more complete analysis of labour market outcomes, as well as potential transitional effects. This chapter offers a rigorous assessment of the potential impact of recent refugee inflows on the working-age population and labour force of European countries up to 2020, taking into account the specificity of refugees and their interactions with the labour market. Although such an exercise does not provide a definitive response to the hopes or concerns regarding the labour market impact of refugees, it will at least help to frame expectations.

The first section examines the recent trends in asylum applications and admissions of refugees in European countries, as well as the available evidence on the economic consequences of these inflows. The second section discusses the labour market impact of major refugee inflows in OECD countries in recent decades, which helps put the current European experience in perspective. The third section presents the methodology used to estimate the impact of refugee inflows on the working-age population and the labour force in European countries through 2020. The fourth section presents the results of these estimates and provides extensions of the main analysis by looking at the potential role of rejected asylum seekers and family members of refugees.

Main findings

- European countries received 4 million asylum applications between January 2014 and December 2017, three times as many as during the previous four-year period. During the same period (2014-17), about 1.6 million individuals were granted some form of protection.
• Historical evidence suggests that large inflows of humanitarian migrants in OECD countries have generally had little impact on the labour market outcomes of the native-born at the national level.

• At the local level, or for specific population sub-groups, however, there is evidence that refugee arrivals can have a negative impact, especially when refugees compete for the same jobs as the native-born. This is, for example, the case in Turkey where Syrian refugees have displaced native-born workers in the informal sector.

• For European countries as a whole, the estimated relative impact of recent refugee inflows on the working-age population is small, projected to reach no more than one-third of 1% by December 2020. In terms of labour force, since participation rates of refugees are typically very low in the early period of their stay in the host country, the magnitude of the aggregate net impact is estimated to be even smaller, at less than one-quarter of 1% by December 2020.

• For about half of European countries, refugee arrivals will have virtually no impact on the labour force, and most other European countries will experience only a moderate impact by the end of 2020.

• This impact is expected to be significantly higher in Austria, Greece and Sweden, however, with at least a 0.5% increase in the labour force and up to 0.8% for Germany.

• In countries with the highest aggregate effects, the impact is likely to be much larger in specific segments of the labour market: among young low-educated men, it could reach about 15% in Austria and Germany.

• Since accessing employment takes time, most of the increase in the labour force will result in an increase in unemployment rather than in employment. This is notably the case in Germany, where the number of unemployed could increase by about 6% by the end of 2020.

• In absence of any return, the cumulative number of rejected asylum seekers could reach 1.2 million by the end of 2020. The effect on the informal labour market will depend on the incidence of voluntary returns and on the efficiency of enforcement measures.

• Through family reunification, inflows of family migrants from the main origin countries of recent refugees have increased and are likely to continue. For Syrians, for example, family reunification could amount to up to 50% of the initial inflow of refugee.

• Young, low-educated men are overrepresented among refugees. Since this population group is already vulnerable in most host countries, well-targeted measures are needed to provide them with adequate support. Further deterioration of employment outcomes in this group could negatively affect the public perception of the impact of refugees on the economy.

• Prompt access to the labour market affects many other dimensions of refugees’ social integration. It is critical to promote integration policies that maximise refugees’ access to employment.
Recent trends in humanitarian inflows towards European countries

Since 2014, European countries have witnessed the largest inflow of humanitarian migrants since World War II. This is due, in part, to the massive displacement of population occasioned by the Syrian War. However, conflicts and humanitarian crises in other countries have also played a role (e.g. in Afghanistan, Iraq, Sudan or the Horn of Africa). Altogether, European countries have received 4 million asylum applications between January 2014 and December 2017. This is nearly three times as many as during the previous four-year period (Jan. 2010-Dec. 2013). About one-quarter (960 000) of those applications were made by Syrian nationals (Figure 3.1). During the same period (Jan. 2014–Dec. 2017), about 1.6 million individuals were granted some form of protection in first instance (asylum under the Geneva Convention, subsidiary or temporary protection), including 780 000 Syrians.

Figure 3.1. Monthly asylum applications in Europe*, January 2011 to December 2017

http://dx.doi.org/10.1787/888933751593

*: EU-28 countries, Norway and Switzerland. Source: Eurostat.

Although inflows of humanitarian migrants towards European countries in the last three years have been high by historical standards, they have remained much lower in absolute and relative terms than inflows experienced by countries neighbouring Syria. In March 2018, about 3.5 million Syrians benefited from temporary protection in Turkey, 1 million in Lebanon, and about 660 000 in Jordan (UNHCR, 2018[1]).

Other OECD countries have also witnessed increasing inflows of humanitarian migrants. In Canada, for example, permanent entries for humanitarian reasons have increased from an average of 25 000 per year in 2011-14 to 32 000 in 2015 and to almost 60 000 in 2016. This figure includes both refugees admitted after having claimed asylum in Canada and refugees resettled from abroad in the framework of sponsorship programmes. The majority of this increase was due to the commitment made in late 2015 by the Canadian government to resettle specifically Syrian refugees. In 2017, permanent entries for
humanitarian reasons declined by 30%, due to the decrease in the number of resettled refugees.

In the United States, a dual system of in-country asylum applications and refugee resettlement also exists, with the latter component being subject to a yearly ceiling. In fiscal years (FY) 2013 to 2015, admissions through resettlement reached the refugee ceiling of 70 000 per year. Partly in response to the Syrian conflict, the ceiling was raised in FY 2016 and admissions increased to 85 000. In FY 2017, however, the number of refugees resettled into the country was capped at 50 000. Although in-country asylum applications have increased steadily in recent years (from 45 000 in FY 2013 to about 140 000 in FY 2017), the number of approved claims has remained stable at around 10 000-15 000 per year, with an increasing backlog of pending applications (close to 300 000 at the end of FY 2017, while it was only 30 000 at the end of FY 2013).

For European countries, the decline in asylum applications that started in the second half of 2016 continued in 2017, with about 60 000 monthly applications, compared to 130 000 between July 2015 and September 2016 (reaching a peak between August and November 2015, with a monthly average of more than 170 000 applications). Despite this slowdown, because of the time required to process asylum claims, the number of pending applications remains very high, at 950 000 in December 2017, including 110 000 Syrians (Figure 3.2).

**Figure 3.2. Monthly asylum decisions and stock of pending applications in Europe*, January 2011 to December 2017**

*: EU-28 countries, Norway and Switzerland.

*Note:* Only first instance decisions are shown here.

*Source:* Eurostat.

Compared to previous years, the sharp increase in asylum seeker inflows in 2015 and 2016 had little effect on the age and sex distribution of asylum applicants or accepted refugees in European countries (Figure 3.3). Throughout the period 2011-17, about 79% of asylum applicants were aged 15-64, whereas children represented about 21%. Among working-age asylum applicants (i.e. aged 15-64), the share of individuals aged 18-34 was
about 68%. In addition, three-quarters of working-age asylum applicants were men. As shown in Figure 3.3 (Panels A and B), these characteristics of asylum applicants do not differ significantly from those of accepted refugees.

Figure 3.3. Age and sex distribution of asylum applicants and refugees admitted in Europe*, 2011-17

![Chart](chart.png)

*: EU-28 countries, Norway and Switzerland.  
*Source: Eurostat.*  
StatLink [http://dx.doi.org/10.1787/888933751631](http://dx.doi.org/10.1787/888933751631)

**Economic impact: What do we know?**

Recent inflows have a potential economic impact, due to the fiscal cost of hosting a larger-than-usual number of asylum seekers and refugees, and in terms of labour market adjustment, in a context where a large share of new refugees are of working age.

The cost of processing a large number of asylum applications and, more importantly, providing means of subsistence to asylum seekers while their applications are examined, has been the focus of previous OECD analyses (OECD, 2015[2]; OECD, 2017[3]). Frequently, before gainful employment is obtained, a significant proportion of refugees will continue to be dependent on the welfare systems of host countries. In addition, for numerous refugees, access to the labour market and proper social integration are conditional on adequate language training, as well as professional training if necessary, which are often largely financed by public funds. Although such expenses can strain local and national budgets in the short run, they can also have a positive impact on the economy by boosting aggregate demand.

An OECD (2017[4]) analysis, focusing on countries having received a relatively high number of asylum applications as a share of the population, has shown that fiscal costs as a share of GDP peaked in 2016 in most countries, ranging from 0.1% of GDP in Switzerland to around 0.9% in Sweden. These fiscal costs across the eight countries covered (excluding Turkey and Switzerland) amount to a cumulative 0.6% of EU GDP from 2016-18 (1.2% of the aggregate GDP in the eight EU countries covered). This may underestimate EU-wide expenditure, as other EU countries have also incurred expenditures to
address higher numbers of asylum seekers. This boost to spending and demand will have had small, positive spillover effects on other European countries and trading partners.

The European Commission (2016[5]) provided early forecasts of the macroeconomic impact, focusing on the fiscal dimension and economic growth. The model used in that report, which includes labour market adjustment, predicts a modest rise in employment and a modest decline in wages (respectively +0.2% and -0.2% by 2018, compared to the baseline). The report points to the key role of integration policies in minimising the long-term fiscal cost of refugees, a conclusion shared in particular by Aiyar et al. (2016[6]), who review economic aspects of the surge in asylum seekers in the European Union.

Similar exercises have been carried out at the country level. For instance, Burggraeve and Piton (2016[7]) study the impact on the Belgian economy and forecast a modest increase of the labour force (+30,000 by 2020 compared to the baseline scenario, or less than 0.6% of the total labour force). For Germany, the European Commission (2016[8]) assessed the economic impact of the 2014-16 refugee inflow. Overall, they find a small negative impact on the employment of natives and a small increase in unemployment, especially for the low-skilled who are potentially more exposed to competition from refugees. Stähler (2017[9]) also analyses the impact on the German economy and finds that poor integration of refugees could lead to negative economic consequences, both on the labour market and in terms of per capita output.

The results described above have all been obtained in the context of economy-wide models, and rely on a number of assumptions regarding the evolution of inflows and the labour market integration of refugees. A comprehensive assessment of the actual labour market impact in European countries, in terms of wages and employment, based on observed outcomes, will only be feasible in a few years, with sufficient hindsight.

The additional labour force provided by refugees has also been, in some cases, considered as a potential means to alleviate labour shortages in the context of an ageing European workforce. The recent refugee inflows, however, occurred as many European countries were recovering from the deep global financial crisis and were still facing high levels of unemployment. In this context, the public perception has not always been positive, with fears of detrimental effects on wages or employment, especially for low-skilled native workers (Figure 3.4). It should be stressed, however, that it can be challenging to disentangle actual concerns about the labour market impact of refugees from other preoccupations, such as a perception of increased insecurity and the dilution of national or cultural identity. In practice, identity and economic concerns tend to be highly correlated, and the expression of the latter does not necessarily imply that the former plays a lesser role in shaping public opinion about refugees (or immigrants more generally). In fact, as shown in Figure 3.4, countries where a high number of refugees have been welcomed, such as Sweden and Germany, tend to have a particularly positive appreciation of the economic contribution of refugees.

Beyond public opinion, most of the economic literature devoted to analysing the labour market impact of immigration in general, and humanitarian inflows in particular, has found little evidence of significant negative consequences. However, this still remains a contentious issue in academic and policy discussions (Dustmann, Glitz and Frattini, 2008[10]; Dustmann, Schönberg and Stuhler, 2016[11]).
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Figure 3.4. Public opinion on the economic impact of refugees in selected European countries

Share of respondents holding positive or negative views, 2016

Source: Pew Research Center, Spring 2016 Global Attitudes Survey (Q51a).

StatLink   http://dx.doi.org/10.1787/888933751650

Existing evidence on the labour market impact of humanitarian migration towards OECD countries

Before analysing in more detail the impact of the recent humanitarian migration in the European context, it is useful to broaden the historical and geographical scope to provide an overview of some of the past large humanitarian inflows in OECD countries, and of the recent inflows in some non-European OECD countries. For some of the cases reviewed below, there has been little investigation of potential economic effects of the arrivals of refugees in destination countries, while others have generated significant academic debates.

Indeed, refugee flows play a specific role in the academic literature devoted to the analysis of the economic impact of immigration. Due to the difficulty of identifying the causal effect of immigration on employment or wages in settings where the location choices of immigrants may have been determined by local employment prospects or wage differences, a number of papers have used humanitarian flows as natural experiments to identify such effects. The involuntary nature of these inflows implies that they can sometimes provide an exogenous source of variation in the level of immigration across space or time (Borjas and Monras, 2017[12]; Clemens and Hunt, 2017[13]).

One of the key results from this literature is that humanitarian migration flows have generally been found to have either relatively modest negative impact on labour market outcomes of natives (wages and employment), or no impact at all. Some studies have identified more significant negative effects, while other works have noted that the skill complementarity between refugees and natives can have positive consequences for natives. Some of the relevant findings of these studies are discussed below. However, in keeping with the objective of this chapter, the different cases reviewed are above all an opportunity to assess the magnitude of the change in working-age population and labour...
force in various contexts, which will provide a useful benchmark for the results discussed afterwards on the current European situation.

**The Indochinese refugee crisis, 1975-95**

One of the earliest and most significant humanitarian migration events in which several OECD countries played a role in the post-World War II era has been the flight of more than three million people from the former French colonies of Indochina – Viet Nam, Cambodia and Laos – following the 1975 communist victories and over the next two decades (UNHCR, 2000[14]; OECD, 2016[15]). Most refugees initially fled (often by boat), to other Southeast Asian countries (Thailand, Malaysia, Hong Kong (China), Indonesia, the Philippines, etc.). By the end of the 1970s, after the arrival of about 700 000 refugees in five years, these countries of first asylum were no longer able nor willing to accept them. The 1979 Geneva Meeting on Refugees and Displaced Persons in Southeast Asia, organised by the United Nations, ultimately led to the resettlement of more than 1.3 million refugees from Southeast Asian camps to OECD countries by 1995, with about half of them being resettled between mid-1979 and mid-1982. Vietnamese made up about 57% of the resettled refugees, Laotians 24% and Cambodians 18%.

As noted in UNHCR (2000[14]), the United States has been the main destination country of the resettled Indochinese refugees with about 825 000 persons, followed by Australia, Canada (137 000 each) and France (95 000). In addition, in the framework of the Orderly Departure Programme (ODP), by which Vietnamese authorities permitted the orderly departure of individuals to resettlement countries, more than 400 000 Vietnamese were resettled in the United States.

Considering the magnitude of these inflows, and the fact that the bulk of the resettlement occurred when a number of OECD countries were experiencing the two oil crises, with relatively low growth and rising unemployment, there has been surprisingly little academic research regarding their economic impact in resettlement countries.

Comparing these inflows of refugees to the working-age population of host countries is the first step in assessing their potential impact on the labour market. One key consideration is that the overall figures mentioned above concern refugees resettled over a period of 20 years. An upper-bound estimate of the impact of these inflows on the working-age population of host countries can be obtained by focusing on the early inflows at the beginning of the 1980s and assuming that three-quarters of the total inflows occurred at that time (which is almost certainly an overestimation). For the sake of obtaining this upper-bound approximation, it is assumed that all the refugees were of working-age. For the United States and Canada, this leads to an estimated upper-bound increase of 0.6% of the working-age population due to these resettled Indochinese refugees. The estimate is about 1% for Australia, and 0.2% for France.10

In the case of the United States, as documented by Parsons and Vézina (2018[16]), California ended up hosting about 22% of the earliest Vietnamese refugee wave resettled to the country (in 1975), followed by Texas (8%). This concentration increased over time and, by 1995, 45% of the Vietnamese population living in the United States were located in California (Parsons and Vézina, 2018[16]). Assuming that the spatial distribution of Cambodian and Laotian refugees mirrored that of the Vietnamese, the state could therefore have hosted about 28% of the resettled refugees from this region in 1980, which would have increased the working-age population of California by 1.7% at the time.11

Although this is significantly higher than the estimate obtained for the United States as a whole, it remains a relatively small number. However, as is often the case for newly
arrived immigrants, these refugees tended to cluster in ethnic enclaves; it is therefore possible that the local impact has been larger in these areas.

**The Mariel Boatlift, 1980**

The Mariel Boatlift, which occurred between Cuba and the United States from April to September 1980, was a much smaller humanitarian inflow, but also much more concentrated in space and time. In April 1980, after about 10,000 Cubans tried to obtain asylum by taking refuge in the Peruvian embassy in Havana, several South American countries along with the United States committed to accepting some of the asylum seekers. The Cuban government then opened the possibility for people to leave Cuba through the port of Mariel. Cuban exiles in the United States quickly organised a boatlift to transport people from Mariel (called “Marielitos”) to the United States.

Due to geographical proximity, half of the Cubans in the United States lived in the Miami metropolitan area in 1980, which is where the majority of the Marielitos landed. In total, about 125,000 Cubans moved to the United States during the six-month boatlift. According to Borjas (2017[17]), about 60% of them remained in Miami. The 1980 census, which occurred just before the Mariel Boatlift, indicates that the working-age population (15-64) of the Miami metropolitan area was 1.1 million at that time. Assuming that all the Marielitos were in that age group, then the working-age population of Miami would have increased by 7% as a direct result of the boatlift. Since most of the Cuban refugees were low-educated, their arrival could have had a detrimental impact on the employment outcomes of low-educated workers already present in Miami.

Card (1990[18]) examined the impact of the Mariel boatlift on the labour market of the city by comparing Miami to other comparable US cities which did not experience a sudden increase in labour supply. He found no evidence of a detrimental impact on the wages or employment opportunities of low-skilled non-Cuban workers. This particular event was recently reanalysed by Borjas (2017[17]) and Peri and Yasenov (2018[19]). While Borjas finds that the wages of high-school dropouts in Miami declined by as much as 10 to 30% as a result of the Mariel boatlift, Peri and Yasenov are in agreement with the earlier results obtained by Card. Taking stock of this debate, Clemens and Hunt (2017[13]) find that some of the very negative estimates suffer from methodological problems and that the small sample size of the surveys used to analyse this issue prevents drawing definitive conclusions. They show that the Mariel boatlift may have had a small temporary negative impact on the wages of the low-educated in Miami (-2% to -8%), but that it may also have had no effect at all.

**Refugees of the 1990s Yugoslav Wars**

Large inflows of humanitarian migrants occurred in Europe due to the breakup of Yugoslavia. About 700,000 people took refuge in Western Europe during the Bosnian War (1992-1995), including 345,000 in Germany and 80,000 in Austria. The Kosovo War (1998-99) led about 100,000 people to flee towards Western Europe. Naturally, over the course of the 1990s, much larger numbers were displaced across the borders of ex-Yugoslavia towards neighbouring countries, or internally in Bosnia, Croatia and Serbia (UNHCR, 2000[14]; OECD, 2016[15]).

An upper-bound on the impact of these inflows on the working-age population of host countries can be estimated by assuming that all refugees were of working-age and dividing their number by the corresponding population of destination countries in 1990. The largest impact is found in Austria (1.5%), while it reaches 0.6% in Germany. Due to
the concentration of refugees in specific regions in these countries, the impact may have been higher locally. According to Borjas and Monras (2017[12]), 34% of the refugees who arrived in Austria settled in Vienna. In 1990, the working-age population of Vienna was 1 million, which implies (at most) a local impact of 2.7% on the working-age population of the capital.

Some papers have examined the labour market impact of these refugee inflows. Looking at the labour market of EU countries, Angrist and Kugler (2003[20]) focus on the changes in non-EU immigration brought about by the wars in Bosnia and Kosovo in the 1990s. Using the distance between destination countries and Sarajevo or Pristina as an instrument for non-EU immigration, they find evidence of negative effects on the employment of natives, especially in countries with less flexible labour markets. Foged and Peri (2016[21]) study the labour market impact of refugee flows in Denmark between 1995 and 2003, among which immigrants from former Yugoslavia figured prominently. They exploit the existence of a refugee dispersal policy that had long-term implications for the geographical location of immigrants across the country. Using longitudinal data, they find positive impacts of the inflows on the labour market outcomes of natives, in terms of occupational complexity, occupational mobility and wages.

**Syrian refugees in Turkey, 2011 - Present**

Turkey alone is currently hosting more than twice as many Syrians as the total number of Syrians who have received some protection in all EU countries since January 2014. As noted above, as of March 2018, about 3.5 million Syrians benefited from temporary protection in Turkey (including 45% of children under 18 and 3% of people aged 60+). Among these, about 240 000 reside in refugee camps administered by the Disaster and Emergency Management Authority of the Turkish government (AFAD); most of the camps are located near the Syrian border. Outside the camps, Syrian refugees now make up nearly 10% of the population of several border cities. The largest metropolitan areas, especially Istanbul and Ankara, as well as the Aegean coast, also attract many refugees seeking job opportunities.

Access to the labour market is a key issue for Syrian refugees, with many taking up informal jobs. Indeed, prior to January 2016, refugees could only apply for a work permit if they held a residence permit, which was only the case for a small minority. Under the current regulation, Syrian refugees can apply for a work permit six months after being registered under temporary protection. These permits, however, are only valid in the locality of registration, which limits their attractiveness because most Syrian refugees are registered in border areas with few employment opportunities. Securing a formal job in another location therefore requires registering and obtaining a work permit in that same location. As a result of these constraints, less than 14 000 work permits had been issued to Syrians at the end of 2016. Although there was an increase in 2017, with about 21 000 permits delivered to Syrian refugees, and although Syrians involved in seasonal work in agriculture are still exempted from requiring a work permit, these figures remain well below the potential number of Syrian refugees in need of work.

As of March 2018, the 1.9 million working-age Syrian refugees living in Turkey represented about 3% of the total working-age population of the country, with a much higher proportion in border cities, as well as in Istanbul and Ankara. Due to the constraints in obtaining work permits, it is estimated that most Syrian refugees in employment have informal jobs, which are common in Turkey (about 20% of total employment).
Several recent papers have attempted to estimate the impact of Syrian refugees on the Turkish economy, and particularly on the labour market. Ceritoglu et al. (2017[22]) treat the massive and sudden wave of forced immigration from Syria to Turkey as a natural experiment to estimate the impact of Syrian refugees on the labour market outcomes of natives. Using a difference-in-differences strategy, they find that immigration has negatively affected the employment outcomes of natives in the South-eastern border area, while its impact on wages has been negligible. They document notable employment losses among informal workers as a consequence of refugee inflows, although formal employment increased slightly, potentially due to increased demand for social services. They also find that disadvantaged groups (women, younger workers and less-educated workers) have been more affected, and that the prevalence of informal employment in the Turkish labour market has amplified the negative impact of Syrian refugee inflows on natives’ labour market outcomes. Using similar data but a different empirical approach, which relies on instrumental variables, Del Carpio and Wagner (2016[23]) find similar results: Syrian refugees induce large scale displacement of the native-born in the informal sector. There are also increases in formal employment for the Turks – though only for men without completed high school education. The low-educated and women experience net displacement from the labour market and, together with those in the informal sector, declining earning opportunities.

In related work, Akgündüz, van den Berg and Hassink (2018[24]) analyse how the Syrian refugee inflows into Turkey affected firm entry and performance. They find that hosting refugees is favourable for firms: while total firm entry does not seem to be significantly affected, they observe a substantial increase in the number of new foreign-owned firms, which may be driven by refugees’ entrepreneurship.

Empirical approach

Basic hypotheses and data

To produce estimates of the number of refugees who will enter the working-age population and the labour force in European countries over the years and up to December 2020, different pieces of information are needed. The entry of refugees in the working-age population of a given country results from the interaction between several factors: the inflow of asylum seekers in the country, which determines the potential number of individuals concerned; the time needed to process asylum applications, which affects the timing of potential labour market entries; and the admission rate, i.e. the share of asylum seekers who obtain refugee status, or some other form of protection. In addition, the number of refugees entering the labour force can be estimated using assumptions about the pattern of labour market participation of refugees over time. Labour market participation among refugees is itself determined by their socio-demographic characteristics, in particular gender, age and education, and their duration of stay in the country.

Some data on the number of humanitarian migrants, such as the inflows of asylum seekers, is directly available from Eurostat for all EU countries (plus Norway and Switzerland). Other information, such as admission rates, is not so readily available and needs to be estimated. Finally, some data is not collected systematically and cannot be inferred easily. This is the case for processing time in particular. Although some countries publish some information about processing time (e.g. Sweden), most do not, and published data are not necessarily comparable across countries or available by country of
Estimates of labour market participation of refugees are based on information gathered on earlier arrivals for two reasons. The first reason is that labour market integration of refugees takes place gradually (Bevelander and Pendakur, 2014[25]). The second reason is data availability, as data on labour market outcomes of recently arrived refugees is available only for a handful of countries (Brücker et al., 2016[26]). Therefore, the analysis in this chapter relies on the ad hoc module of the 2014 EU Labour Force Survey, which includes questions on the motive for migration. This survey is quite recent and covers most EU countries (OECD and European Commission, 2016[27]). It is necessary to bear in mind, however, that refugees from recent waves might differ from earlier refugees along several dimensions, which could affect their integration pattern over time. Moreover, the length of waiting time between asylum application and decision can have a negative impact on labour market integration prospects of refugees (Hainmueller, Hangaartner and Lawrence, 2016[28]). Since the recent refugee surge has led to a significant increase in processing time in several European countries, it is quite possible that labour market outcomes of those refugees will be negatively affected and that their integration will be slower than for earlier refugee cohorts. In addition, while refugees do not necessarily compete for jobs with native workers due to different skill sets, they are more likely to compete with one another. When many refugees with similar characteristics enter the labour market at the same time it might generate crowding effects which can slow their access to employment. Lastly, labour market conditions at entry may have long-lasting effects on integration prospects.

The assessment of the magnitude of the labour supply shift is further complicated by the potential participation in the labour market of asylum seekers who are waiting for a decision: according to EU regulations, asylum seekers are normally able to work after at most 12 months following their asylum request even if it is still under examination, with some countries having shorter waiting periods (Figure 3.5). There are however some restrictions to labour market access for asylum seekers as they might need to secure a work permit, or be allowed to work only in specific occupations. What is more, the possibility for asylum seekers to find work shortly after arrival is limited by other obstacles such as linguistic barriers, limited recognition of qualifications and past experience, lack of country-specific knowledge of the labour market, lack of social capital and, in many cases, trauma related to war and flight. Their participation in the labour market is therefore likely to be even lower than that of individuals who have recently obtained refugee status.

The analysis presented in this chapter looks at the labour market contribution of people in need of protection only when they have formally obtained a refugee status or another type of protection. It disregards the potential contribution of people awaiting a decision on their asylum claim, although some of them may be entitled to work.
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Figure 3.5. Most favourable waiting periods for accessing the labour market for asylum seekers in selected OECD countries


Refugee admissions over time

Admission rates are assumed to be independent of gender and age, and are estimated by country of origin, country of destination and month of application. Unfortunately, there is no comprehensive data source linking applications and decisions over time for all European countries. Expected admission rates for each monthly cohort of applicants are therefore approximated by the ratio of positive decisions in the next 12 months to the total number of decisions over the same period. The rationale for this approach is that most applications received in a given month are dealt with within a year. Although this ratio conflates decisions made about applications that were received at different points in time, the use of a 12-month window smooths the series of admission rates.

The method developed to estimate processing time is detailed in Box 3.1. The number of new refugees can then be computed for each month by combining new asylum applications, admission rates, and the relevant processing time.
Box 3.1. Estimating the distribution of processing time

Processing time is estimated using insights from queuing models. In a stable system (i.e. when inflows and outflows are balanced), Little’s law states that the average processing time is equal to the number of customers in the queue (i.e. in this context, asylum seekers waiting for a decision) divided by the arrival rate (new inflows of asylum seekers in the “queue”). Obviously, European asylum systems have not been in a stable state in recent periods, with inflows exceeding processing capacity in many countries. This resulted in an increase in pending applications. Using Little’s law is therefore likely to underestimate average processing time. In addition, this approach to estimate the labour supply shift due to refugees requires more information on the distribution of processing times than a simple average. For each period and origin-destination couple, a “prospective” stock-flow ratio is computed, which accounts for both current and future pending applications, and current and future asylum applications.

A direct application of Little’s law would rely only on “contemporary” information to define the stock-flow ratio as $P(t - 1)/A(t)$, where $P(t - 1)$ is the number of pending applications at the end of period $t - 1$ and $A(t)$ is the number of new applications during period $t$. The stock-flow ratio is instead computed using a six-month prospective window after the current period: $\left[ P(t - 1)^{1/3} \prod_{i=t}^{t+5} P(i)^{1/9} \right] / \left[ A(t)^{1/3} \prod_{i=t+1}^{t+6} A(i)^{1/9} \right]$. This is simply a geometric average of contemporary and future stock-flow ratios, putting one-third of the weight on the contemporary ratio and two-thirds on future ones.

Then, for each period and destination country, quartiles of stock-flow ratios are computed over all origin countries and five-month windows. These quartiles are then rescaled by an origin-destination-month average stock-flow ratio. For new asylum applications received in a given month, this gives an estimation of the month at which decisions will have been made for the 25% of applications which were processed the most rapidly, the following 25%, and so on.

Country-specific participation and employment rates

The microdata from the 2014 EU Labour Force Survey are used to estimate country-specific participation rates for refugees, by duration of stay and socio-demographic characteristics (i.e. gender, age group and education). Due to the relatively small sample size of refugees in the survey, and missing categories of individuals in several countries, it is not possible to rely on average participation rates that would be computed directly from the survey for different categories of refugees. Instead, an econometric model is estimated to explain labour market participation by key individual characteristics (gender, age group [14-17; 18-34; 35-64], duration of stay in the host country [from less than one year to ten years], and education [ISCED 1 or less, ISCED 2, ISCED 3, ISCED 4 and more12]). A single linear regression, comprising all countries in the survey, is estimated including host country fixed effects to account for differences in average participation.13 Using the estimated coefficients, labour market participation can be predicted for all categories of refugees, including out-of-sample. These labour market participation rates can then be applied to the relevant groups of refugees. The same approach is used to compute employment rates by gender, age group and education.

The results of these estimations, shown in Annex Figure 3.A.1, match patterns that have already been identified in the literature on the labour market integration of humanitarian
migrants, in particular in European countries (Åslund, Forslund and Liljeberg, 2017[29]; Bratsberg, Raum and Røed, 2017[30]; Schultz-Nielsen, 2017[31]; Fasani, Frattini and Minale, 2018[32]; OECD, 2017[33]). Refugees initially have low participation and employment rates and, although their outcomes improve with duration of stay, they remain below that of natives and other categories of immigrants. In most cases, refugee women have even more difficulties accessing employment than refugee men or women having immigrated for non-humanitarian motives.

Distribution of educational attainment of refugees

Labour market integration prospects for refugees depend, as for other migrant groups, on educational attainment: on average, better-educated individuals have much better employment prospects than those with only a basic education. This can be explained by a better fit with labour demand in host countries, better ability to acquire language skills, or other unobservable factors correlated with formal education. In addition, because natives’ and refugees’ educational attainment is likely to be quite different, education is also a key dimension for the analysis of the labour market impact. Indeed, refugees are likely to be concentrated at the bottom, and to a lesser extent at the top, of the education distribution of host countries, which implies that labour market impacts may differ strongly across educational groups.

Although some recent surveys or administrative sources provide information on the educational attainment of asylum seekers or refugees (Buber-Ennser et al., 2016[34]; Brücker et al., 2016[26]), there is no comprehensive and comparable data at the European level.

In order to get comprehensive information on the potential distribution of education among recent asylum seekers, the analysis carried out in this chapter uses data on the distribution of education in origin countries in 2010 (Lutz, Butz and KC, 2014[35]). In the absence of strong selection effects, these distributions would be acceptable approximations for the distribution of education among asylum seekers. As can be seen in Figure 3.6, which depicts the distribution of education of Syrians and Afghans in their origin countries (Panel A), and in various transit or destination countries (Panels B, C and D), it is, however, likely that selection is not negligible (this is particularly striking for Syrians). Indeed, better-educated individuals are probably more likely to have the resources required to escape conflict areas and to seek refuge beyond neighbouring countries. In the presence of positive selection, the use of origin countries’ distribution of education would induce two types of bias: (i) it would overstate the impact on the lower part of the distribution of host countries, and (ii) since education is a key determinant of labour market participation and employment, it would underestimate the aggregate labour market outcomes of refugees.
Projections for 2018-20

At the time of writing, complete data on asylum applications and decisions were available from Eurostat for all European countries up to December 2017. As discussed above, considering the delay between asylum application and eventual labour market entry, asylum seekers having completed their application by the end of 2017 will start entering the labour market of their host country a couple of months later, at the earliest. In order to obtain consistent estimates of labour market entries up to the end of 2020, it is therefore necessary to make projections.
necessary to make some hypotheses regarding the evolution of asylum applications over
the next two years. Two scenarios are analysed: one where asylum applications from
2018 to 2020 go back to the “pre-crisis” 2011-13 average, and one where they are equal
to the 2017 average (for these projections, the same disaggregation by origin, destination,
genre, and age group is retained). These two different scenarios generate quite different
future inflows of asylum seekers towards European countries. In the first scenario (2011-
13 average), the total number of applications between 2018 and 2020 amounts to about
1.1 million, while it amounts to 2.1 million in the second scenario (2017 average).

Results

Refugees in the working-age population

To estimate the contribution of the recent increase in asylum seekers inflows to the
working-age population (15-64), the absolute change in population induced by this
observed increase is compared to a counterfactual scenario in which asylum applications
(as well as decisions) from 2014-20 are assumed to have remained consistently at the
average level observed between 2011 and 2013.

Figure 3.7. Additional refugees of working-age (15-64) arrived in Europe* since 2011,
according to different scenarios

As shown in Figure 3.7, the refugee working-age population of European countries has
increased by 1.3 million between January 2011 and December 2017, compared to
460 000 in the counterfactual scenario (i.e. in the absence of the refugee surge observed

StatLink  http://dx.doi.org/10.1787/888933751707
since 2014). The net effect is therefore 880,000. Projections for the end of 2020 indicate that this net effect might reach between 990,000 (if asylum applications go back to their 2011-13 average in 2018-20) and 1.2 million (if asylum applications in 2018-20 remain at the level observed in 2017).

In relative terms, this corresponds to an additional increase of 0.26% of the working-age population of European countries between January 2014 and December 2017 (Figure 3.8). By December 2020, this net effect could amount to 0.29-0.36%. The overall net effect is therefore small. Indeed, United Nations population projections indicate that, over the same period 2014-20, the working-age population of European countries is set to decrease by 2%.

Figure 3.8. Relative change in working-age population due to increased inflows of asylum-seekers between 2014 and 2017 in Europe*
Cumulative change estimated in December 2017 and December 2020

*: EU-28 countries, Norway and Switzerland.
Note: The relative change in working-age population is the difference between the estimated refugee working-age population accounting for increased inflows since January 2014 and the counterfactual refugee working-age population (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total working-age population in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.

Estimates of the impact of asylum seekers on the working-age population vary considerably across countries, as shown in Figure 3.8. For 15 European countries (Poland, the Slovak Republic, the Czech Republic, Croatia, Estonia, the United Kingdom, Lithuania, Latvia, Romania, Portugal, Spain, Slovenia, Ireland, Hungary and Bulgaria), there is virtually no impact of additional refugee inflows on the working-age population by December 2020 (i.e. less than 0.1%). Fewer than ten countries are in an intermediate situation, where the effect is small but not negligible, at most equal to 0.4% (Norway, France, Belgium, the Netherlands, Finland, Italy, Denmark, and Switzerland). Finally, in five countries (Luxembourg, Greece, Sweden, Austria and Germany), the net effect is above 0.5%, and it may reach at least 1% before the end of 2020 in Sweden, Austria and Germany.
Due to the specific age and sex distribution of asylum applicants and refugees (see Figure 3.3), which differs greatly from that of the general population in destination countries, as well as the predominance of relatively low-educated individuals among them, different segments of the working-age population are affected differently. Figure 3.9 depicts the same net relative effect as in Figure 3.8, for specific sex and age groups (Panel A) and by sex and education (Panel B). Three key results emerge from these comparisons:

- First, the overall effect for women is much smaller than the one estimated for men: by December 2020, the net effect among women is at most 0.2% while it stands at 0.5% for men.
- Second, the differences across age groups are even larger: among men, by December 2020, the net effect for those aged 35-64 is less than 0.2% while it reaches 1.2% for those aged 18-34.
- Third, there is significant heterogeneity across education groups: while the effect remains very small in the intermediate and upper segments of the education distribution, it is much larger at the bottom. By December 2020, the low-educated male working-age population will have increased by an additional 1.4% as a result of the increased inflow of refugees, while the tertiary-educated segment of the male working-age population will only have witnessed a 0.2% net increase. Although the overall magnitude of the effect is lower for women, the educational gradient is similar to the one observed for men.

Figure 3.9. Relative change in working-age population due to increased inflows of asylum-seekers between 2014 and 2017 in Europe*, by sex, age and education

Cumulative change estimated in December 2017 and December 2020

A. By sex and age

<table>
<thead>
<tr>
<th></th>
<th>December 2020 (low-high range)</th>
<th>December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, 14-17</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Women, 18-34</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Women, 35-64</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Women, total</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Men, 14-17</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Men, 18-34</td>
<td>1.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Men, 35-64</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Men, total</td>
<td>1.8</td>
<td>2.0</td>
</tr>
</tbody>
</table>

B. By sex and education

<table>
<thead>
<tr>
<th></th>
<th>December 2020 (low-high range)</th>
<th>December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, edu L</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Women, edu M</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Women, edu H</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Women, total</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Men, edu L</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Men, edu M</td>
<td>1.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Men, edu H</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Men, total</td>
<td>1.8</td>
<td>2.0</td>
</tr>
</tbody>
</table>

*: EU-28 countries, Norway and Switzerland.

Note: The relative change in working-age population is the difference between the estimated refugee working-age population accounting for increased inflows since January 2014 and the counterfactual refugee working-age population (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total working-age population in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.


StatLink: http://dx.doi.org/10.1787/888933751745
These results concern the European working-age population overall, but the concentration of the effects on specific subgroups of the working-age population is even more pronounced in countries where the average effect is larger. This is, for example, the case for Germany, Austria and Sweden. Figure 3.10 shows the net effect among men aged 18-34 with a low level of educational attainment (lower-secondary education or less). By end 2020, it is estimated that in Austria this segment of the working-age population will have increased by 21% compared to end 2013, due to the recent inflows of refugees. For Germany, the maximum net effect is 18% while it is close to 10% for Switzerland, Luxembourg and Sweden.

If these figures are large in relative terms, it is both because of the over-representation of refugees in this category, but also because this specific segment of the working-age population (low-educated men aged 18-34) is small in European countries. Overall, this segment represents only about 5% of the male European working-age population, with limited heterogeneity across countries.

**Figure 3.10. Relative change in the population of low-educated men aged 18-34 due to increased inflows of asylum-seekers between 2014 and 2017 in Europe***

Cumulative change estimated in December 2017 and December 2020

*EU-28 countries, Norway and Switzerland.

**Note:** The relative change in working-age population is the difference between the estimated refugee working-age population accounting for increased inflows since January 2014 and the counterfactual refugee working-age population (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total working-age population in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.

**Source:** Eurostat: asylum statistics, labour force statistics; OECD estimates.

**Refugees in the labour force**

Due to the low participation rate of refugees in the first years of residence, the impact on the labour force will be significantly lower than that on the working-age population. The net effect is estimated at 345 000 at the end of 2017, and between 515 000 and 590 000 at the end of 2020 (depending on the level of asylum applications in 2018-20).
In order to assess the potential economic significance of this labour force increase, it is necessary to compare it to the size of the overall labour force. Assuming that the non-refugee part of the labour force would have followed the same path under the actual and counterfactual scenarios, the relative impact is obtained by dividing the difference between the estimated and counterfactual refugee labour force by the total labour force in December 2013. This can be done for the overall European labour force, as well as for each country separately (Figure 3.11).

For European countries as a whole, the relative impact on the labour force is 0.14% in December 2017 and 0.21% to 0.24% in December 2020. At the country level, the pattern is similar to the one described for the working-age population: for about half of European countries, there is virtually no impact (less than 0.05%) of additional refugee flows on the labour force, be it in December 2017 or in December 2020. About ten countries experience relatively low impact – between 0.1% and 0.3% at the end of 2020. Finally, the impact is expected to be significantly higher in Sweden, Greece, Austria and Germany, with at least 0.5% increase, and up to 0.8% for Germany.

Figure 3.11. Relative change in labour force due to increased inflows of asylum-seekers between 2014 and 2017 in Europe*  
Cumulative change estimated in December 2017 and December 2020

* EU-28 countries, Norway and Switzerland.  
Note: The relative change in labour force is the difference between the estimated refugee labour force accounting for increased inflows since January 2014 and the counterfactual refugee labour force (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total labour force in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.  

StatLink  http://dx.doi.org/10.1787/888933751783

How does this contribution of recent refugee inflows to the labour force compare with the “normal” growth rate of the labour force? Estimates based on Eurostat data indicate that labour force growth for European countries as a whole is currently about 0.4% per year. Assuming a continuation of this trend until 2020, the total growth of the labour force over
the period 2013-20 would be 2.7%. This is about 10 times larger than the estimate of the net effect of the recent refugee inflows, which is therefore marginal. As is the case for the working-age population, the impact on the labour force differs across sex, age groups and education (Figure 3.12, Panels A and B). For women of all ages and educational attainments, the overall impact is very small, due to their under-representation in refugee inflows and their low participation rates. For men, mirroring the findings on the working-age population, the impact is highest among the youngest groups and the low-educated. For the latter, the net effect by December 2020 reaches 1.2%. It is however much smaller among older or better educated men (less than 0.2%).

Figure 3.12. Relative change in labour force due to increased inflows of asylum-seekers between 2014 and 2017 in Europe*, by sex, age and education

Cumulative change estimated in December 2017 and December 2020

A. By sex and age

<table>
<thead>
<tr>
<th></th>
<th>December 2020 (low-high range)</th>
<th>December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, 14-17</td>
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<td>0.0</td>
</tr>
<tr>
<td>Women, 18-34</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Women, 35-64</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, 14-17</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, 18-34</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, 35-64</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

B. By sex and education

<table>
<thead>
<tr>
<th></th>
<th>December 2020 (low-high range)</th>
<th>December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, edu L</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Women, edu M</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Women, edu H</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, edu L</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, edu M</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Men, edu H</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*: EU-28 countries, Norway and Switzerland.

Note: The relative change in labour force is the difference between the estimated refugee labour force accounting for increased inflows since January 2014 and the counterfactual refugee labour force (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total labour force in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.

In Panel B, “edu L” stands for lower secondary education or less, “edu M” stands for upper secondary education, and “edu H” stands for post-secondary education.


StatLink: http://dx.doi.org/10.1787/888933751802

Figure 3.13 shows country-level results for low-educated men aged 18-34, the group for which the overall impact is the highest. The recent refugee inflows will induce a negligible or small increase (below 2%) in the labour force of this group by the end of December 2020 in about half of the countries (compared to the level in December 2013). The impact on the labour force is, however, relatively large in a couple of countries, although smaller than the figure obtained for the total population of this group (Figure 3.10): the net effect reaches 15% in Austria, 14% in Germany, and 9% in Sweden and Luxembourg.
Figure 3.13. Relative change in the labour force of low-educated men aged 18-34 due to increased inflows of asylum-seekers between 2014 and 2017 in Europe*

Cumulative change estimated in December 2017 and December 2020

* EU-28 countries, Norway and Switzerland.

Note: The relative change in labour force is the difference between the estimated refugee labour force accounting for increased inflows since January 2014 and the counterfactual refugee labour force (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by the total labour force in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.


StatLink: [http://dx.doi.org/10.1787/888933751821](http://dx.doi.org/10.1787/888933751821)

### Employment and unemployment among refugees

Drawing inference from this result in terms of wages or employment prospects in this segment of the labour force – both for workers who were already in those countries and for refugees themselves – is not straightforward. It not only depends on the short-term dynamics of labour demand addressed to relatively unskilled and junior workers, but also on the adjustments made by firms in response to a changing labour supply. For example, some firms might choose to delay the adoption of new labour-saving technologies for a specific range of activities. These medium to long-run adjustments are beyond the scope of this chapter. With additional assumptions, however, the short-run effect on the labour force discussed above can be decomposed into changes in employment and unemployment.

As noted above, data from the 2014 EU Labour Force Survey can be used to estimate employment rates for refugees according to the length of their stay in host countries (see also Annex Figure 3.A.1). Using these predictions, one can estimate the number of employed refugees at different points in time although caution is required when interpreting these results because this approach assumes that labour demand patterns up to 2020 remain sufficiently close to those observed in 2014. Unsurprisingly, because of their relatively low employment rates, refugees do not contribute much to the rise of employment in European countries (Figure 3.14). Overall, the net effect at the end of 2020 is about 0.16%. It is higher than average in countries where the impact on labour force is also relatively large, particularly in Greece (0.3% to 0.5%), Austria (0.5%), Germany (0.4%) and Sweden (0.4%).
The impact on unemployment is much more significant, for two reasons. First, as noted above, employment prospects of recently arrived refugees are often poor. Second, the base population, i.e. the initial number of unemployed among the host-country population, is much smaller. As shown in Figure 3.15, the total number of unemployed in European countries is expected to increase by 0.8-1.0% between December 2013 and December 2020 due to the additional inflows of refugees. The impact will be much larger in the key destination countries, especially Germany, where the expected cumulative impact by December 2020 is 6.1-6.7%. According to these estimates, Austria, Luxembourg and Sweden should also experience an overall increase in the number of unemployed of 2% to 4% over the period.

Official German employment statistics corroborate these findings. Between December 2013 and June 2017, the share of Syrian nationals\textsuperscript{19} in total employment in Germany increased from 0.03\% to 0.17\%, a six-fold increase, while their share among job-seekers was multiplied by 20, from 0.3\% to 6.3\% (Figure 3.16). More specific data, albeit for a more limited time frame, show that the share of refugees (of all nationalities) among job-seekers in Germany reached 9.3\% in February 2018, up from 4.8\% in July 2016.\textsuperscript{20} This sharp increase, which reflects the fact that newly-admitted refugees in Germany currently arrive on the labour market faster than they find employment, has so far had little impact on the total unemployment rate.

\footnotesize
\begin{itemize}
\item [*]: EU-28 countries, Norway and Switzerland.
\item [Note]: The relative change in employment is the difference between estimated refugee employment accounting for increased inflows since January 2014 and counterfactual refugee employment (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by total employment in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.
\item [Source]: Eurostat: asylum statistics, labour force statistics; OECD estimates.
\end{itemize}
3. THE CONTRIBUTION OF RECENT REFUGEE FLOWS TO THE LABOUR FORCE

Figure 3.15. Relative change in unemployment due to increased inflows of asylum seekers between 2014 and 2017 in Europe*
Cumulative change estimated in December 2017 and December 2020

*: EU-28 countries, Norway and Switzerland.

Note: The relative change in unemployment is the difference between estimated refugee unemployment accounting for increased inflows since January 2014 and counterfactual refugee unemployment (i.e. assuming that asylum applications in 2014-20 remain equal to the 2011-13 average), divided by total unemployment in December 2013. Up to December 2017, observed data on asylum applications and decisions are used; for 2018-20, it is assumed that asylum applications are either equal to the 2011-13 average or to the 2017 average, generating the December 2020 low-high range.


StatLink: http://dx.doi.org/10.1787/888933751859

Figure 3.16. Share of Syrians among job-seekers and in total employment in Germany, December 2013 to June 2017

Source: Job-seekers: Statistik der Bundesagentur für Arbeit, Migrations-Monitor Arbeitsmarkt - Eckwerte (Monatszahlen); Employment: Statistik der Bundesagentur für Arbeit, Beschäftigte nach Staatsangehörigkeiten (Quartalszahlen).

StatLink: http://dx.doi.org/10.1787/888933751878
Figure 3.17. Share of refugees and asylum seekers among jobseekers in German districts, February 2018

In the case of Germany, there is a noticeable spatial dimension in the distribution of refugees. At the end of 2016, the share of refugees in the population at the State level ranged from about 0.5% in Sachsen, Baden-Württemberg and Bayern to 1.8% in Saarland and 2.2% in Bremen, while the country average was 0.8%. These regional differences in terms of population are also visible when looking at the distribution of job-seeking refugees. Figure 3.17 shows a map of German districts highlighting the share of refugees (and asylum seekers) among job seekers in February 2018. In most districts of Eastern Germany, refugees and asylum seekers represented less than 7% of all job seekers, while the country average was 10.5%. In a number of districts of Western Germany, this share reached more than 15%, especially in cities.

Rejected asylum seekers

Although the core of the labour market impact of the recent increase in humanitarian migration inflows towards Europe will materialise through the entry of refugees in the
labour force, other categories might play a role. This is the case notably of asylum seekers who have seen their application denied.

Although the admission rates have increased in most European countries in the context of the refugee surge, there are still large numbers of asylum seekers whose applications are rejected (see Figure 3.2). In 2016, 354,000 asylum applications by working-age individuals were rejected in first instance by European countries. In 2017, this figure amounted to 416,000. The net increase in the total “stock” of rejected asylum seekers from December 2013 to December 2020 ranges from 850,000 to 1.2 million, depending on the counterfactual scenario considered.

These figures are based on first instance decisions and should therefore be considered as upper-bound estimates. Furthermore, among those who will not be granted protection, a non-negligible share may return voluntarily, or not, to their country of origin. In Europe, voluntary assisted returns and forced returns amounted to around 260,000 in 2016. Ultimately, only a fraction of rejected asylum seekers will remain unlawfully in their destination country but it is legitimate to assume that most of them will look for a job to make a living, most likely in the informal labour market.

It is worth noting that the main nationalities of rejected asylum seekers are quite different from the main nationalities of asylum seekers and refugees. The main regions of origin of rejected asylum seekers during the period 2014-17 are Afghanistan, Albania, Iraq, Pakistan, Kosovo, Serbia, Nigeria, Russia, Bangladesh, the Former Yugoslav Republic of Macedonia (FYROM), Iran and Gambia. Together, these regions account for 60% of all rejected asylum seekers, but for only 45% of applications. The countries of origin with the lowest admission rates are the FYROM, Serbia, Bosnia and Herzegovina and Albania. For nationals of these countries, the overall admission rate in one of the EU countries (plus Norway and Switzerland) in 2014-17 was less than 15%. Adding Kosovo (for which the admission rate was higher, at 40%) to this list, these regions represented almost one-quarter of all rejected asylum applications in 2014-17. Since all these regions are geographically close to the EU, the likelihood of return (voluntary or not) after a failed asylum claim is probably higher than for more distant regions. Indeed, these regions feature prominently in the list of regions of origin of people who returned home following an order to leave, with Albania, Kosovo and Serbia being the top three regions in 2014-16.

For the period 2012-17, Figure 3.18 depicts the actual number of rejected asylum seekers of working-age in all European countries, the counterfactual equivalent (i.e. assuming that inflows of asylum seekers in 2014-17 are at the same level as in 2011-13), and the number of returns of third-country nationals following orders to leave. Before 2014, as well as in the 2014-17 period under the counterfactual scenario, the annual number of rejected asylum seekers remained roughly stable between 140,000 and 180,000. This figure is lower than the total number of returns, which has also been fairly stable over the period for which data is available: between 2008 and 2016, it fluctuated between 190,000 and 250,000. Although the number of returns was higher in 2016 than in the four previous years, it was not higher than what was observed at the end of the previous decade and it went down in 2017. In contrast, as a result of the large increase in the number of asylum applications, the number of rejected asylum seekers has been multiplied by 2.5 between 2014 and 2017.

This implies that, for 2016 and 2017, newly rejected asylum seekers are much more numerous than third-country nationals who have returned after an order to leave. A range of plausible values can be estimated by considering two opposite scenarios. The first
scenario assumes that all returnees are rejected asylum seekers. In this case, for each country, the estimated approximate number of rejected asylum seekers remaining in the country is the difference between the number of asylum seekers who are denied protection a given year and the number of returns. In the second scenario, one assumes that all rejected asylum seekers remain in the destination country, which, naturally, generates a higher value.

According to this approach, the range of possible values for the number of rejected asylum seekers remaining in European countries is 200 000-395 000 in 2016 and 305 000-470 000 in 2017. It is also possible to reproduce this procedure under the counterfactual scenario for the inflows of asylum seekers to obtain a net estimate of the increase in the number of rejected asylum seekers remaining due to the recent large inflows. The counterfactual number of rejected asylum seekers remaining in European countries is 50 000-170 000 in both 2016 and 2017. The net effect is therefore between 155 000 and 230 000 in 2016 and 260 000 and 300 000 in 2017.

Although this estimate does not account for the unknown number of rejected asylum seekers who have left of their own accord, as well as the fact that people do not necessarily return the same year as their asylum application was denied, it implies that the stock of rejected asylum seekers who remain in European countries is rising quite fast and will probably continue to do so over the next couple of years unless ongoing efforts by many EU countries to increase the efficiency of returns materialise in practice.

**Figure 3.18.** Annual number of rejected asylum seekers of working-age and annual number of third-country nationals returned following orders to leave, in Europe*, 2012-17

![Graph showing annual number of rejected asylum seekers and returns following orders to leave from 2012 to 2017.](http://dx.doi.org/10.1787/888933751916)

*: EU-28 countries, Norway and Switzerland.

*Note:* Third country nationals returned following an order to leave are third-country nationals who have in fact left the territory of a Member State, following an administrative or judicial decision or act stating that their stay is illegal and imposing an obligation to leave the territory.


*StatLink* [http://dx.doi.org/10.1787/888933751916](http://dx.doi.org/10.1787/888933751916)
Family members of refugees

Beyond the direct contribution of refugees to the working-age population and the labour force, it is also worth considering potential dynamic effects due to family reunification. Indeed, once an individual has obtained refugee status in a destination country, he/she can apply to be joined by his/her spouse and children (OECD, 2017[37]). In order to assess the potential impact of family reunification on the working-age population and the labour force, the potential number of refugees’ spouses who might be able to immigrate in this context can be estimated.

In the absence of data on the time period between admission as refugee and family reunification, this analysis focuses on the stock of refugees at the end of 2017 and provides an estimate of the number of their family members of working-age with whom they could potentially reunite. For refugees admitted in 2015, for example, this process might have already occurred and the family members might already be living in the destination country but this is probably not the case for those admitted in late 2017. As in the previous sections, only refugees that are in excess of the counterfactual scenario are considered. To further simplify the question, the analysis only considers reunification with spouses, and assumes that children are in age groups where labour market participation is negligible.

As mentioned above, the gender distribution of asylum seekers and refugees is unbalanced: among those of working-age, about 75% are men. If one assumes that all married refugee women have arrived in their destination country with a husband, this leaves a significant number of male refugees who might try to reunite with their family.

In many origin countries of recent refugees, the marriage rate among adults is typically quite high. For example, in Afghanistan, in 2007-08, 88% of men aged 25-39 were married and this proportion reached 96% for those aged 40-64. The female marriage rate was similarly high. In Syria (2001) and Iraq (2004), the share of married men was also close to 95% for those aged 40-64 but marriage before 30 years old was not so frequent: in Syria, only 9% of the 20-24 age group were married, and 38% of the 25-29; in Iraq, the shares were 18% and 49%. For women, the married share was somewhat lower, about 80% for the 30-44 in Iraq, and about 85% in Syria. Although there are national idiosyncrasies, similar patterns are found in most countries from which refugees originate (United Nations, 2017[38]).

It is assumed that refugees who have come to their destination countries as adults have matrimonial behaviour similar to the general population of their origin country. This would imply that 80% of refugees (men and women) aged 35-64 are married. For the 18-34 group, since there is steep age gradient, two possible marriage rates are considered: 20% and 60%, without making a gender distinction.

As of December 2017, among refugees aged 35-64, there were 204 000 men and 103 000 women. Assuming that 80% of them were married and that all married women were matched with a husband, this implies that 81 000 men could potentially apply to reunite with their family who stayed abroad. Including the 18-34 age group in the picture, and accounting for the “regular” surplus of married men among refugees as captured by the counterfactual, the total number of potential spouses to be reunited with refugees, ranges from 120 000 to 250 000 (all working-age women).

Compared to the above estimate of 920 000 additional working-age refugees who entered European countries between 2014 and 2017, this supplementary inflow of working-age
spouses brought about through family reunification is therefore not negligible (an extra 13-27% of the refugee inflow).

Using direct data on family permits delivered to nationals of the main origin countries of refugees is also useful in assessing the potential of this entry channel. For example, there has been a significant increase in the number of permits delivered to Syrian nationals for family reasons by European countries in recent years. While only about 3 000 such permits were delivered per year in 2010-11, this number was multiplied by 20 in five years to reach 60 000 in 2016, which coincided with the massive inflow of Syrian asylum seekers in European countries (Figure 3.19). Assuming that these additional family permits are directly linked to the earlier arrivals of Syrian refugees in European countries, this adds up to 100 000 Syrian family members who have already arrived during the period 2014-16. Assuming a one-year lag between admission as refugee and family reunification, one can estimate a “reunification multiplier” by dividing the number of family permits delivered in year \( t \) by the number of refugees of the same nationality admitted in year \( t-1 \). For Syrians, the average multiplier is about 0.5 for refugees admitted in 2012-15. Based on this estimate, and on the number of Syrian refugees admitted in 2016 and 2017, one can expect the entry of about 240 000 additional Syrian family members in 2017-18. For Syrians, the overall net effect of family reunification would therefore be 340 000 immigrants, which is to be compared to the net increase of 700 000 in the number of Syrian refugees between 2014 and 2017. Since this estimate includes children, the effect on the working-age population would however be smaller.

Figure 3.19. Syrian refugees admitted to Europe* in 2011-17 and family permits delivered to Syrian nationals in 2011-16 (and estimates for 2017-18)

*: EU-28 countries, Norway and Switzerland.
Note: The number of family permits delivered to Syrian nationals in 2017 and 2018 is estimated assuming a “reunification multiplier” of 0.5 (see text).
Source: Eurostat: asylum statistics; OECD estimates.

StatLink  
http://dx.doi.org/10.1787/888933751935
Conclusion

In the context of the recent increase in the number of asylum seekers and refugees in European countries, an assessment of the economic impact is necessary for both economic and political reasons. The support of public opinion is essential to sustaining the European asylum system and preventing backlash against refugees (and immigrants in general). To ensure such support, a proper impact evaluation of refugee inflows is necessary to identify any potential negative consequences for the native-born and to incite appropriate additional measures to minimise such effects.

If recent refugees have a labour market integration profile similar to previous refugees, the overall labour market effects of the recent surge are likely to be small and gradual. Most migrants who have been admitted as refugees in European countries since 2013 have just started entering the labour market today, and labour market entry of those refugees who have arrived since 2015 will stretch over the coming years.

The analysis presented in this chapter only looks at changes in labour supply and does not account for potential negative effects due to unforeseen changes in labour demand. Based on historical experience, however, for European countries as a whole, the modest effect on the labour supply probably precludes any risk of the recent inflows having significant negative labour market impact.

There are, however, specific labour market segments in some countries where the increase in labour supply is higher than average and where the native-born may be affected significantly. This is, for example, the case for informal employment, where most rejected asylum seekers who will remain unlawfully in destination countries are likely to concentrate. This is also the case for young low-educated men, due to the overrepresentation of refugees in this population group. In this segment, especially in Germany, Sweden and Austria, the labour supply shift is significant. Since this category of the population is already vulnerable, this labour supply shift calls for a reinforcement of policy measures towards this group.

Even if this sub-group of the population is relatively small, a further deterioration of employment outcomes among them, due to competition with refugees for access to jobs, could have significant negative spillovers on the public perception of the average impact of refugee flows on the economy.

At the same time, it is also necessary to help refugees achieve their integration into the labour market, and more broadly in their host societies, as quickly and as smoothly as possible. Fostering the integration of refugees into the labour market would mechanically lead to a larger and more rapid labour supply shift but would also raise demand. Since a prompt access to the labour market for refugees is a key determinant of other dimensions of their social integration and also reduces their dependence on welfare, it remains critical to promote integration policies that maximise their swift access to employment.

Notes

1. This chapter was prepared by Gilles Spielvogel.
2. The figures provided in this paragraph are taken from UNHCR Mid-Year Trends reports (UNHCR, 2013[39]; UNHCR, 2018[40]).
In this chapter, unless otherwise specified, the term “refugee” includes individuals having obtained actual refugee status (as defined by the 1951 Refugee Convention), but also individuals under subsidiary protection or authorised to stay for humanitarian reasons under national law.

In this chapter, European countries refer to all EU 28 countries, plus Norway and Switzerland.

Although the refugee resettlement number was capped at 50 000 by Executive Order, the United States admitted more than 53 000 refugees in FY 2017 due to a ruling by the Supreme Court that permitted those with a bona fide claim to a relationship with a person or entity in the United States to be admitted even after the ceiling was reached.

Less than 1% of asylum applicants or accepted refugees in European countries were aged 65 and over.

These countries are: Austria, Belgium, Denmark, Germany, Greece, Italy, the Netherlands, Sweden, Switzerland and Turkey.

This was in particular a point of view echoed in Germany in 2015 by many stakeholders, including in the government. See e.g. http://www.spiegel.de/international/germany/refugees-are-an-opportunity-for-the-german-economy-a-1050102.html; http://www.dw.com/en/tapping-refugees-to-combat-germanys-labor-shortage/a-18688541.

The seemingly intuitive nature of the basic supply-demand framework, combined with the political underpinnings of the issue, probably explain the persistence of the quest for a “true” result in the economic literature and the polarisation of the debate.

To obtain these estimates, the number of resettled refugees in each host country, taken from UNHCR (2000[14]), is multiplied by 75% (share of the total inflow assumed to have arrived by 1980) and divided by the working-age population (15-64) of the host country in 1980. For the United States, the total number of Indochinese refugees resettled between 1975 and 1995, including through the ODP, is 1.28 million. The upper-bound estimate for the number of working-age refugees in 1980 is therefore 75%×1.28 million. Dividing by the US working-age population in 1980 (151 million) leads to the 0.6% estimate.

This estimate is obtained with the same method as the country-level ones. The share of Indochinese refugees in California is assumed to have increased linearly from 22% in 1975 to 45% in 1995, which results in a share of 28% in 1980. This share is then applied to the national level estimate for the number of working-age refugees in 1980 (75%×1.28 million). The denominator is the working-age population of California in 1980 (16 million).

ISCED stands for International Standard Classification of Education. ISCED 1 corresponds to primary education, ISCED 2 to lower secondary education, ISCED 3 to upper secondary education, ISCED 4 to post-secondary non-tertiary education, and ISCED 5 to 8 to the different levels of tertiary education (short-cycle, bachelor, master and doctorate).

The model allows duration of stay to affect participation differently according to age; in addition, the coefficients of each education group are interacted with gender, thus allowing different returns to education for men and women. In this context, since only aggregate predictions are needed (rather than individual) the specification issues due to the use of a linear model instead of a non-linear one are benign. Due to data constraints, it is not possible to account for country of origin effects.

This does not imply, however, that highly-educated refugees will necessarily be employed in high skilled jobs, as there is ample evidence of overqualification of refugees (and immigrants in general) on European labour markets.

The net relative change is 0.29% if asylum applications go back to their 2011-2013 average in 2018-2020, and 0.36% if asylum applications are equal to the 2017 average in 2018-2020.
For Sweden, the net effect is larger in December 2017 than in December 2020, because of the sharp decrease in asylum inflows in 2016 and 2017 compared to 2015. While results for 2017 are heavily influenced by the very high inflows registered in 2015, projections for 2018-2020 are defined on the basis of either the 2011-2013 average or the 2017 average. Inflows of asylum applicants in 2017 were even lower than the 2011-2013, period which defines the counterfactual trajectory. As a result, the net effect in 2020 is lower than in 2017. This is also true, although to a lesser extent, for Norway.

For Norway and Sweden, the net effect is larger in December 2017 than in December 2020. See note 16.

For 2020, the lower and upper bounds of the range correspond to the two alternative hypotheses on the level of asylum applications: back to 2011-2013 average (lower bound), or 2017 average (upper bound).

These statistics refer to all Syrians living in Germany, not only refugees. Refugees represented 55% of all Syrian nationals in Germany at the end of 2016, while this share was 39% at the end of 2013.

Statistik der Bundesagentur für Arbeit, Migrations-Monitor: Personen im Kontext von Fluchtmigration. This share increases to 10.5% in February 2018 when including asylum seekers.

References


3. THE CONTRIBUTION OF RECENT REFUGEE FLOWS TO THE LABOUR FORCE


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3. THE CONTRIBUTION OF RECENT REFUGEE FLOWS TO THE LABOUR FORCE


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Annex 3.A. Supplementary figures

Annex Figure 3.A.1. Participation and employment rates of refugees in European countries according to their duration of stay (in years) in the destination country, by sex and educational attainment

Note: For each category, the line plotted corresponds to the median participation or employment rate across European countries.

Source: Labour Force Surveys (Eurostat) 2014 ad-hoc module on the labour market situation of migrants and their descendants; OECD estimates.

StatLink: http://dx.doi.org/10.1787/888933751954