Recruiting Immigrant Workers

THE NETHERLANDS

OECD

Recruiting Immigrant Workers: The Netherlands 2016

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Foreword

This review of the Netherlands' labour migration policy is the seventh of a series conducted by the OECD Secretariat as a follow-up to the 2009 High Level Policy Forum on International Migration. The rationale for this initiative was the recent growth in labour migration observed in many countries and the likelihood that recourse to labour migration would increase in the context of demographic ageing. Prior to the 2008-09 economic crisis, many countries had made substantial changes to labour migration policies with a view to facilitating recruitment from abroad. With the introduction of these changes, more prominence was accorded to the question of their effectiveness and more broadly, to the objectives of labour migration policy in general. Although the economic crisis put a damper on labour migration movements, it did not stop them entirely, and interest in labour migration policy is unlikely to diminish in the near future.

The central objective of labour migration policy is to help meet those labour market needs which cannot be satisfied through tapping domestic labour supply in a reasonable time frame, without adversely affecting the domestic labour market and without hindering development prospects in vulnerable origin countries. Although the objective itself can be easily stated, specifying the criteria for assessing the success of policy in achieving it is a complex matter. It involves evaluating how well labour market needs have been identified and whether migration has had an impact on the labour market, both of which are analytically difficult.

This series of reviews addresses the question of whether labour migration policy is effective in meeting labour market needs without adverse effects, and whether the policy is efficient. To address these questions, this review aims to analyse two key areas: i) the labour migration system and its characteristics, in terms of both policies in place and the labour migrants who arrive; and ii) the extent to which it is responding to the current and forecast needs of the domestic labour market, as well as any impact on the latter.

The focus is specifically on labour migration from outside the European Union because those labour migration movements are discretionary, that is, immediately subject to migration policy. Other categories of migration – family, for example – are considered in terms of their influence on decisions to admit workers, while this review does not cover humanitarian migrants. Movements in the context of free-circulation agreements, which are important in many European countries and especially in the Netherlands, are also covered in their relation to discretionary labour migration.

In light of recent large flows, the Netherlands faces a similar discussion as other OECD countries regarding effective labour migration policy, and it is in this context that the Netherlands requested that the OECD review its labour migration policy. This review asks the question of what should be the role of discretionary labour migration policy in the specific context of the country, given the very high levels of migration from within the European Economic Area.

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Table of contents

Figures

Tables

Acronyms and abbreviations

CBS	Central Statistical Office (*Centraal Bureau voor de Statistiek*)
CEDEFOP	European Centre for the Development of Vocational Training
DUO	Education Executive Agency
EEA	European Economic Area
EFTA	European Free Trade Association
EU	European Union
GBA	Municipal Personal Records database
GVVA	Combined residence and work permit (*Gecombineerde vergunning* voor *verblijf en arbeid*)
HBO	Higher professional education (*hoger beroepsonderwijs*)
ICTs	Intra-company transfers
IND	Dutch Immigration and Naturalisation Service (*Immigratie- en Naturalisatiedienst*)
ISCED	International Standard Classification of Education
ISCO	International Standard. Classification of Occupations
IT	Information technology
MBO	Middle professional education (*middelbaar beroepsonderwijs*)

MVV	Provisional residence permit (*Machtiging tot Voorlopig Verblijf*)
NACE	Statistical Classification of Economic Activities in the European Community
NESOs	Netherlands Education Support Offices
PIAAC	OECD Survey of Adult Skills
R&D	Research and development
ROA	Research Centre for Education and the Labour Market (*Researchcentrum voor Onderwijs en Arbeidsmarkt*)
SER	Social and Economic Council (*Sociaal-Economische Raad*)
SME	Small and medium-sized enterprise
TEV	Entry and residence procedure (*Toegang en Verblijf*)
TWV	Work permit (*Tewerkstellingsvergunning*)
UOE	UNESCO-OECD-Eurostat
UWV WERKbedrijf	Public employment service
WO	Academic education (*wetenschappelijk onderwijs*)
WODC	Research and Documentation Centre (*Wetenschappelijk Onderzoek- en Documentatiecentrum*)

Executive summary

Based on a characterisation of labour migration to the Netherlands and of the Dutch labour migration policy, this review examines whether labour migrants match the demand in the Netherlands and explores how the Netherlands can attract and retain highly skilled migrants. Labour migration from non-EU countries to the Netherlands has been higher in recent years than prior to 2007 but remains low in comparison to other categories of migration. In 2013, it accounted for only 9% of the total permanent migration inflow of 100 000 persons. This share was higher than in Germany and France but below the average for European OECD countries. Inflows through free movement within the European Union accounted for more than 60% of permanent migrant flows to the Netherlands. Migrants from EU countries, especially in Central and Eastern Europe, are also the main source of temporary migrants, whose total level approached 200 000 in 2012.

Relative to the domestic population, the flow of non-EU permanent labour migrants has also remained below the average for European OECD countries, although the Netherlands began introducing programmes specifically for more high-skilled labour migration from outside the European Union over a decade ago. Skilled labour migration has the potential not only to address current labour shortages, but also to strengthen the position of the Netherlands as a knowledge-based economy. High future demand for highly skilled labour is expected, but the domestic supply of such workers has increased more slowly than in almost all other OECD countries.

A scheme for knowledge migrants has become by far the largest channel of non-EU labour migration to the Netherlands, with more than 7 000 first permits issued in 2014. The scheme is popular with Dutch employers, not least because it uses a simple salary requirement instead of an educational requirement or a lengthy labour market test. While this criterion makes procedures transparent and predictable, it does not reflect differences in salaries between sectors and regions. In particular, Dutch economic policy fosters nine especially innovative and export-oriented

top sectors, yet few knowledge migrants work in these sectors. Similarly, the vast majority of knowledge migrants stay in the central provinces of the Netherlands. Lower salary requirements for specific sectors and regions could help reflect the Dutch top sector approach in labour migration policy and level the playing field between regions. In addition, given the existing gender wage gap, the salary threshold results in fewer women qualifying than men. To account for this inherent bias, alternative selection mechanisms should be considered.

As the knowledge migrant scheme grew, an older scheme based on a case-by-case approach – and often involving a labour market test – shrunk from over 3 000 first permits issued in 2005 to fewer than 350 in 2014. Much of this decline may be due to EU enlargement that in many cases obviated the need to obtain a residence permit, but it does appear that labour migration to the Netherlands has shifted over time towards the knowledge migrant scheme and other recent schemes for highly skilled labour migrants. It cannot be verified, however, whether this has led to labour migrants being more highly skilled than before, as their educational attainment is not observed.

The Netherlands has become quite attractive among international students. The total number of international students enrolled in the Netherlands, including those from EU countries, has risen rapidly in recent years and approached 70 000 in 2013. In comparison to other OECD countries, relatively few of them were enrolled in sciences, engineering, manufacturing or construction. More than 12 000 international students from non-EU countries (mainly in Asia) were issued first permits in 2014. Since 2007, international graduates of Dutch institutions can obtain a residence permit that allows them to spend up to one year searching for work as knowledge migrants. This possibility was later extended to graduates of selected institutions abroad. Following the recent merger of the two schemes, a higher take-up can be expected because the same favourable conditions now apply to all graduates, while confusion between schemes is avoided.

For sponsors of knowledge migrants and international students alike, the recently implemented Modern Migration Policy has significantly simplified the system. Through a trusted sponsor system, residence permits can be requested by sponsors on behalf of applicants, administrative requirements are waived for them, and most applications are processed within one day. In turn, the trusted sponsors assume greater responsibilities for compliance with labour migration legislation, also on the part of the applicant and of subcontractors. Sponsors who do

not comply can incur high fines and lose the right to recruit labour migrants. This system gives trusted sponsors strong incentives to adhere to the rules but may be too demanding for small and medium-sized companies.

Overall, the changes to the Dutch labour migration system in recent years have brought significant simplifications and have adapted it to the needs of Dutch employers. The most recent example for this approach is the extension of the knowledge migrant scheme to short-term visits, offering companies a more practical alternative to an existing scheme for intra-company transfers. This extension was first introduced as a pilot scheme and was made permanent after a positive evaluation. An evidence-based approach using pilots has become common in Dutch migration policy and has allowed for informed decisions by the authorities. To further improve this approach, more rigorous methods should be used for empirical evaluations. Making available more of the data already collected in the management of labour migration would assist in this goal.

The Dutch economy and quality of life in the Netherlands should be better branded to promote the country's attractiveness among highly skilled labour migrants from outside the European Union. To better promote the Netherlands as a destination, employer networks could be built to help partners of knowledge migrants access the labour market. This would not only increase the supply of skills in the Dutch economy but would also increase the likelihood that knowledge migrants stay in the Netherlands, according to the evidence provided in this review. Early labour market experience, acquired through internships and ideally related to the field of study, is important for the retention of international graduates as it enables them to establish contacts and develop their language skills. Local internships could be made an integral part of the programmes followed by international students.

Summary of the main recommendations for the Netherlands

A. Streamline the system of labour migration

- Consider reducing the time employers are required to search – before they can recruit from outside the European Union – for candidates in highly demanded occupations to the same as required for other occupations.
- Reconsider the need for a separate investor scheme, given the existence of schemes for self-employed and for start-ups.

B. Strengthen the capacity of the system to respond to the specific needs of the economy

- Apply lower salary requirements for knowledge migrants who commit to working in top sectors or in peripheral regions.
- Consider creating a public and regularly updated list of shortage occupations and waiving labour market tests for Labour Migrant Permit applicants in listed occupations.
- Accord additional points in the scheme for self-employed if they commit to working in top sectors or in peripheral regions.

C. Reinforce efforts to retain highly skilled labour migrants and international students

- Promote local employer networks through which employers can arrange job offers for spouses and partners of labour migrants.
- Exempt those who speak Dutch extensively at work from the integration courses.
- Consider giving international students greater incentives to attend Dutch language courses and to gain local work experience.
- Promote co-operation of educational institutions with local businesses to offer international students a combination of studies and work experience.

D. Maintain a sufficient level of public inspections and migration law enforcement

- Reintroduce random inspections among employers of migrants to uphold effects on compliance from the possibility of controls.
- Replace salary requirements for short-term knowledge migrants, which are difficult to verify in practice, by a more transparent requirement for migrants or sponsors.

E. Better promote the Netherlands as a destination for skilled labour migrants

- Online information on labour migration schemes should be easy to find, also in English and other foreign languages.
- Intensify efforts to promote the Netherlands as a destination through advertising campaigns, job fairs and subsidised courses of Dutch language and culture.
- Explore the possibility, e.g. through a pilot scheme, of a general search year that is open not only to recent but also to older graduates of selected universities.

Summary of the main recommendations for the Netherlands *(cont.)*

F. Improve the statistical infrastructure

- Information on temporary labour migrant flows should be collected.
- Ensure that data collected by the relevant institutions (e.g. IND and UWV) are electronically available, also for research purposes.
- Data from different sources should be unified on a regular basis.
- Data collection should include information on labour migrants' education and occupation.
- Pilots should be evaluated using more rigorous empirical methods in co-operation with academic institutions.

Assessment and recommendations

Permanent migrant inflows to the Netherlands have grown…

During 2010-13, permanent migrant inflows to the Netherlands were stable at around 100 000 persons annually, but these levels substantially exceeded inflows in previous years. The growth was driven by a strong rise in migrant inflows based on free movement within the European Union and the European Free Trade Association (EFTA), from 19 000 in 2003 to 65 000 in 2013. Among migrants from countries outside the EU and EFTA, around 20 000 family migrants made up the largest group throughout recent years. Total net migration inflows had fallen below 20 000 in 2012 and 2013 but rose again to 37 000 in 2014.

… but only 9% are labour migrants from outside the European Union

The inflow of non-EU labour migrants rose markedly between 2005 and 2008: migrants especially from Asia took up the opportunities offered by newly introduced schemes for labour migrants. Remaining stable thereafter, the inflow stood at 10 000 in 2013, which represented only 9% of the total permanent migration inflow in 2013, corresponding to 0.04% of the population in the Netherlands. While this share was higher than in neighbouring Germany and France, it remained below the average for European OECD countries.

Most labour migrants are EU citizens

As about half of the EU citizens who come through free movement can be classified as labour migrants, non-EU labour migrants were also a minority in the total inflow of permanent labour migrants. EU citizens, especially from Central and Eastern Europe, were also a majority of temporary labour migrants, whose number approached 200 000 at the end of 2012. Due to growing numbers of temporary labour migrants from new EU member states, the stock of temporary labour migrants almost doubled after 2004. Educational attainment of EU labour

migrants who arrived between 2003 and 2008 matched that of non-EU labour migrants arriving in the same years.

Future demand for skilled labour is expected to be high

The labour market in the Netherlands has been more strongly affected by the economic crisis than in many other OECD countries. Unemployment rose substantially across the Dutch provinces and reached 8% country-wide in early 2014 and then fell below 7% by late 2015. Labour shortages are limited to specific sectors and occupations. In the medium term until 2025, 1.3 million new job opportunities are expected at medium skill levels and 2.4 million at high skill levels. Over the same period, labour supply is expected to grow by only 1 million at high skill levels and to fall at medium skill levels. The demand for skilled workers is therefore expected to substantially exceed supply.

Migration plays a limited role for the transition towards a knowledge economy

Employment in the Dutch economy has shifted towards knowledge-intensive services between 1993 and 2011. To foster the transition to an internationally competitive knowledge economy, Dutch economic policy gives special consideration to nine so-called top sectors that are highly innovative and export-oriented. A number of migrants, in particular from non-EU countries, are already employed in these sectors, but they account for a lower proportion of employment in these sectors than in neighbouring European countries. In recent years, employment of highly skilled migrants has fallen in most of the top sectors. The special role played by the top sectors is not reflected anywhere in the Dutch labour migration policy.

A scheme for skilled labour migrants has assumed the leading role

In order to facilitate the recruitment of highly skilled labour migrants from outside the European Union, the knowledge migrant scheme was set up in 2004. The only requirement is that employers are recognised as sponsors and that the salary paid is above a certain threshold. It neither involves a work permit nor a labour market test. More than 7 000 first permits for knowledge migrants were issued in 2014, three times as many permits as were issued under the second largest scheme for permanent labour migrants, researchers according to EU Directive

2005/71. As the number of first permits for knowledge migrants grew over time, fewer first permits were issued under the old demand-driven scheme that required work permits and often also labour market tests. Some of this fall occurred because more labour migrants benefited from free movement following EU enlargements.

Salary thresholds are simple but can be restrictive for certain groups of migrants

For 2016, the salary thresholds for knowledge migrants have been set at a gross monthly salary of EUR 4 240 for applicants above age 30, and at EUR 3 108 for applicants below 30. The former roughly corresponds to 120% of the average gross income in the Netherlands, and the latter to about 80%. By this measure, both thresholds rank close to the average of salary thresholds used in comparable national schemes in other OECD countries. Both thresholds are annually adjusted upwards. While a salary requirement is simple and transparent, it can be much more restrictive for groups of applicants with lower median wages. Women, because of their lower median wages, have to reach the top 12% of their wage distribution versus 31% for men to pass the requirement for applicants over 30. To account for this inherent bias, alternative selection mechanisms should be considered for the knowledge migrant scheme.

The impact on the selection of labour migrants is unclear

As information on the educational attainment of labour migrants is not collected by standard data sources in the Netherlands, it is not possible to verify whether the share of tertiary educated persons among permanent labour migrants has grown since the introduction of the knowledge migrant scheme. As this scheme specifies a salary requirement but not an educational requirement, there is no guarantee that it has led to a more skilled labour migration intake, and it is possible that many workers who qualified as labour migrants before now also qualify as knowledge migrants. Some evidence suggests that the share of tertiary educated persons has increased among employed migrants, but this share remains lower than in most of the neighbouring European countries.

The EU Blue Card cannot compete with the national scheme

Since the EU Blue Card was introduced in the Netherlands in 2011, hardly any have been issued. The likely reason is that the knowledge migrant scheme is more attractive for applicants and employers. The salary required for an EU Blue Card amounts to EUR 4 968 in 2016, which exceeds the highest salary requirement applied under the knowledge migrant scheme by 17%. Obtaining the EU Blue Card further requires an assessment of migrants' formal qualifications while the knowledge migrant scheme does not. By contrast, the rights that migrants and their families obtain do not differ much between the two schemes. To employers, the EU Blue Card does not give any additional benefit at all, so that they prefer the knowledge migrant scheme, especially if they are already recognised sponsors.

The trusted sponsor system reduced administrative burdens and processing times…

Sponsors of knowledge migrants, researchers and international students need to be recognised by immigration authorities. The "Modern Migration Policy" implemented in 2013 gave recognised sponsors a central role in immigration procedures: they can start procedures on behalf of applicants, they have a personal contact at the immigration authority, and their assurances are often accepted instead of formal documentation. This has significantly reduced the administrative burden for employers and immigration authorities alike. Immigration authorities process almost all applications with recognised sponsors within one day and employers indicate that they are very satisfied with the system.

…but it favours large companies

The sponsorship system favours large companies not only because the cost of becoming a sponsor is relatively small for them but also because they have the necessary legal expertise to ensure compliance with all regulations. For smaller firms without this expertise, the costs of acquiring such expertise and the risk of incurring fines is too large, so they do not use the system. To facilitate the use of the system by small and medium-sized companies, public authorities could offer legal assistance in these cases or consider a waiver of the fee for small and medium-sized enterprises with certain characteristics.

Authorities rely on sponsors for enforcement of migration laws

The recognised sponsors are expected to ensure that the migrants they sponsor meet the legal requirements throughout their stay. The status of recognised sponsor can be withdrawn if sponsors do not fulfil their responsibilities, so that they are banned from sponsoring any further knowledge migrants, researchers or students. In addition, all employers involved in illegal employment of migrants can incur substantial fines, depending on the number of illegally employed migrants. This gives employers, especially those who depend on recruitment from abroad, strong incentives to comply with legal requirements. Inspections by public authorities target employers where there is a high risk of serious transgressions at a significant scale. In practice, self-policing is therefore expected of most employers of migrants. To verify that this arrangement functions well, random inspections should be reintroduced. The risk of being inspected and subsequently fined should be real and well-known among employers.

Few skilled labour migrants work in key sectors or in peripheral regions

The vast majority of knowledge migrants reside in the two provinces that form the economic centre of the Netherlands: North and South Holland. Among the remaining ten provinces, only North Brabant hosts a substantial share. Only about 20%, however, work in one of the nine top sectors, while many of them are employed in business services or in information and communication. To change the distribution of knowledge migrants over sectors and regions, the salary requirements should be lowered for knowledge migrants who are offered a job in a top sector or in the periphery. Similarly, the scheme for self-employed could award points to applicants who commit to working in top sectors or peripheral regions.

Retention rates of knowledge migrants are satisfactory but could further improve if spouses had better opportunities in the Dutch labour market

About one in three knowledge migrants still reside in the Netherlands five years after arrival. Knowledge migrants working in financial services, education, health or "other" services have a higher probability to stay in the Netherlands than those in other sectors. While several

factors influence how long knowledge migrants stay, an important determinant is whether or not their spouse or partner is also employed in the Netherlands. Highly skilled labour migrants are more likely to have highly skilled spouses or partners who want to pursue their own career. If various local employers co-operate in networks, it is more likely that they can make attractive job offers to both partners if the profile of the spouse or partner matches available jobs at other employers in the network.

Recruitment from outside the European Union for shortages at medium or low skill levels is difficult

Many non-EU/EFTA labour migrants with medium or low skill levels do not earn sufficiently high wages to meet the salary requirement for knowledge migrants. The main schemes open to them (temporary migration and the Labour Migrant Permit) assess applications on a case-by-case basis and apply a labour market test. Employers are required to search for applicants from the Netherlands or other EU countries for five weeks before the procedure can start. In the case of vacancies that are difficult to fill, this requirement rises to three months, which is the longest among OECD countries using a labour market test. Compared to other occupations, migrants with medium or low skill levels in these occupations therefore face an additional hurdle. To reflect labour market needs, the same conditions as for other occupations could possibly apply to these migrants. It may also be worth considering a public and regularly updated list of shortage occupations. The labour market test can then be waived for occupations on this list, allowing employers to fill such vacancies more quickly and more reliably.

More and more international students come to the Netherlands to study

A record number of close to 70 000 international students were enrolled in the Netherlands in 2013. This was more than twice the number enrolled in 2005 and international students represented 7% of the student population in 2012. While 43 000 international students originated from within the European Union, the number of international students from Asia has grown rapidly in recent years, reaching 10 000 in 2013. Some of the factors that make the Netherlands attractive to international students are the strong international position of Dutch universities, moderate tuition fees and a broad range of programmes

taught in English. Only 17% of the international students are enrolled in sciences, engineering, manufacturing or construction, while these fields account for more than one-third of international students in Switzerland, the United States, Germany and Sweden. Comparatively many (22%) of the international students in the Netherlands are enrolled in health, welfare and services.

More should be done to retain them upon graduation…

Several estimates suggest that less than 30% of the international students stay in the Netherlands after graduation, so that a potential for tertiary educated labour migrants who are already familiar with the Netherlands is not used. In addition, it is unclear whether these graduates are staying in the Netherlands to continue their studies or work or a combination of the two. Many of the graduates are likely to face obstacles to finding a job in the Netherlands, such as insufficient proficiency in the Dutch language, a lack of employer contacts and little knowledge of rules and customs in the Dutch labour market.

…and local work experience can help retain them

International students who gain local work experience during their studies are found to be more likely to stay than those with no work experience. This estimated effect is stronger for students from non-EU countries. Work experience that is relevant for the field of study and longer work experience (approaching two years) is even more positively associated with the probability to stay in the Netherlands post-graduation. Many students of science or engineering gain such work experience. To retain more international students, they should be given greater incentives to gain local work experience and to attend Dutch language courses. By offering such comprehensive programmes, co-operating educational institutions and local businesses can also attract more international students.

University graduates have the possibility to come to/stay in the Netherlands and look for a job for up to a year

Since 2007, international students from outside the European Union have been allowed to spend one year in the Netherlands searching for work as knowledge migrants after graduating from a Dutch institution. A lower salary requirement has been applied to them (in 2015, EUR 2 021).

Close to 2 000 international students annually participated in recent years. A similar scheme was introduced for graduates of the top 200 universities worldwide as defined by a number of university rankings. About 250 highly educated persons participated in this scheme in 2014. The two schemes were merged in 2016 (using a salary requirement of EUR 2 228) and extended beyond students to persons engaged in research.

The merged job-search scheme will likely attract more applicants

The job search year for graduates of Dutch universities seemed to be working well and contributed around 600 persons to the knowledge migrant pool in both 2013 and 2014. Graduates of Dutch universities who hold a search year permit thereby accounted for 60% of all status changes into a knowledge migrant permit in 2013. In contrast, take-up was very limited for the search year for graduates of universities abroad. The existence of the two parallel schemes with different conditions might have created some confusion among university graduates, so that the merged scheme may be easier to promote. In addition, the rules have tended to become more generous, both regarding eligibility and labour market access during the search year, which makes the search year at the same time more attractive and available to a larger number of potential participants. As a result, take-up can be expected to increase.

The Netherlands is attractive for skilled labour migrants…

In international comparisons, the Netherlands ranks well in terms of the capacity to attract and retain talent from abroad. Innovative companies, strong research institutions and the high standard of living in the Netherlands could appeal to many highly skilled labour migrants. The services offered by expatriate centres in major cities facilitate their arrival in the Netherlands. The rule that up to 30% of their salaries can be paid as a tax-free allowance likely has a significant impact on the financial incentives on offer.

…so that greater efforts to promote the Netherlands could attract more of them

Despite the strong competitive position of the Netherlands according to these criteria, only a few potential migrants express an a priori interest in the Netherlands. The pool of highly skilled labour migrants who

already have a notion of the Dutch language is small, and by consequence, little may be known about life in the Netherlands. It might therefore be worthwhile exploring ways to acquaint the target groups of Dutch labour migration policy with the Netherlands. Campaigns that promote the Netherlands as a destination could include job fairs abroad and subsidised courses of Dutch language and culture.

Labour migration policy remains innovative and adapts to changing needs

New schemes for labour migrants continue to be created. In several cases, they were preceded by a pilot phase and fully implemented only after a positive evaluation. This approach allows policy makers to make better informed decisions. Using this approach, a scheme has been set up for knowledge migrants who stay for up to three months, responding to the needs of businesses with extensive cross-border activities. That the same salary requirements are met in the context of such short stays can be difficult to verify in practice, and more transparent criteria should be considered. The incentives created by the recognised sponsor arrangement might already be sufficient to safeguard against abuse of the scheme. Another new scheme has been set up for investors but demands a comparatively high investment and initially involved a significant administrative burden. Hardly anyone has thus far participated in this scheme, and investors might in practice resort to the schemes for self-employed and start-ups. The scheme for investors might therefore not be needed.

Gaps in labour migration statistics should be addressed

High-quality data can make a crucial contribution to the successful operation and the further development of labour migration policy. While data on migration is systematically collected in the Netherlands by several institutions, the different data sets should be unified on a regular basis. To close significant gaps in data coverage, information needs to be collected also on temporary labour migration flows as well as on the education and occupation of labour migrants. Some of this information may already be collected but cannot be accessed due to technical problems. The evaluation of labour migration policy and of pilot schemes should draw on all available data and employ rigorous empirical methods. Co-operation between public institutions, as well as with academic institutions can help improve both the collection of data and the implementation of evaluation studies.

Chapter 1

Context for labour migration to the Netherlands

This chapter discusses developments in the Netherlands that have implications for the scope and scale of labour migration. Heterogeneous labour market conditions and recent contributions of migrants to employment growth are documented. The chapter argues that structural change in the Dutch economy, a trend towards higher skills and labour supply forecasts all suggest a role for targeted labour migration at both high and medium-skill levels. Labour migration could be complementary in the adjustment of the Dutch labour market because the supply of skilled labour from domestic sources has tended to increase slowly and will eventually be affected by population ageing.

In order to identify the function that labour migration can fulfil for the Netherlands, this chapter examines developments in the Dutch economy and especially on the Dutch labour market. Following a review of current labour market conditions, recent contributions of migrants to employment growth are documented. On the background of structural change towards a knowledge economy, the need for specialised and skilled labour is examined, with a focus on key sectors. The chapter finds that demand will likely grow at both high and medium-skill levels. While additional labour supply can come from a number of domestic sources, the chapter highlights the distinctive role that labour migration can play.

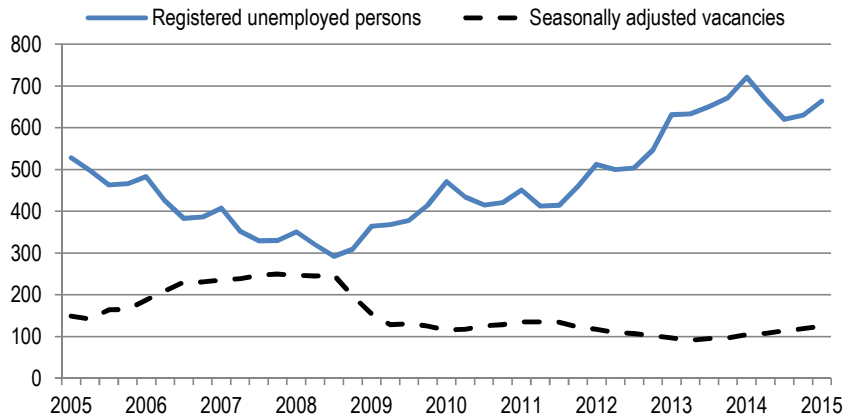
Current labour market conditions

The Dutch labour market has been profoundly affected by the economic crisis. The unemployment rate rose from a low level of 3.4% in Q3 2008 to 8.1% in Q1 2014, according to figures from the Dutch Central Office for Statistics (CBS). However, by Q3 2015, the unemployment rate had receded to 6.6%. The increase in the Dutch unemployment rate following the economic crisis was the seventh highest among OECD countries, and more than twice the average increase (see Figure 2.1 in OECD, 2015a). Figure 1.1 shows that the number of registered unemployed persons rose strongly while the number of vacancies halved in 2009 and remained at a low level thereafter. Employment has been in decline since 2011: according to CBS data, the number of jobs held has steadily fallen from 7.9 million in 2011 to 7.7 million in 2014, and total hours worked exhibit a similar tendency.

Effects of these trends have been felt particularly among young labour market entrants. Survey data of the Research Centre for Education and the Labour Market (ROA) on school leavers indicate that unemployment rates of the 2011/12 graduation cohort tended to be the highest in ten years. The wages of younger people appear to have come under pressure, as is suggested by CBS statistics on median gross household income that distinguish by the age of the primary earner in the household. Where primary earners were less than 25 years old, gross household income stood at EUR 19 300 in 2009 but has since declined to EUR 16 900 in 2013. A similar development is observed for primary earners aged 25 to 30 years: their gross household income fell from EUR 44 600 in 2009 to EUR 43 100 in 2013. By contrast, gross household incomes have continued to climb up for primary earners aged 45 to 65, from EUR 56 400 in 2001 to EUR 69 400 in 2009 and further to EUR 73 700 in 2013.

Figure 1.1. Levels of vacancies and registered unemployed persons, 2005-15

In thousands



Note: The levels of registered unemployed persons are not seasonally adjusted.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

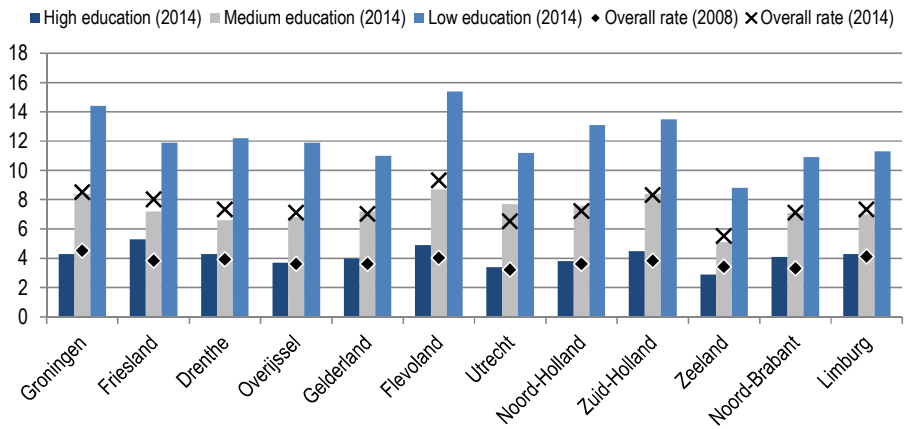
In line with relatively high unemployment and stagnating starting wages, employers do not report significant difficulties with hiring. When surveyed in the second quarter of 2015 as part of the Eurostat Business and Consumer Surveys, only 4.1% (seasonally adjusted) of employers in the Netherlands indicated that labour shortages hold back their production. In the previous quarter, this figure stood at 2.9%, and it had fluctuated between 1% and 5.5% since the second quarter of 2009. Results of employer surveys conducted by the private sector, such as the Manpower Talent Survey, paint a similar picture.

However, such economy-wide indicators do not reflect any heterogeneity in labour market conditions between different segments of the labour market. In principle, very unfavourable labour market conditions in some segments can co-exist with very favourable conditions in others. A first look at the heterogeneity underlying the economy-wide unemployment rate is provided in Figure 1.2. It shows that unemployment rates in 2014 differed considerably between educational groups: individuals with a tertiary education exhibited substantially lower unemployment rates (around 4%) than individuals with medium levels of education (around 7%), who in turn had much lower unemployment rates than individuals with low levels of education (around 12%). This pattern is observed across all provinces of the

Netherlands, as unemployment rates varied rather little between provinces. A comparison of the overall unemployment rates in 2008 and 2014 shows strong increases in the unemployment rates of all provinces, especially in Flevoland and Zuid-Holland.

Figure 1.2. Unemployment rates by region and education level, 2014 and 2008

Registered unemployed persons in percent of the labour force



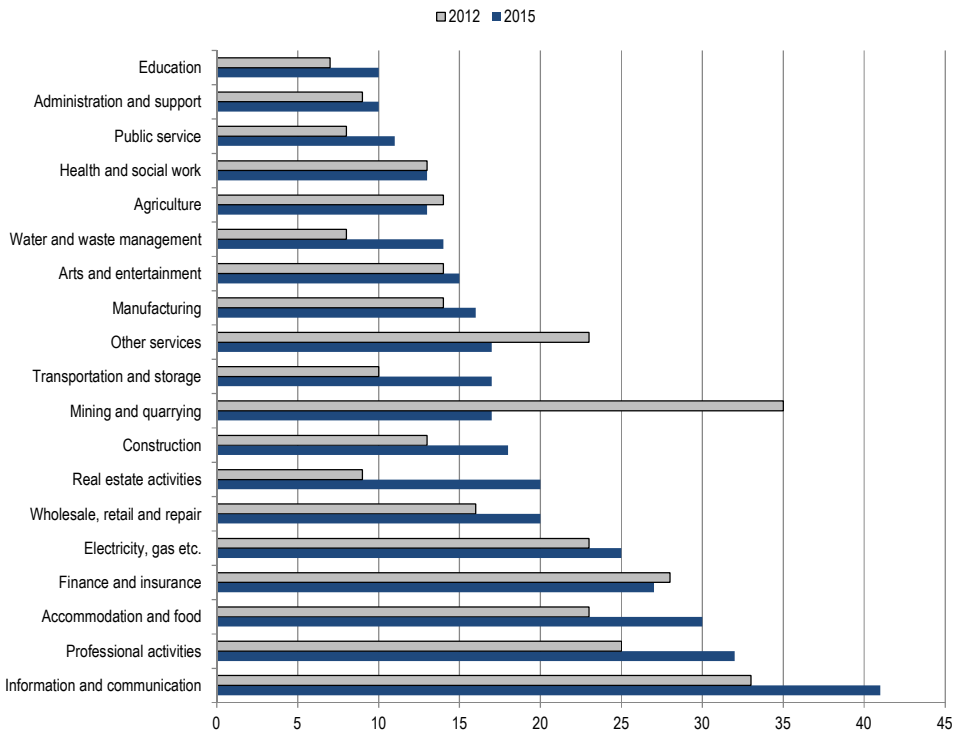
Note: Regions are ordered by their NUTS-2 code.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

Strong heterogeneity likewise arises in vacancy rates. As Figure 1.3 indicates, vacancy rates in the second quarter of 2015 varied across sectors from about 10 per 1 000 jobs in education as well as in administration and support to more than 40 per 1 000 jobs in information and communication. Despite the low overall level of vacancies shown in Figure 1.1, high vacancy rates (above 20 per 1 000 jobs) could also be found in a number of other sectors: electricity and gas, finance and insurance, accommodation and food, and professional activities. In addition, vacancy rates can exhibit large variations from one year to another. For example, the vacancy rate in mining and quarrying stood at 47 in 2014 (based on the same data source) but decreased to 17 in 2015. Over the years 2012-2015, rapid increases in vacancy rates occurred notably in real estate activities, transportation and storage, and water and waste management. Vacancy rates in information and communication were high throughout this time period.

Figure 1.3. Vacancy rates by sector, 2012 and 2015

Vacancies per 1 000 jobs



Note: Figures refer to the second quarter of the respective year; vacancies are counted at the end of the quarter. Sectors are ordered by the vacancy rate in 2015.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

This heterogeneity in unemployment and vacancy rates suggests that there may be a possible role for labour migration even in the context of unfavourable overall labour market conditions. Well-managed labour migration could serve as a tool to rapidly alleviate bottlenecks of certain types of labour supply, especially when labour needs cannot be satisfied with locally available labour supply or within short training periods. Alleviating bottlenecks would allow sectors to grow and to thereby generate additional employment opportunities also for other workers. That is, the recruitment of scarce specialised workers can be a necessary condition for the recruitment of workers who are currently unemployed in considerable numbers.

The scarce labour input that limits businesses' expansion will often – although not exclusively – be highly skilled, specialised workers with either high or medium levels of education. Certain highly skilled or specialised workers, however, may be as scarce in other EU countries as in the Netherlands: CEDEFOP (2015) projects that creation of job opportunities between 2013 and 2025 will be driven by the same occupational groups in the Netherlands as in the entire European Union, especially by professionals. In this context, managed labour migration from outside the European Union may still allow to respond to such demand in a targeted way. Bottlenecks for otherwise scarce labour can thus be resolved, be it temporarily until domestic sources of labour supply have adjusted to the specific labour demand, or permanently in case of structural shortages of the kind of labour demanded.

Beyond punctual remedies through managed labour migration, the low unemployment rate for job seekers with a tertiary education suggests that the Dutch labour market could absorb more such job seekers. Broader policies of attracting and retaining highly educated migrants therefore appear feasible without aggravating overall labour market conditions. Such policies could serve to accelerate or even steer structural change in the Dutch economy towards more knowledge-intensive and innovative lines of business. The potential role of migration for the transition of the Netherlands towards a 'knowledge economy' will be discussed below, after a brief survey of the contributions migrants have made to growing employment in the Netherlands over the last few years.

Migrants have contributed to employment growth

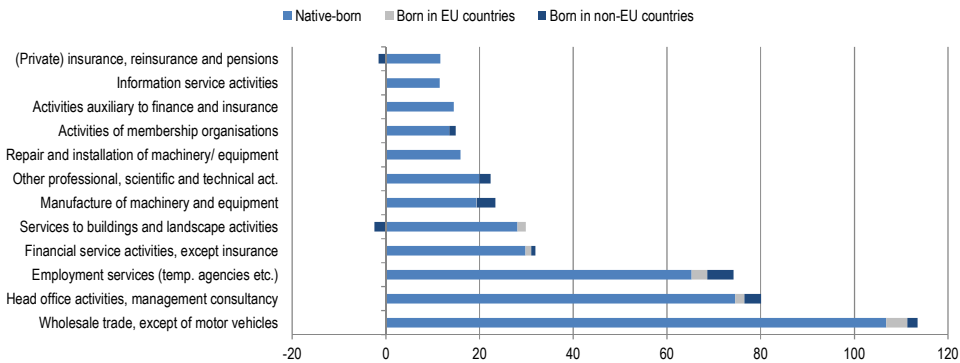
In the segments of the Dutch economy that have recently exhibited significantly growing employment, growth included migrants in most cases. Based on data from the EU Labour Force Survey, Figure 1.4 shows all sectors in which significant employment growth was observed over the years 2010 to 2014. Migrants accounted for a substantially larger proportion of employment growth in some sectors than in others, but this might simply reflect a larger share migrants account for in this sector's initial employment level. To go one step further, one can determine whether migrants were over-represented or under-represented in the employment growth, compared to their representation in the initial employment stock. This still does not establish whether migrants were a driver of the employment growth – for example, by alleviating bottlenecks – or whether migrants were hired among others as a result of

employment growth. However, one might expect that migrants will likely be over-represented in the employment growth if they are a driver of it: those who drive employment growth would be hired first, while other employment would only catch up over time, so that the drivers of employment growth may still be over-represented at the time of the survey.

The largest employment growth in absolute terms has been observed in wholesale trade (plus 113 000), management consultancy (plus 80 000) and employment services, for example of temporary employment agencies (plus 74 000). Migrants born in non-EU countries were under-represented in each case: they accounted for 1.9% of employment growth in wholesale (against 8.7% of the employment stock in 2010), and similarly in management consultancy (4.4% against 7.1%) and employment activities (7.5% against 10.6%). By contrast, migrants born in EU countries were somewhat over-represented in employment growth in wholesale (4% against 3.3%) and employment services (4.5% against 3.4%). The same pattern results for financial service activities and service to buildings/landscape activities. However, non-EU migrants were over-represented in employment growth in manufacture of machinery and equipment (16.6% against 6.4% in the employment stock in 2010) and in other professional, scientific or technical activities (10.9% against 9.7%).

Figure 1.4. Change in employment in selected detailed sectors, by origin, 2010-14

Employed persons aged 15-64, in thousands



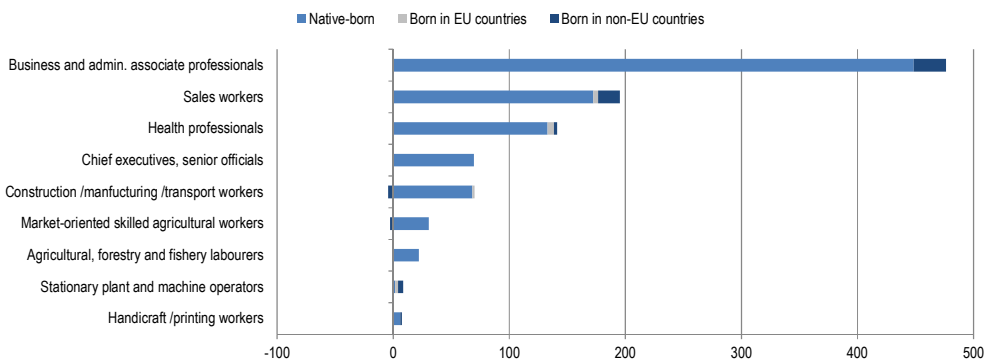
Note: Only sectors with total employment growth exceeding 10 000 employees in the period 2010-14 are included. Sector delimitations refer to the NACE classification at two-digit level. Where the share of persons born either in EU countries or in other countries is not shown, their measured employment was too small in 2010 or 2014 to be statistically reliable.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

An analogous analysis can be applied to occupations, likewise based on EU Labour Force Survey data. Figure 1.5 shows the composition of employment growth for those occupational groups that exhibited growing employment in the period 2010 to 2014. By far the largest employment growth was observed in the group of business and administration associate professionals (plus 476 000), followed by sales workers (plus 195 000) and health professionals (plus 141 000). Non-EU migrants were under-represented in employment growth among business and administration associate professionals (5.9% against 11% in the employment stock in 2010) and among health workers (2% against 8.1%) but were over-represented in employment growth of sales workers (9.6% against 5.7%). Non-EU migrants were strongly over-represented in employment growth of plant and machine operators (53% against 18%) and of handicraft or printing workers (21% against 10%). EU migrants were over-represented notably in employment growth of health workers (3.9% against 2.4%) and of plant and machine operators (28% against 3.9%). Perhaps surprisingly, both types of migrants were under-represented in employment growth of construction, manufacturing and transport workers. Finally, it is worth noting that employment of migrants as chief executives or senior officials is too small to reliably identify their contribution to employment growth in this occupational group.

Figure 1.5. Change in employment in selected occupational groups, 2010-14

Employed persons aged 15-64, in thousands



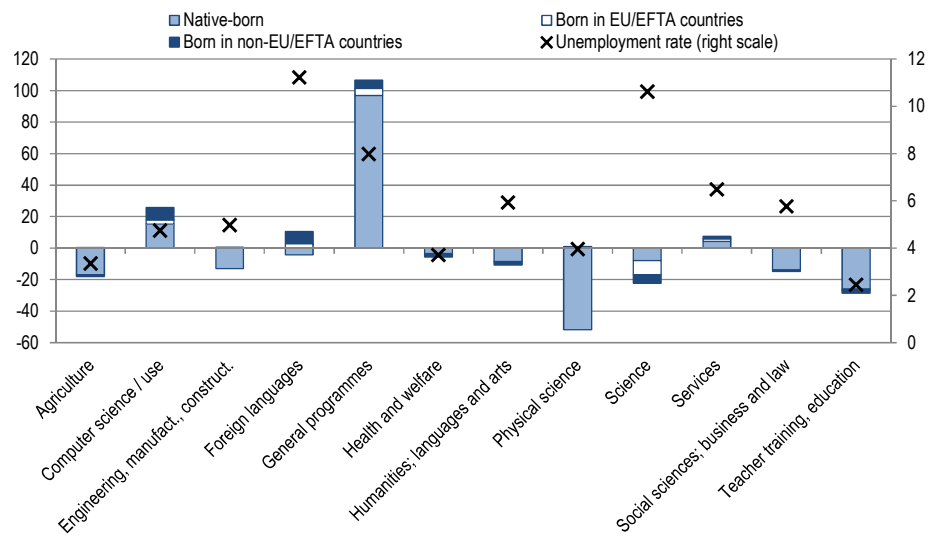
Note: Only occupational groups with positive total employment growth in the period 2010-14 are included. Occupational groups refer to the ISCO classification at two-digit level. Where the share of persons born either in EU countries or in other countries is not shown, their measured employment was too small in 2010 or 2014 to be statistically reliable.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

For a particular group of individuals, more direct information on migrants' contributions to alleviating bottlenecks can be obtained from the EU Labour Force Survey. Figure 1.6 shows both changes in employment and the unemployment rate by the field in which individuals obtained their highest qualification. Low unemployment rates among workers with qualifications in particular fields could partly arise due to (relative) shortages of such workers. Where low unemployment rates coincide with strong contributions of migrants to employment growth among workers with the respective qualifications, migrants have likely helped alleviate any bottlenecks of these qualifications. Such a comparison of unemployment rates and employment growth cannot be done for sectors or occupations because it is not clear which sector or occupation an unemployed person belongs to. However, there are limitations also for information on the field of qualifications: it is only available for persons who are either aged between 15 and 34 or who have obtained the qualification in the preceding 15 years.

Figure 1.6. Change in employment in the field of qualification, by origin, 2009-13 and unemployment rate in the field of qualification, 2013

Persons aged 15-34 or who obtained the qualification within the previous 15 years; in percent (of 2010 employment level for change in employment, of the labour force in 2013 for the unemployment rate)



Note: Only highest attained qualifications, from ISCED level 3 onwards, are included. Science includes life sciences and mathematics; computer technology includes computer science and computer use.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

According to the composition of employment growth between 2009 and 2013 depicted in Figure 1.6, migrants from non-EU/EFTA countries have contributed strongly to employment growth among persons with qualifications in computer science and use, in foreign languages and in services. Albeit less strongly, EU/EFTA migrants have mainly contributed to employment growth in the same fields. In the case of computer science and use, the hiring of migrants may well have responded to bottlenecks: considerable employment growth here coincides with an unemployment rate of under 5%. The case of services is less clear: small employment growth coincides with an unemployment rate of 6.5%. In the case of foreign languages, an unemployment rate of about 11% suggests that migrants' contribution to employment growth did not address shortages. Qualifications from general programmes constitute a special case: migrants strongly contributed to very high employment growth in this field, coupled with an unemployment rate of 8%. Strongly falling employment of migrants with science qualifications aligns with an unemployment rate of close to 11% for this field.

In conclusion, aggregate indicators such as levels of registered unemployment and vacancies, average wages and average measures of labour shortages point to a slack labour market in the Netherlands. Yet labour market conditions can vary starkly between sectors, occupations, regions, as well as between levels and fields of qualifications. In this context, managed labour migration can produce benefits in the short run by addressing specific bottlenecks in parts of the economy that are generating jobs. There are indications that, for a number of sectors, occupations and fields of qualifications, migrants from both non-EU and EU countries have helped alleviate shortages, which may have unlocked investments and business expansions, thereby contributing to employment growth.

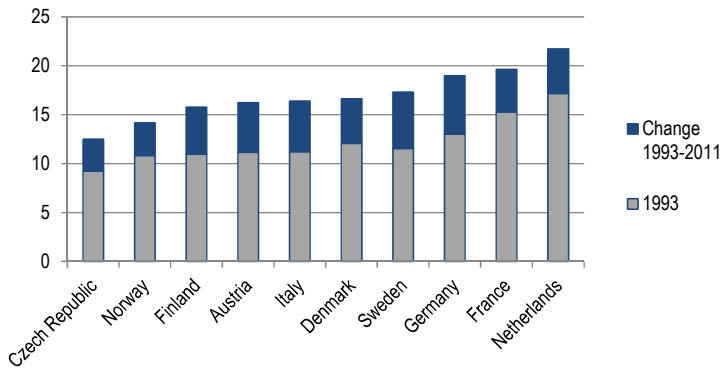
Challenges in the medium and the long run

The Dutch economy is experiencing structural change that brings questions about available skills and qualifications to the forefront. Figure 1.7 indicates that the share of knowledge-intensive services in total employment has risen from 17% in 1993 to almost 22% in 2011. While this level was higher than in a number of other European OECD countries, shares rose more strongly in several other countries over this period, allowing them to catch up. Measures based on the share of value added in total GDP paint a similar picture: in 2010/11, knowledge-intensive services accounted for close to 20% of value added in total

GDP in the Netherlands compared to 15% in the first half of the 1990s; by contrast, the shares of manufacturing, construction and agriculture have fallen (see Figure 2.7 in OECD, 2014d). For the years 2015 to 2018, the UWV WERKbedrijf (2013) predicted further shifts of employment from manufacturing and agriculture to trade and services. On the background of this structural change, the capacity for innovation has taken centre stage in debates about the future economic performance of the Netherlands.

Figure 1.7. Employment growth in knowledge-intensive services, 1993-2011

As a percentage of total employment



Note: Knowledge-intensive services include information and communication, financial and insurance activities, professional, scientific and technical activities and administrative and support service activities (divisions J, K and M-N of ISIC Rev. 4).

Source: OECD Structural Analysis (STAN) Databases, http://www.oecd.org/sti/ind/stanstructuralanalysisdatabase.htm.

With the aim of strengthening the international competitiveness of the Netherlands, the Dutch Government adopted a combined industrial and innovation policy targeting the so-called "top sectors" (see OECD, 2014d). The top sectors are nine largely technology-intensive sectors that were identified as playing a key role for the further development of the Dutch economy: agriculture and food, chemicals, creative industries, energy, high technology (high-tech systems and materials), horticulture, life sciences & health, logistics and water. In assembling this set of sectors, four criteria were used: the sector's knowledge intensity, its export orientation, its requirements for specific legislation or regulation and its role in the resolution of economic challenges (see CBS, 2015).

In line with these criteria, the top sectors are particularly important for exports and for research and development in the Netherlands: according to CBS (2015), exports by the top sectors accounted for 40% of exports in 2013 and their spending on own research and development represented 75% of this spending in 2013.

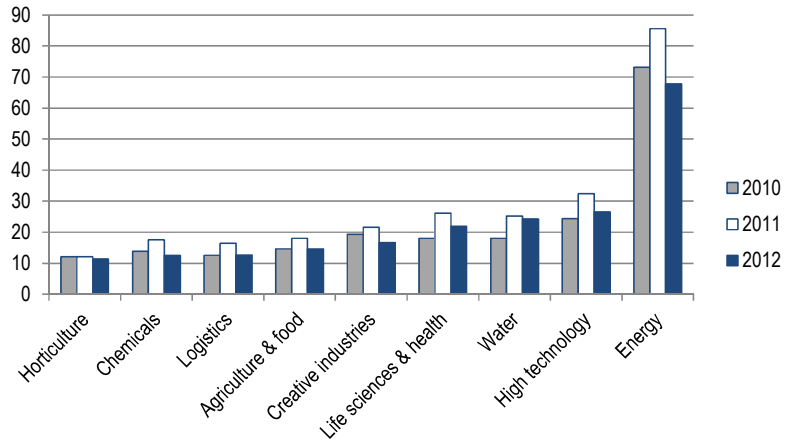
Maintaining and raising the capacity for innovation

A key input for innovative sectors are skilled individuals, whose employment can spur innovation in a number of ways (see Box 1.1 in OECD, 2011). Therefore, ensuring that top sectors can recruit the employees they need is crucial for the top sector approach to succeed. In recent years, however, a number of top sectors exhibited vacancy rates that may indicate recruitment difficulties (see Figure 1.8). With vacancy rates above 20 vacancies per 1 000 jobs in 2012, four out of nine top sectors – energy, high technology, water, and life sciences and health – would be placed among the highest vacancy rates shown in Figure 1.3 above. The extremely high vacancy rate in energy (68 in 2012) exceeds all vacancy rates shown in Figure 1.3. Vacancy rates observed in energy were very high throughout the years 2010-12, pointing to serious recruitment difficulties. Similarly, results from a survey among top sector companies highlighted labour shortages in high-technology and water, but to some extent also in energy, life sciences and chemistry (see Ministry of Economic Affairs, 2013).

Innovation in top sectors can also depend on the capacity for innovation of the Dutch economy in general. In this context, it is worth noting that comparatively few employees in the Netherlands work in research and development (R&D). Figure 1.9 shows that about 14 out of every 1 000 employees were working in R&D in 2013. This figure stood above an estimated average for the EU28, but fell short of the figures in all countries in the vicinity except Luxembourg and the United Kingdom (figures for the latter are likely underestimated). However, the figure for the Netherlands has increased markedly since 2008 when it stood at 10.5 per 1 000 employees. This was the highest increase over this period among all countries shown, and it raised the figure for the Netherlands to about the same level as that for Germany and Belgium.

Figure 1.8. Vacancy rates in the so-called top sectors, 2010-12

Vacancies per 1 000 jobs

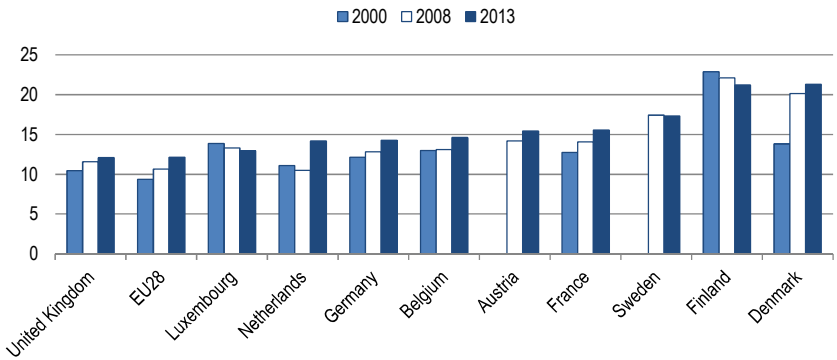


Note: Agriculture & food neither includes wholesale nor retail trade of food. Sectors are ordered by vacancy rates in 2012.

Source: OECD Secretariat calculations based on Tables 10a and 13a in Centraal Bureau voor de Statistiek (2015), "Monitor topsectoren 2015. Methodebeschrijving en tabellenset", The Hague.

Figure 1.9. Total personnel in research and development, selected countries, 2000, 2008 and 2013

Full-time equivalents per thousand employees



Note: All figures for 2013 are provisional except for the Netherlands, Finland and Sweden. Figures for the United Kingdom and Sweden are likely underestimated or biased. The EU28 average is based on OECD estimates. Figures for 2000 are missing in the cases of Austria and Sweden. Countries are ordered by their 2013 figure.

Source: Table 10 in OECD (2015), *Main Science and Technology Indicators*, Vol. 2015/1, OECD Publishing, Paris, http://dx.doi.org/10.1787/msti-v2015-1-table10-en.

The Dutch Government is aware that the top sectors will require specialised skilled labour to remain innovative. Several measures have been taken to identify the skills needed in the top sectors and to better prepare graduates of various educational routes for work in a technology-intensive environment (see OECD, 2014d). For each top sector, a Human Capital Agenda analyses current as well as future labour demand and derives the implications for the educational system. Within institutions for secondary vocational education and universities of applied sciences, centres were established through public-private partnerships that focus on research and education linked to one or several top sectors. By 2014, more than 40 such centres had been set up and involved about 1 300 companies (see Topsectoren, 2016).

Another initiative, the 2020 National Technology Pact, responds to the challenge that the supply of skills in engineering and science is unusually low in the Netherlands, compared to other OECD countries (see OECD, 2016). This is attributed partly to students' preferences for other degrees, although a degree in science or engineering comes with good job prospects. As a multi-stakeholder forum, the Technology Pact promotes technical training throughout the education system (see OECD, 2014d): science and technology classes are to be introduced in 7 000 primary schools, 1 000 scholarships are made available per year for engineering students, and substantial funds are invested into the training of teachers and the re-training of unemployed persons in technical fields.

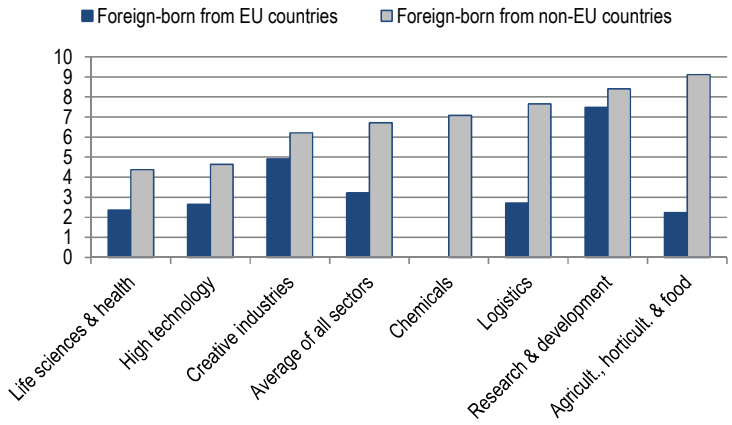
In contrast to the considerable efforts to align policies on human capital formation with the top sector approach, there does not appear to be a link between the top sector approach and labour migration policy. But as the specialisation of businesses in top sectors increases, the qualifications and skills they demand might often not match those available on the Dutch labour market, so that businesses need to have access to a global talent pool. Skilled labour migrants might also make particular contributions to the development of top sector businesses. Migrants can initiate and facilitate the transfer of technology or know-how, from their country of birth or from other countries they have resided in. Their contacts can give access to networks abroad, which would not only create links to potential innovators but would also support the further internationalisation of the top sectors. Such contacts, together with migrants' knowledge of foreign markets and languages, can contribute to top sectors' export performance.

Positive effects of migrants on innovation have been reported in the academic literature. For example, Hunt and Gauthier-Loiselle (2010) find that foreign-born graduates in the United States apply for patents at about twice the rate of native-born graduates, which they attribute to the greater frequency of science and engineering degrees among foreign-born graduates. Similarly, Kerr and Lincoln (2010) find that a higher number of US visas for highly skilled labour migrants leads to higher employment in science and engineering and to more patents. It has also been debated whether employment of migrants spurs innovation by increasing the diversity of staff, under the premise that diverse teams might come up with more diverse attempts to solve problems; a review of this literature can be found in Kemeny (2014).

Figure 1.10 shows that highly skilled migrants already contribute significantly to employment in top sectors. This applies especially to migrants from non-EU countries, whose share among the highly skilled employees in 2014 reached 9% in agriculture, horticulture and food, 8% in research and development and also 8% in logistics. However, these shares were not substantially higher than the average share over all sectors (7%), and shares were below this average in several top sectors. While reliable figures cannot be determined for some top sectors (water, energy and for EU migrants in chemicals), migrants from non-EU countries accounted for higher shares than migrants from EU countries in all other sectors. Their combined share of employment was highest in R&D (16%), while it was lowest in life sciences and health (7%). An extensive discussion of evidence on the role of labour migration for employment in top sectors is provided in Chapter 4 of this review.

Figure 1.10. Shares of foreign-born persons in the employment of highly-skilled in top sectors, 2014

In percent



Note: A person is considered highly skilled if educational attainment corresponds to ISCED levels 5 or 6. See Table 4.A1.1 in the annex of Chapter 4 for sector definitions. As sector-specific research & development could not be subsumed under the respective top sector, a sector "Research & development" is added here. The top sectors water and energy are not included because of insufficient sample sizes. For the same reason, the share of foreign-born persons from EU countries working in chemicals is not included. Sectors are ordered by the share of foreign-born persons from non-EU countries.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Trends towards high and medium skill levels

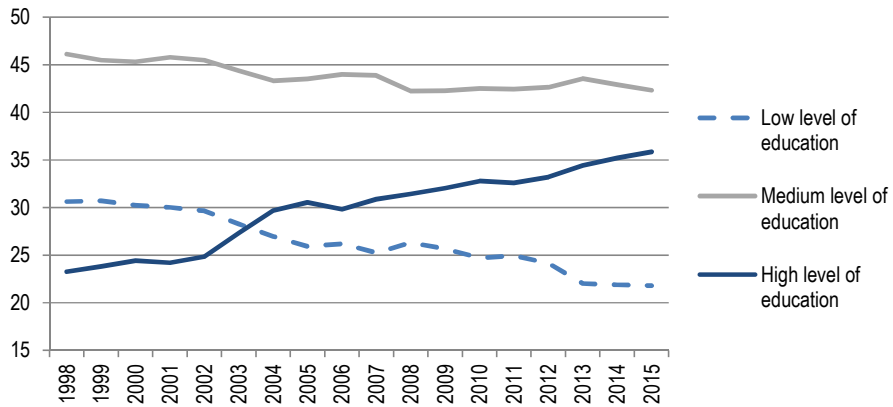
In employment across the Dutch economy, the share of highly educated employees of working age (15-64) has been growing in the past decade. As Figure 1.11 shows, this share has displayed a strongly rising tendency over the period 1998 to 2015, notwithstanding a period of stagnation in the early 2000s. The share of employees with medium levels of education has fallen somewhat between 1998 and 2015, while the share of employees with low education has fallen by more than one-quarter. In 2015, the latter only accounted for 22% of working-age employees, while those with medium levels made up 42% and those with high levels 36%.

The skill-biased structural change raises the issue whether the Dutch economy can meet the demand for high-skilled employees in certain

occupations. To address such questions for the medium run, ROA derives detailed vacancy forecasts from an empirical model of labour market flows (see ROA, 2013): first, the labour demand due to expanding economic activity is calculated for each sector; second, the need for replacement of workers in existing jobs is calculated for each occupation. Three levels of education beyond school are distinguished: middle professional education (*middelbaar beroepsonderwijs*, MBO), higher professional education (*hoger beroepsonderwijs*, HBO), and academic education (*wetenschappelijk onderwijs*, WO). The forecasts of labour demand may then be juxtaposed to labour supply, taking into account some possibilities for substitution.

Figure 1.11. Shares in total employment of persons aged 15-64 by educational attainment, 1998-2015

In percent



Note: Persons with an educational attainment at ISCED level 5 or 6 are counted as highly educated, at ISCED level 3 or 4 as medium-level educated, and as low-educated at a lower ISCED level.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

For the years to 2018, ROA (2013) predicts falling overall labour demand but stable employment. The highest demand for replacements is forecast for technical, industrial, transport, and agricultural occupations. A high number of vacancies is expected for sectors in which high demand for replacements coincides with growing employment, notably in health care at MBO level and in environment/agriculture at WO level. At the same time, a rising inflow of school leavers is expected especially

in environment/agriculture at WO level but also from technical and business education at both WO and HBO levels, as well as from social and cultural education at MBO and HBO levels.

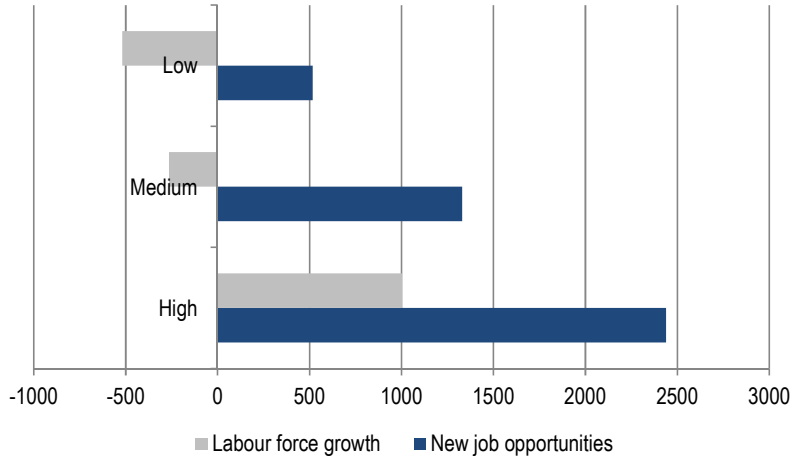
With the number of school leavers exceeding the number of job openings, school leavers' job chances in the years up to 2018 are considered mediocre in ROA (2013), across educational levels. However, chances appear good for those educated in medicine or care, at MBO or WO level, and for teachers of certain subjects. While job chances are still very good for some types of technical education (such as civil engineering at HBO level, electrical engineering at WO level, and mechanical engineering at any level), the gap between supply and demand has narrowed for other types of technical education. Outright shortages are forecast only for some types of education: care personnel at MBO or WO level, the types of engineers mentioned before and agricultural workers at MBO level, as well as teachers in these subjects.

However, according to Platform Bèta Techniek (2012), figures supplied by the top sectors suggest that the ROA forecasts substantially underestimate their recruitment needs because of narrow definitions. For the period 2011-14, the top sector high technology already foresaw a shortage of 40 000 workers with technical skills, of which three quarters would be needed at MBO level (see Platform Bèta Techniek, 2012). The food and agriculture sector expected to face a shortage until 2016 of 46 000 workers with technical skills at MBO level. While expected shortages were comparatively small in the chemical sector (1 300 per year), they were also mostly foreseen at MBO level. Across top sectors, this added up to an expected shortage of 40 000 technically skilled workers per year.

Some forecasts for the longer run are produced by the European Centre for the Development of Vocational Training (CEDEFOP). According to a forecast by level of education, 2.4 million job opportunities for highly educated persons are expected to arise between 2013 and 2025, as depicted in Figure 1.12. Another 1.3 million job opportunities are expected for persons with a medium level of education, and barely more than 500 000 are expected for persons with low education. While a fall in the labour force by 2025 is forecast for medium and low levels of education, a growth by 1.0 million is forecast at high education levels. Despite this growth, a gap of 1.4 million unfilled job opportunities for highly educated persons would remain. An even larger gap of 1.6 million is forecast for medium levels of education.

Figure 1.12. Forecasted labour force growth and new job opportunities, 2013-25

In thousands



Note: For information on the forecasting model, see Annex 9.A1 in OECD/European Union (2014).

Source: CEDEFOP Skills Forecast 2015, http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations.

Large numbers of jobs are expected to be created over the period 2013-15 in four occupational groups that typically require a medium or high education level (see CEDEFOP, 2015): technicians and associate professionals (about 400 000 new jobs), clerks (about 600 000), service workers and sales workers (more than 700 000) and professionals (about 1.5 million). Jobs for professionals are thus expected to make up one-third of all newly created jobs in the Netherlands. Forecasts for particular segments of the Dutch labour market tend to confirm that shortages at both high and medium education levels are expected to arise in some sectors. For small and medium-sized enterprises, Ruis et al. (2012) expect shortages of medium technical skills in industry, energy, and construction, as well as shortages of other medium skill levels in transport, personal care and health services. Specifically for health care, Eggink et al. (2010) estimated a labour shortage of 250 000 workers by 2030.

While such forecasts are inherently uncertain and should not be taken at face value (see Kremer, 2013), it appears fair to say that there is a likely tendency towards the creation of skilled or specialised jobs that require either a medium or a high level of education. Demand for

workers with a high education level is expected to exceed supply although the share of highly educated persons in total employment has been rising for decades. A shortage of similar magnitude is expected for workers with medium education levels, and their share in employment has tended to fall. The next section discusses how the Dutch labour market can adjust to the increasing demand for skills.

Adjustment to future labour demand

Adapting to rising long-run demand for skills could prove a formidable challenge. As Figure 1.13 shows, the population of the Netherlands in 2000 exhibited a comparatively high share of highly educated persons aged 25-64, which then increased comparatively little over the years 2000 to 2012. Among OECD countries for which the relevant data are available, only Italy and Mexico exhibit an even smaller shift towards highly educated persons over this period. It is therefore doubtful that, in case of a large increase in demand for highly educated workers, the existing growth in the supply of such labour would meet the demand within a reasonable time frame. This challenge may arise in particular in sectors where jobs require a technical or mathematical qualification – there are already too few graduates in these fields (see Platform Bèta Techniek, 2012).

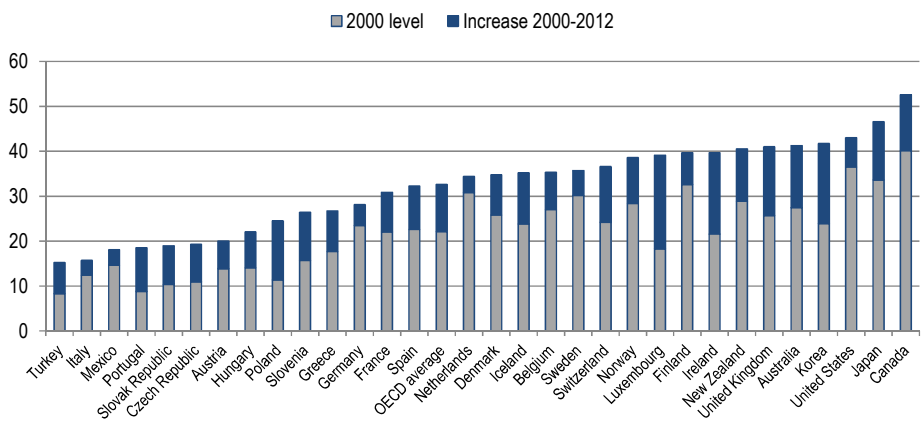
There appears to be some room for market mechanisms to react to emerging labour shortages in the future. In response to a shortage of persons with a high education level, wage premiums paid by employers for a high education level might rise, thereby raising the incentive to obtain a high level of education. Thus far, earnings of highly educated employees in the Netherlands approach twice the level of what is earned by employees with less than upper secondary education. This ratio, while close to the OECD average, seems rather low in comparison to most other OECD countries (see OECD, 2015b). By consequence, it is not hard to imagine this ratio to rise, leading in effect to a larger wage premium for high education.

Similarly, greater wage dispersion between sectors might incentivise school leavers to train in certain subjects and might also raise the re-allocation of labour within the Dutch economy. However, as pointed out in OECD (2012a), job mobility observed in the Netherlands is very low in comparison, and average job tenure accordingly high, due to substantial benefits that accrue with job tenure. In an environment of low job mobility, especially businesses in new sectors might find it difficult

to grow and to establish themselves. Even businesses in the top sectors might be affected by low job mobility when they undergo rapid growth and look to recruit experienced staff.

Figure 1.13. Share of tertiary-educated in the population aged 25-64, 2000 and 2012

In percent



Note: Persons with an educational attainment at ISCED level 5 or 6 are counted as highly educated.

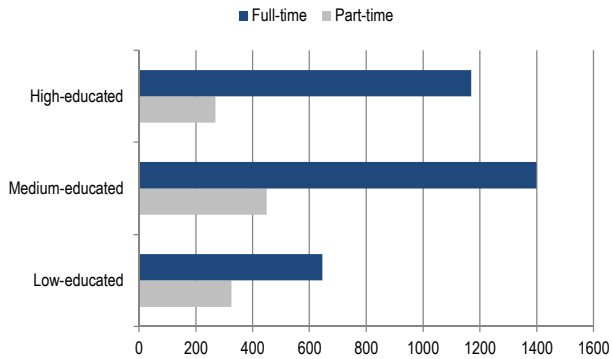
Source: OECD Secretariat calculations based on Chart A1.1 in OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888933114951.

Additional labour supply can notably come from part-time employees. According to CBS figures for 2014, only 4.2 million of the 8 million employees aged 15 to 65 work full-time, while 2.3 million employees work between 20 and 35 hours per week and 1.5 million work less than 20 hours per week. This rather large extent of part-time employment has remained stable throughout recent years. Figure 1.14 clarifies which employees work part-time: while part-time employees are a small minority among employed men, they make up a clear majority among employed women. No less than 860 000 highly educated women work part-time, and even 1.3 million women with a medium level of education. Counting both men and women, the largest number of part-time employees has a medium level of education (1.7 million), followed by those with a high education (1.1 million) ahead of those with a low education (1.0 million). Part-time employment is therefore a pervasive phenomenon across education levels. If part-time employment can be turned into full-time employment, it will offer a large source of further labour supply at all skill levels.

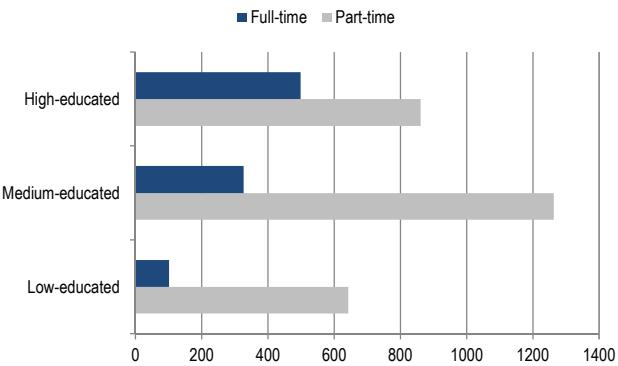
Figure 1.14. Full-time and part-time employment by sex and level of education, 2014

In thousands

A. Employed men aged 15-65



B. Employed women aged 15-65



Note: Education levels corresponding to ISCED 5 or 6 are classified as high; ISCED 3 and 4 are classified as medium levels of education; lower ISCED levels are classified as low education.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

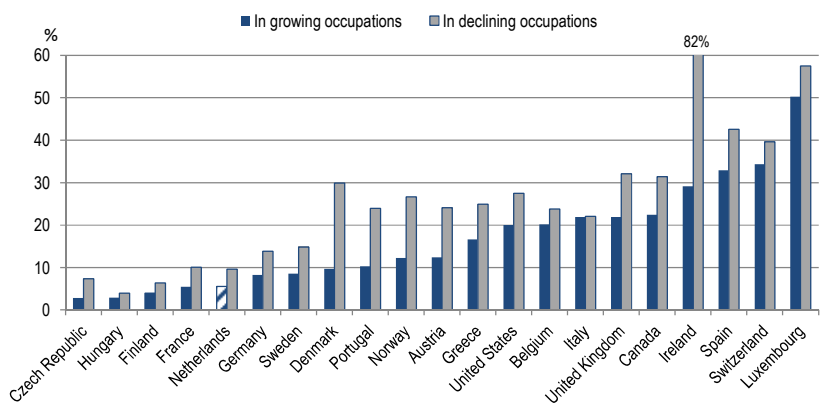
But this may prove difficult in practice, especially when part-time employment is preferred by employees. Similarly, it is not clear to what extent additional labour supply for certain occupations or with qualifications in certain subjects can be mobilised through economic policies. After all, students' subject choices and employees' choices of working hours likely reflect individual preferences in very many cases, which might be hard to change. For example, a shortage of graduates of technical degrees or training programmes has been recognised for some time, but it has proven difficult to raise the number of such graduates.

Similarly, efforts to increase the level of qualifications offered by various reservoirs of labour supply can take a number of years to bear fruit.

By contrast, the design of labour migration policy can target migrants with certain skill levels, qualifications in certain subjects and work experience in certain occupations. The level of labour migration from outside the European Union would be comparatively easy to adjust, especially in the short run. In the adjustment of the Dutch economy to higher demand for certain skills, labour migration can therefore function as a highly flexible tool, complementing efforts to mobilise additional labour supply from domestic sources. A key challenge in this context, however, is how to ensure an adequate matching of labour migrants to the occupations where their skills are demanded. Evidence on occupational choices suggests that migrants who arrive in the Netherlands (from EU and EFTA countries or from elsewhere) do not have a strong tendency to find work in growing occupations: Figure 1.15 shows that the share of newly arriving migrants among all entries into growing occupations was low in the Netherlands (6%) in comparison to other OECD countries and well below the corresponding share of entries into declining occupations (10%). An extensive discussion on matching labour migrants to labour demand in the Netherlands is offered by Chapter 4 in this review.

Figure 1.15. Entries of newly arriving migrants into growing and declining occupations, 2010

Share of entries by newly arriving migrants among all entries, in percent



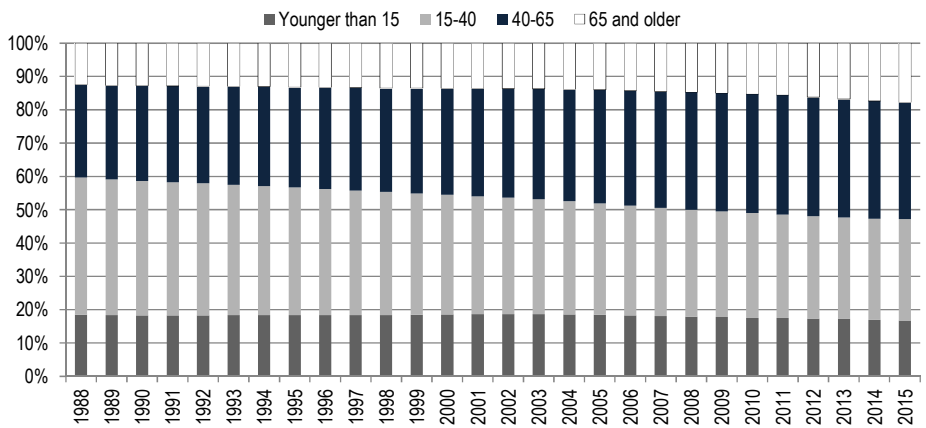
Note: Growing occupations are in the top two growth quintiles, declining occupations in the bottom 2 quintiles.

Source: Table II.5 in OECD (2012), "Renewing the Skills of Ageing Workforces: The Role of Migration", *International Migration Outlook 2012*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888932617075.

Population ageing

Labour market conditions in the future might be strongly affected by long-term demographic trends. Figure 1.16 depicts the change in the age structure of the population since 1988. The share of those younger than 15 years has remained roughly stable, but the share of those older than 65 has steadily grown and now approaches one-fifth of the population. This growth has thus reduced the share of the working-age population, i.e. of persons aged between 15 and 65 years: from 69% in 1988, the share of the working-age population has fallen to 65% in 2015. However, the dependency ratio of the Netherlands (the ratio of those aged 65 and above to those aged 15 to 64) still remains below the EU average (see Martinez-Fernandez et al., 2013). A demographic shift is also observed within the working-age population, as shown in Figure 1.16: the share of the age group 15 to 40 years has fallen considerably, while the share of the age group 40 to 65 years has grown substantially.

Figure 1.16. Age structure of the population, 1988-2015



Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

The process of population ageing can affect future labour market conditions, notably through the decline in the working-age population. The Commissie Arbeidsparticipatie (2008) calculated a fall in employment of 700 000 persons by 2040, compared to the level in 2015. Estimates produced by Berkhout and van den Berg (2010) suggest that labour supply in the Netherlands will be 13% below labour demand in

2050; they find that the employment rate in the Netherlands would have to rise from 77% in 2008 to 89% in 2050 to close this gap.

A part of this adjustment can come from older cohorts. The participation rate of those aged 55 to 64 is already fast approaching the average participation rate (see ROA, 2013), and employment growth in this age group has been comparatively high in the Netherlands (see OECD, 2014e). Greater participation can also be expected from those aged 65 and above as the legal retirement age rises and as better health allows older persons to continue professional activities. While Euwals and Folmer (2009) forecast that the increase in participation of women and older cohorts will lead to greater overall participation of those aged 20 to 65 – from 75% in 2006 to 77% in 2015 and 78% in 2040 – these rates would have to be much higher to allow for an employment rate of 89% by 2050. The role of older workers in responding to labour market developments is, however, somewhat limited by low job mobility. In 2012, job mobility in the age group 55-64 was one of the lowest in the OECD, likely linked to the wages of older workers being especially high in the Netherlands, relative to wages of younger workers (see OECD, 2014e).

An increase of net immigration can likewise alleviate demographic effects on the labour market. For a scenario without migration, Berkhout and van den Berg (2010) find that labour supply will rather be 16% below labour demand in 2050. This implies that there can be a role for migration to stabilise labour supply also more broadly, beyond particular occupations and sectors. A by-product of such a stabilisation would be a dampened rise in the dependency ratio, in particular if migrants are rather young or have children. However, for such a broad demographic effect to materialise, migration policy would normally have to pursue this objective over long time horizons, as the scope for ad-hoc measures to have a lasting demographic impact appears very limited.

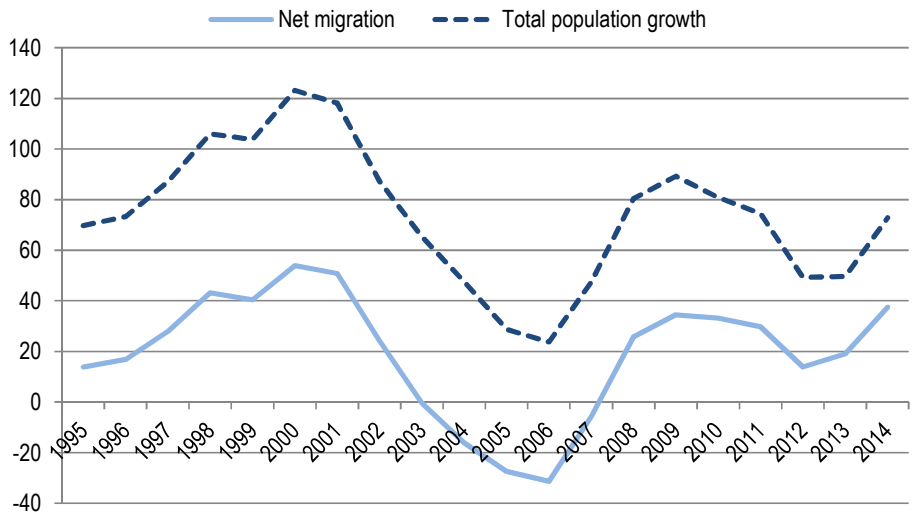
Increasing foreign-born population

The level of migration is already a primary factor influencing demographic developments. Figure 1.17 suggests that net immigration has contributed substantially to the growth of the population in the Netherlands over the last 20 years. From 1995 to 2002 and again from 2008 to 2014, net immigration accounted for a large part of population growth. According to preliminary figures for 2014, net immigration contributed more than 50% to total population growth for the first time since 1995. Net migration was negative from 2003 to 2007

due to a combination of circumstances: incoming flows of Dutch citizens were low during these years, as were incoming flows of foreigners, while outgoing flows of Dutch citizens were high (see de Boom et al., 2013). The fact that the population increase during these years reached the lowest levels in two decades again underlines the role net migration plays for population growth in the Netherlands.

Figure 1.17. Net migration and population growth, 1995-2014

In thousands



Note: Net migration figures include administrative corrections to emigration levels. Figures for 2014 are preliminary.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

The net immigration over recent decades has contributed to a strongly rising foreign-born population in the Netherlands. According to CBS figures, the number of foreign-born residents has risen from 1.3 million in 1996 to 1.8 million in 2014. This growth has outpaced the total population growth, so that the share of foreign-born residents in the total population has climbed from 8% in 1996 to almost 11% in 2014. In its most recent forecast for the evolution of the immigrant population, the CBS projects the foreign-born population to exceed 2 million by 2020, to reach 2.5 million in 2040 and 2.7 million in 2060. A corresponding CBS forecast projects the development of the total population in the

Netherlands from 2014 to 2060. Population growth is expected to continue until about 2040 and to stall thereafter. According to this forecast, the total population of the Netherlands will stand at 17.2 million in 2020, at 18.0 million in 2040 and at 18.1 million in 2060 – compared to a level of 16.9 million at the beginning of 2015. As van Duin and Stoeldraijer (2014) emphasise, migrants are the key contributors to this expected growth (the assumptions made about migration in this forecast are spelt out in van Duin et al., 2015). The CBS forecasts together imply that the share of foreign-born persons in the total population is expected to rise to 14% in 2040 and 15% in 2060.

Overall, the demographic trends in the Netherlands might pose significant challenges for the labour market in the future. Thus far, however, the fall of the working-age population induced by the ongoing ageing process has remained limited, and net immigration tends to slow down the decline. The total population is even expected to grow for another two decades, also as a result of net immigration. If this development materialises, demographic pressures on the labour market might appear only in the more distant future.

Nevertheless, shortages of highly educated workers may arise, especially in certain occupations. As (re-)training might take several years, there is a risk that innovative or expanding sectors run into bottlenecks if the labour supply they require is not readily available domestically. This suggests particular functions for the Dutch labour migration policy. Firstly, it could allow employers to respond quickly to punctually arising shortages at high or medium skill levels. Secondly, by steadily complementing the domestic supply of skilled labour with highly skilled migrants, it could facilitate structural change. At the same time, the recruitment of migrants for new job opportunities might reduce the incentives for the domestic population to (re-)train for these opportunities. To balance such considerations, labour migration policy might thirdly have to be well-targeted and highly adaptive.

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Chapter 2

Evolution and characteristics of labour migration to the Netherlands

This chapter presents a detailed profile of labour migration to the Netherlands in recent years. It discusses the share of labour migrants among total migration inflows in recent years and examines the composition of both permanent and temporary labour migration flows. Special attention is given throughout to differences between labour migrants from within the European Union and those from non-EU countries. The stocks of labour migrants and international students are characterised. The chapter concludes with an overview of labour migrants' outcomes in the Dutch labour market, including an assessment of effects from the financial crisis in 2007/08.

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.

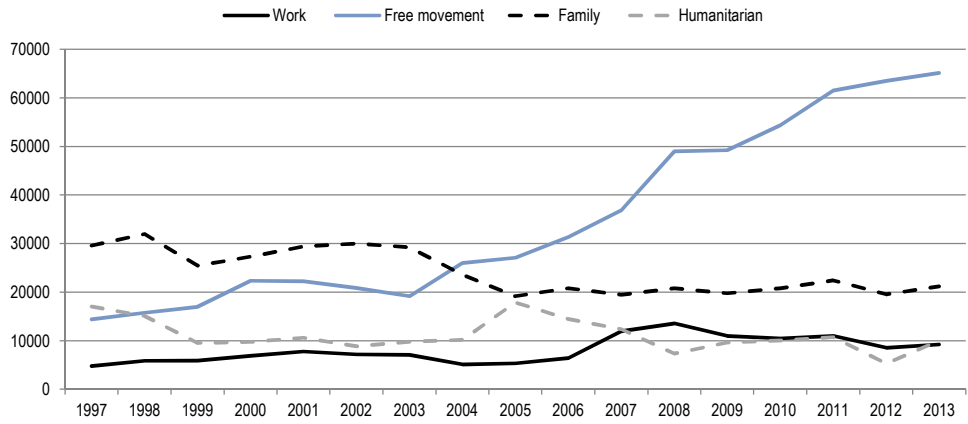
This chapter provides a quantitative overview of labour migration to the Netherlands in recent years, with a focus on labour migrants from outside the EU and EFTA countries. The discussion covers the flows of newly arriving labour migrants as well as the stock of labour migrants who reside in the Netherlands. From the yearly information on the flows, trends in the evolution of labour migration to the Netherlands can be derived. The information on stocks allows for an assessment of labour migrants' outcomes in the Dutch labour market. The chapter includes an overview of international students in the Netherlands because they can become labour migrants if they stay and find employment.

To structure the chapter, the distinction between temporary and permanent migrants is used. The Dutch migration system draws a clear line at 90 days: residence permits are only needed for stays that are (planned to be) longer. As a consequence, Dutch residence permit data does not offer information on migrants whose stay is shorter. Due to such data considerations, this chapter regards labour migrants who stay for more than 90 days as permanent labour migrants, and those staying for up to 90 days as temporary labour migrants. In the OECD data on migrant flows (the International Migration Database), however, permanent migrants are somewhat differently defined as migrants whose stay is not limited a priori, in contrast to temporary migrants whose stay necessarily ends after some time and can normally not be extended. Both definitions of permanent migrants thus include many migrants who only stay for one or two years. For flows in recent years, using one or the other definition should hardly make a difference: Chapter 3 finds that only a small minority of migrants who stay for longer than 90 days would be considered temporary migrants under the definition of the OECD.

The composition of permanent migration flows

Net migration inflows to the Netherlands fell below 20 000 in 2012 and 2013 but rose again to 37 000 in 2014 (see Figure 1.17 in Chapter 1). Gross permanent migration inflows had risen substantially over previous years but remained stable at around 100 000 per year during 2010-13, according to the OECD International Migration Database. Over the last decade, there has been a strong increase in permanent migration inflows to the Netherlands that are based on free movement within countries of the European Union or the European Free Trade Association (EFTA). Figure 2.1 shows this rise from an annual level of 19 000 in 2003 to 65 000 in 2013. As a result, free-movement migrants have come to dominate the permanent migration inflow to the Netherlands: in both 2012 and 2013, they made up more than 60% of the total inflow.

Figure 2.1. Permanent migration inflows by category of entry, 1997-2013



Note: Figures are missing for inflows from Slovenia and Croatia before 2009. Migrants are considered permanent if their stay is not a priori limited.

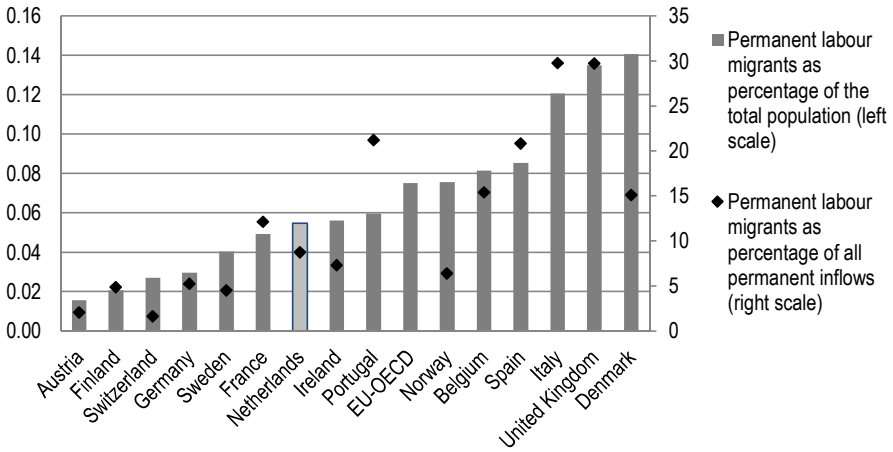
Source: OECD International Migration Database, http://dx.doi.org/10.1787/data-00342-en.

Permanent migrants from countries outside EU and EFTA could be categorised into family migrants (20% of the total inflows in both 2012 and 2013), labour migrants (9% in both years) and humanitarian migrants (5% in 2012, 9% in 2013). In contrast to the flow of EU/EFTA migrants, the magnitude of these three flows from other countries has by and large remained stable in recent years (see Figure 2.1). From 2006 to 2008, however, the inflow of labour migrants rose considerably. De Boom et al. (2010) attribute this increase to the introduction of a scheme for highly skilled migrants, and they report quickly rising numbers of labour migrants from India, China and Turkey for these years.

The composition of inflows by category of entry varies widely across OECD countries (see Figure 1.3 in OECD, 2015). The observed inflow of labour migrants to the Netherlands from outside EU and EFTA is not high in international comparison. Relative to the total population, this inflow is below the average for European OECD countries, much lower than in the United Kingdom and Denmark, but higher than in Germany and France (see Figure 2.2). Free-movement migration to the Netherlands was the seventh-largest in 2013 among 15 European OECD countries, while the largest free-movement flows were registered in Switzerland, Norway and Austria. The share (9%) that permanent labour migrants represented in the total permanent migration inflow was

lower in the Netherlands than in many other European OECD countries (see Figure 2.2): the corresponding shares in both Italy and the United Kingdom approached 30% and stood at 21% for both Spain and Portugal. Only for Switzerland, Austria, Finland, Germany and Sweden, this share was significantly lower than for the Netherlands.

Figure 2.2. Permanent labour migration inflows from non-EU countries, 2013



Note: Migrants are considered permanent if their stay is not a priori limited. Data include changes of status from a temporary to a permanent status. Permanent labour migrants as percentage of all inflows are not reported for EU-OECD because free-movement flows are not determined in this case.

Source: OECD International Migration Database as cited in OECD (2015), *International Migration Outlook 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888933260743.

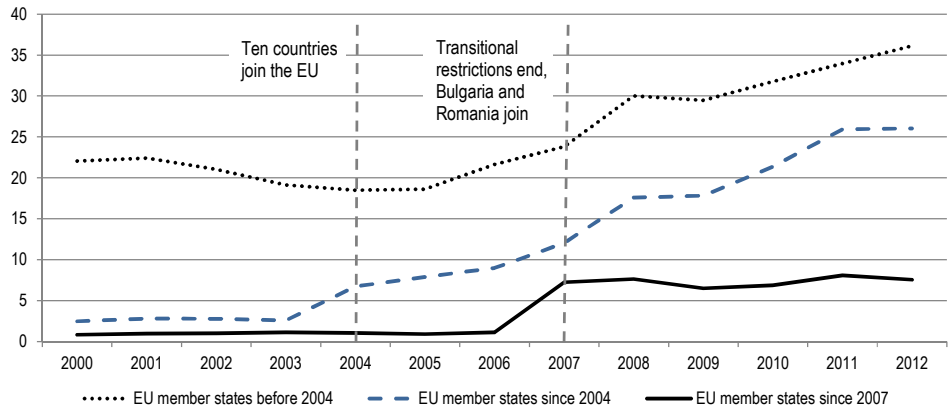
Figure 2.3 decomposes the total inflow of EU migrants to the Netherlands by citizenship. It depicts inflows from existing EU countries whose citizens have full access to the Dutch labour market; from countries that acceded to the European Union in 2004 and whose citizens obtained full labour market access in 2007 (when transitional restrictions on labour market access expired); and from Bulgaria and Romania that acceded in 2007, with full labour market access for their citizens gained in 2013. Inflows from all three groups of countries have increased strongly between 2000 and 2012, albeit with an interruption in 2008 that likely reflects the onset of the economic crisis. While inflows from countries acceding in 2004 have risen most rapidly, inflows from existing EU countries have often exhibited a roughly parallel development over this period.

Significant rises in inflows of new EU citizens have occurred when countries joined the European Union and also when full labour market access was granted to their citizens. The rises around the time when labour markets were opened point to the labour migration component in free movement, but de facto labour migrants likely already contributed to the rising inflows observed before this time. In the case of Bulgaria and Romania, a large rise was in fact only observed in the year of their accession. Since then, inflows of Bulgarians and Romanians have remained roughly stable, while inflows from other EU countries returned to a rising path after 2009.

The magnitude of free-movement inflows to the Netherlands mainly reflects particularly large inflows from a few countries. According to the OECD International Migration Database, more than 18 000 Poles migrated to the Netherlands in 2012, twice the 2007 number. Poles thereby represent by far the largest inflow from newly acceded EU countries, ahead of Bulgarians (5 000 in 2012), Hungarians (3 000) and Romanians (2 500). The Polish inflow also greatly exceeds the largest inflows from existing EU countries, notably from Germany (about 9 000 in 2012), the United Kingdom and Spain (between 4 500 and 5 000 each). Comparable inflows from countries outside the European Union were in 2012 only observed for China (5 000), India (4 000) and the United States (about 3 500).

Figure 2.3. Permanent inflows from EU countries by citizenship, 2000-12

In thousands



Note: Migrants are considered permanent if their stay is not a priori limited. Figures are missing for inflows from Slovenia before 2009. Flows from Croatia (accession in 2013) are not included.

Source: OECD International Migration Database, http://dx.doi.org/10.1787/data-00342-en.

Box 2.1. Data sources on labour migration to the Netherlands

The figures and analyses provided in this review draw on a wealth of data obtained from a number of data providers. Frequent use is made of data at the national level from official Dutch sources. They are complemented by data sets with international coverage that allow for cross-country comparisons. Beginning with the national data providers, the main data sources are briefly characterised.

Central Office for Statistics (Centraal Bureau voor de Statistiek, CBS)

The Central Office for Statistics of the Netherlands plays a key role in the provision of official Dutch statistics: it draws on and merges information from a range of official data sources, such as the foreigners' register, the IND (see below) and the tax register. To this end, various data recorded for the same individual can be linked through a unique identifier (*VNumber*). Aggregate statistics on a wealth of topics including migration flows, the stock of foreign population and key labour market variables can be arranged and selected via the online database provided by the CBS (*Statline*).

The CBS also offers results of in-house analyses and estimations. Extrapolating the observed demographic developments, regularly updated projections seek to predict in particular the development of the migrant population in the Netherlands, defined as all individuals who migrated themselves or who have at least one parent who migrated to the Netherlands. As another example, the CBS identifies labour migrants from EU/EFTA countries (who cannot be observed directly through residence permits) as migrants from EU/EFTA countries who take up employment in the Netherlands within three months of arrival. Some gaps in the data, however, could not yet be filled, so that e.g. the educational composition of the migration inflow is unknown.

Econometric analyses undertaken for this review draw on individual-level micro data obtained from the CBS. For each analysis, a data set has been assembled from the available CBS micro data with the specific analytical approach in mind. This way, data sets with a range of variables were created for knowledge migrants, for spouses and partners of knowledge migrants and for international students. These three data sets are characterised in Chapters 4 and 5, but are presented in more detail in the analytical report prepared by Berkhout et al. (2016).

In addition, aggregate statistics have been assembled by the CBS on numbers of migrants who are still in the Netherlands up to ten years after arrival, separately for yearly cohorts arriving between 1999 and 2010. These figures allow calculating stay rates, and distinguish by migrants' country of origin, their reason for migration and their labour market status. Further tables allow to determine the labour market status of the entire foreign-born population by age, gender, reason for migration and group of origin country, as well as the composition of temporary labour migrants in December 2012 by age, gender, country of origin, sector and firm size.

Box 2.1. Data sources on labour migration to the Netherlands *(cont.)*

Immigration and Naturalisation Service (Immigratie- en Naturalisatiedienst, IND)

The Dutch Immigration and Naturalisation Service processes all requests for residence permits that concern stays for at least 90 days. As part of the administrative processes, data are recorded on the flows of requested and approved residence permits. The micro data for labour migrants and international students contain the detailed permit type requested, the decision taken, and the age, gender, and nationality of the applicant. The applicant's educational attainment is not recorded. From the dates of the procedures, average processing times can be derived, and sector of employment is available for a large group of labour migrants (knowledge migrants).

The data cover the first requests for most permit types over the years 2005 to 2014. First requests for a residence permit as knowledge migrant, researcher or self-employed are covered from 2008 to 2014. For the years 2012 to 2014 only, the data cover requests for renewals or changes of existing permits. Through a unique identifier (*VNumber*), renewed and changed permits can be linked to previously held first permits, which allows the calculation of status changes for the years 2012 to 2014. The calculation of stay rates, however, is beyond the scope of this data set.

Across the available variables, information is almost never missing, but requests for some permit types are not available for each year (e.g. requests for residence permits as scientific researcher are missing in 2012). Due to the link to residence permits, these data cannot capture two large groups of labour migrants and international students: those who do not need a residence permit to work or study in the Netherlands, notably citizens of EU/EFTA countries, and those who are citizens of third countries but do not need a residence permit because their stay does not exceed 90 days.

EU Labour Force Survey (Eurostat)

This annual survey among households is assembled by Eurostat based on data collected in EU member countries, EFTA countries (except Liechtenstein), Turkey and the Former Yugoslav Republic of Macedonia. Data are collected through about 1.8 million interviews every quarter; yearly data are based on averages over quarters. Sample sizes vary considerably across countries; by consequence, statistics derived from these samples may be more reliable for some countries than for others. Despite such differences, EU Labour Force Survey data appear much more comparable between countries than data from national sources, thanks to the common Eurostat definitions employed in data collection.

For the years up to 2013, the available data from the EU Labour Force Survey cover a range of demographic and work-related variables, notably age, gender, nationality, country of birth, marital status, the presence of children, educational attainment, occupation and labour force status. Further variables include the sector of employment and the region of residence. For all individuals who were born outside of the country they are surveyed in, the EU Labour Force Survey records the elapsed duration of stay as years of residence in the current country of residence, which allows distinguishing between recent migrants (who have stayed for less than five years) from settled migrants (who have stayed for five years and more).

Box 2.1. Data sources on labour migration to the Netherlands *(cont.)*

In 2008, the EU Labour Force Survey was extended by an ad-hoc module (AHM) that oversampled migrants and introduced a small number of additional questions specifically to explore the situation of migrants and their families, e.g. a question on the main reason for migration. The AHM includes close to 1.44 million observations, covering all EU member countries except Finland, Malta and Croatia. A similar ad-hoc module was produced in 2014 but did not include observations from the Netherlands.

OECD International Migration Database

Largely based on the individual contributions of national correspondents (the OECD Expert Group on Migration), this database covers gross bilateral migration flows and the flow of naturalisations on a yearly basis. The network of correspondents covers most OECD member countries as well as the Baltic States, Bulgaria and Romania. Legal migration flows are fully covered, while irregular migrants are only partially covered. As these data derive from national sources, the underlying definitions might vary. By consequence, the comparability of these figures is limited across countries; yet such problems are much less likely to arise in comparisons over time.

UNESCO-OECD-Eurostat (UOE) database on education

The UNESCO-OECD-Eurostat (UOE) data collection on education statistics is compiled from national administrative sources, as reported by ministries of education or national statistical offices. To capture student mobility, a distinction is made between resident foreign students – that is to say, foreign students who are resident in the country because of prior migration by themselves or their parents – and non-resident foreign students, who came to the country expressly to pursue their education. The stock of international students is defined as students with permanent residence outside the reporting country, and data on non-citizen students are used only where information on non-resident foreign students is unavailable. Data on international students are only available from 2004 onwards.

Gallup World Poll Data

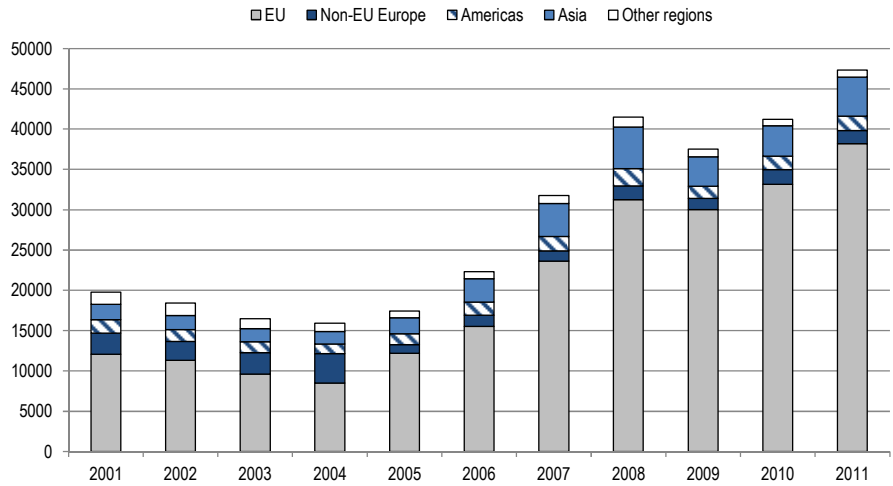
The Gallup World Poll covers a large range of behavioural and economic topics. It is conducted in approximately 140 countries based on a common questionnaire, translated into the predominant language of each country. Each year since 2006, more than 100 questions have been asked of a representative sample of around 1 000 persons aged 15 and above. In some countries, Gallup collects oversamples in cities or regions of special interest. In countries with large populations, such as China, India and the Russian Federation, sample sizes can include up to 4 000 adults. Results may, however, be affected by sampling and non-sampling errors.

Permanent labour migration flows

Figure 2.4 shows the composition of permanent labour migration flows to the Netherlands by region of origin for the period 2001 to 2011. In Dutch official data, permanent labour migrants from non-EU countries are identified as those who obtain residence permits for stays of more than 90 days, in contrast to the OECD's definition mentioned above. Using this definition, temporary labour migrants will also be included in these figures if their stay exceeds 90 days. To distinguish labour migrants among the EU/EFTA migrants, the Dutch Centraal Bureau voor de Statistiek (CBS) uses on two criteria. As spelled out in Jennissen et al. (2014), those EU/EFTA migrants who start working within 120 days after arrival are categorised as labour migrants; whenever a person arrived within 120 days after the immigration of a parent or partner, the individual is categorised as a family migrant. Many EU/EFTA migrants meet both criteria, so that 27% of EU migrants are counted towards two categories, while very few are counted towards three categories. Following this approach, 48% of the free-movement inflows from 1999 to 2010 can be identified as labour migration, 44% as family migration, 17% as international students, 0.2% as humanitarian migrants and 19% as migrants of other categories, such as au pairs and pensioners (see Jennissen et al., 2014). Over time, the share of family migrants among the EU/EFTA migrants appears to have fallen somewhat, while the share of labour migrants has fluctuated around a stable level.

Among a total of over 47 000 permanent labour migrants in 2011, about 9 000 came from non-EU countries (see Figure 2.4). Permanent labour migration flows from Asia have grown strongly since 2004, albeit from a low level. By 2011, they accounted for almost 60% of all flows from non-EU countries. Flows from non-EU European countries (notably Ukraine, Bosnia-Herzegovina and Belorussia) have grown slowly since 2005, after a sharp fall between 2004 and 2005 that reflects the EU enlargement in 2004. Flows from the Americas and from other regions have by and large remained stable. Permanent labour migration flows from EU countries have grown much more strongly than such flows from elsewhere. As a result, the share of EU migrants has also risen, from about 60% in 2001-03 to 80% in 2009 to 2011. In total, permanent labour migration flows in 2011 stood at the highest level observed between 2001 and 2011 and amounted to three times the total flows in 2004, which was the lowest level observed in this period.

Figure 2.4. Permanent labour migration inflows by region of origin, 2001-11

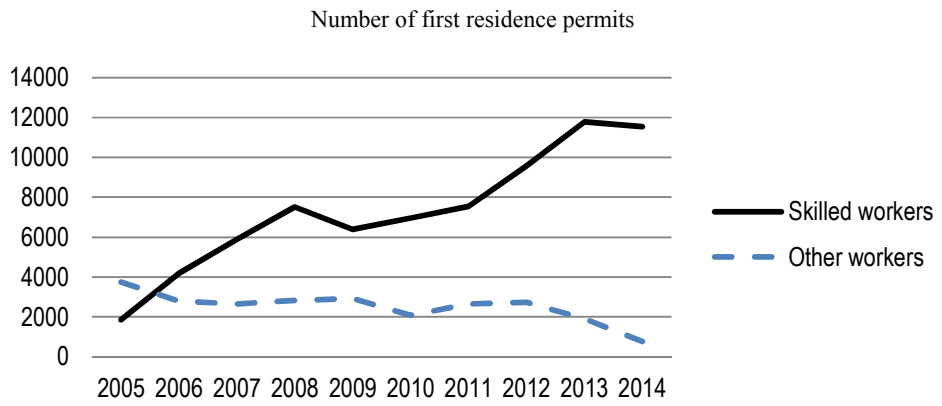


Note: Only those migrants are counted who (plan to) stay in the Netherlands for more than 90 days. Region of origin is determined by the country of birth. Among migrants who benefit from free movement, labour migrants are defined as those who are observed to enter employment within 120 days of arrival.

Source: CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl.

Based on data from the Immigration and Naturalisation Service (IND) on residence permits, Figure 2.5 shows the evolution of permanent labour migration from non-EU countries separately for two broad categories: skilled labour migrants and other labour migrants. The former consist mainly of the so-called knowledge migrants and scientific researchers, but also includes international graduates and holders of an EU Blue Card, while the latter captures the remainder, mainly work permit holders, self-employed and interns (see Chapter 3 for details on permit types). In 2014, 11 500 first permits for skilled workers were issued, compared to only 800 permits for other workers. Over the entire period 2005-14, 73 000 first permits were issued to skilled workers and 25 000 to other workers. The diverging evolution of these two groups suggests a clear shift in managed labour migration towards skilled labour migrants and away from other labour migrants: while the number of permits for skilled workers has risen in almost every year over the period 2005 to 2014, the number of permits for other workers has fallen in almost every year. Still in 2005, fewer permits were issued to skilled workers than to other workers (1 900 compared to 3 700).

Figure 2.5. Permanent non-EU labour migrants by permit type, 2005-14



Note: Only those migrants are counted who (plan to) stay in the Netherlands for more than 90 days. Skilled workers hold a first residence permit as knowledge migrant, researcher, holder of an EU Blue Card, or a job-search year permit for graduates (including status changes in 2012-14, as most of these permits were recorded). Other workers hold (as first residence permit) a Labour Migrant Permit, a permit based on bilateral treaties or as self-employed, intern, clerical or posted worker. Residence permits are not required for citizens of EU/EFTA countries, so that only citizens of other countries are included here.

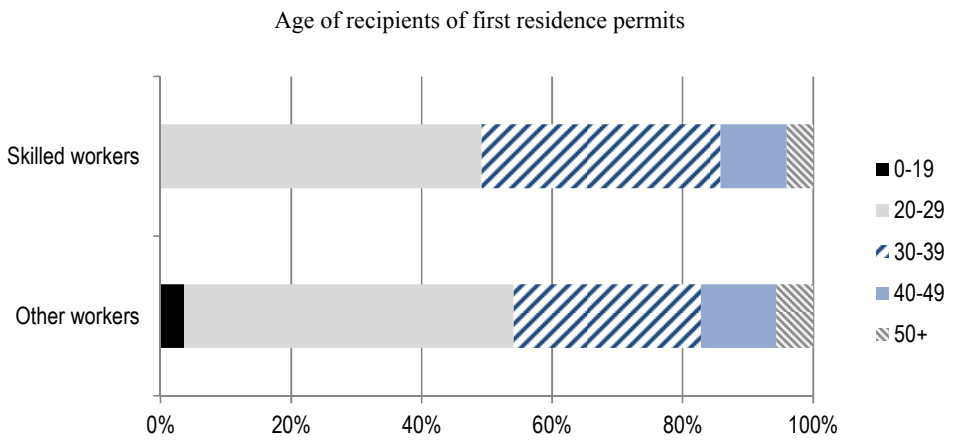
Source: Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Workers aged below 30 represent about half of labour migration inflows from non-EU countries (see Figure 2.6): 49% of skilled workers and 54% of other workers are younger than 30. The share of workers aged between 30 and 39 years is significantly greater among skilled workers (37%) than among other workers (29%). Overall, age distributions do not differ much between skilled and other workers, but skilled workers are somewhat more concentrated in the age groups from 20 to 39 years: 86% of skilled workers fall into this range, compared to 79% of other workers. However, this result derives primarily from the absence of workers aged less than 20 among skilled workers. Given the conditions for skilled workers (see Chapter 3 for a detailed discussion), workers below 20 may have little possibility to qualify as skilled migrants.

Some surprising similarities arise in a comparison of the main nationalities between skilled and other workers, shown in Figure 2.7. While Indian nationals are the largest group among skilled workers, Chinese nationals have this position among other workers. Yet the five

most frequent nationalities are the same for both skilled and other workers: these are nationals of India and China, the United States, Japan and Turkey. The last three countries even account for similar shares among both types of workers. In total, 20 000 Indian workers received a first residence permit over the years 2005-14, and in 93% of the cases, this was a permit for skilled workers. The corresponding figures are 15 000 for Chinese workers (59% as skilled workers), 12 000 for US workers (68%), 5 000 for Japanese (64%) and 4 000 for Turkish workers (73%).

Figure 2.6. Age distribution of permanent non-EU labour migrants by permit type, 2009-14

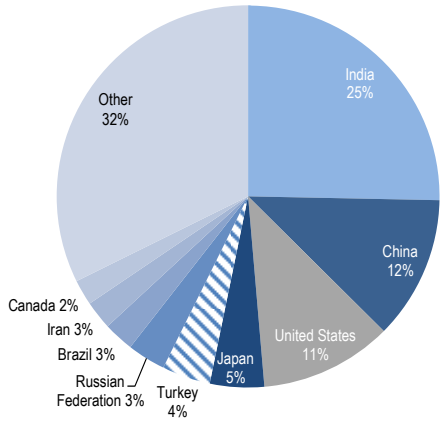


Note: Only those migrants are counted who (plan to) stay in the Netherlands for more than 90 days. Skilled workers hold a first residence permits as knowledge migrant, researcher, holder of an EU Blue Card, or a job-search year permit for graduates (including status changes in 2012-14, as most of these permits were recorded). Other workers hold (as first residence permit) a Labour Migrant Permit, a permit based on bilateral treaties or as self-employed, intern, clerical or posted worker.

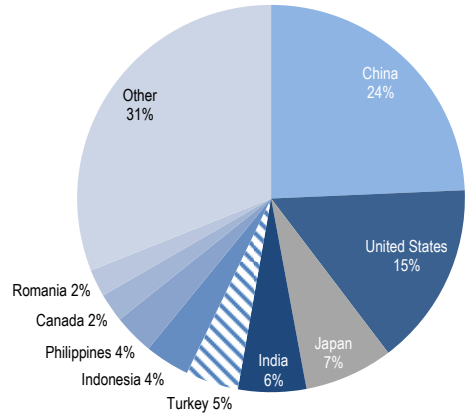
Source: Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Figure 2.7. Main nationalities of labour migrants obtaining first residence permits, 2005-14

A. Skilled workers



B. Other workers



Note: Only those migrants are counted who (plan to) stay in the Netherlands for more than 90 days. Skilled workers hold a first residence permits as knowledge migrant, researcher, holder of an EU Blue Card, or a job-search year permit for graduates (including status changes in 2012-14, as most of these permits were recorded). Other workers hold (as first residence permit) a Labour Migrant Permit, a permit based on bilateral treaties or as self-employed, intern, clerical or posted worker.

Source: Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

While the group of skilled workers has grown at the expense of other workers, Figures 2.6 and 2.7 imply that the distribution of migrants over age and nationality has largely remained the same. This finding is at odds with the large-scale shift towards skilled labour migration that Figure 2.5 suggests. While it is possible that just about the same shares of both skilled and other workers come from the United States, Japan, Turkey and Canada, it is also possible that both shares reflect the same underlying links in business and trade that attracted roughly the same migrants, irrespectively of the type of residence permit. In this latter case, the composition of labour migration flows would change little, but labour migrants who would have entered the Netherlands as other workers only a few years ago might now arrive as skilled workers. This raises the question to what extent the growing use of programmes for skilled migrants has in fact changed the composition of labour migration flows. As information on the composition by education is not available, it is ultimately impossible to verify whether there was a shift towards more skilled labour migration, but Chapter 4 considers this question in more detail.

Temporary labour migration

While permanent labour migration flows are associated with stays of more than 90 days in Dutch official data, shorter stays for the purpose of work are considered temporary labour migration. A diverse range of phenomena thus fall under temporary labour migration: seasonal workers who stay for three months as much as posted workers who stay for a few days, certain business visits as much as intra-company transfers for the duration of a project. The Dutch economy offers ample scope for all these forms of temporary labour migration, as it features a strong agricultural and horticultural business as well as services and industries that are strongly oriented towards international trade. Therefore, all these forms likely contribute to the extent of temporary labour migration. However, persons who are temporary labour migrants by the OECD's definition will not be considered temporary labour migrants in Dutch official statistics if their stay exceeds 90 days.

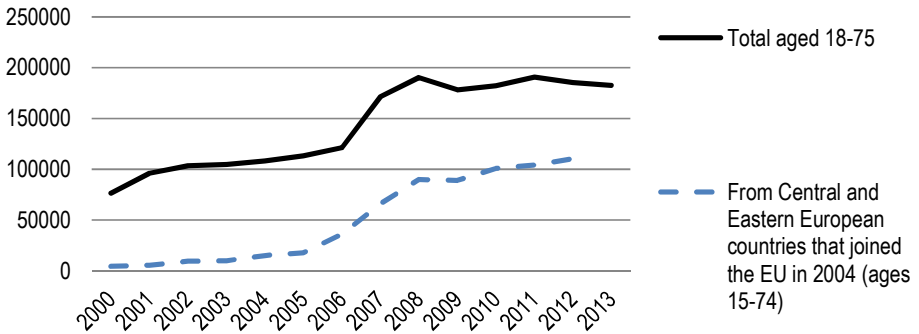
For a number of reasons, it has proven difficult to statistically capture temporary labour migration. Given the brevity of their stay, temporary labour migrants are not required to register with local authorities. While temporary labour migrants from outside EU and EFTA may need a visa, they do not necessarily need a residence permit. As a result, statistics on the inflows of temporary labour migrants are

unavailable. Some information on stocks is available, but is bound to depend strongly on the particular time at which the stock is measured, due to seasonal fluctuations in the level of temporary labour migration. Irrespectively of when the stock is measured, however, the stock will likely be much smaller than the total inflow: short stays imply that most temporary migrants who enter the Netherlands at some point during the year are not present on its territory when the stock is measured.

The CBS provides information on the stocks of temporary labour migrants measured on the last Friday of September in each year. As temporary labour migrants are not observed directly, these data rely on the fact that persons who stay in the Netherlands for less than four months are not required to register locally (in the GBA register). The CBS assembles data on persons who are not locally registered from tax records, the UWV WERKbedrijf, police records and other sources. Temporary labour migrants are then identified indirectly as persons who are not locally registered but who are employed in the Netherlands. However, this will include a number of persons who stay for more than 90 days but less than four months, as well as others who for some reason did not register although they stay for at least four months. Among labour migrants from Central and Eastern European countries, the latter group alone might account for one-quarter of the persons indirectly identified as temporary labour migrants, according to Berkhout et al. (2014). Therefore, the approach of the CBS could substantially overestimate the true number of temporary labour migrants.

As Figure 2.8 shows, the approach of the CBS suggests that temporary labour migration has grown strongly until 2008 before stabilising at a high level. The observed increases were roughly parallel to the increasing numbers of temporary labour migrants from eight Central and Eastern European countries that joined the European Union in 2004. Citizens of these countries began to have access to the Dutch labour market in May 2006 and enjoyed full access by May 2007 (see Centraal Planbureau, 2011), which likely explains the rapid increases in levels that Figure 2.8 shows for the years 2005-08. It appears that, by 2012, citizens of the new EU member states accounted for close to 60% of temporary labour migration to the Netherlands.

Figure 2.8. Stocks of temporary labour migrants at the end of the third quarter, 2000-13



Note: Totals refer to persons who were employed in the Netherlands on the last Friday of September of the respective year but who did not appear in the local population register (registration is compulsory only for stays of at least four months). Country of origin refers to country of birth where possible and to nationality otherwise. For persons from Central and Eastern European countries, a value for 2013 is not available.

Source: For totals, CBS Statline (Centraal Bureau voor de Statistiek), http://statline.cbs.nl; for migrants from new EU member states: CBS Statline and CWI (Centrum voor Werk en Inkomen, now UWV Werkbedrijf) as cited in Centraal Planbureau (2011), "Arbeidsmigranten uit Oost-Europa", CPB Notitie, Table 5 (years to 2010) and CBS Migrantenmonitor 2011/12, http://www.cbs.nl/nl-NL/menu/informatie/beleid/publicaties/maatwerk/archief/2014/140123-migrantenmonitor-2011-2012.htm.

Poland is the main origin country of temporary labour migrants. According to CBS micro data, migrants from Poland accounted for 56% (almost 90 000 persons) of the stock of temporary labour migrants at the end of December 2012 (Dutch emigrants who temporarily return are not counted towards the stock). Migrants from neighbouring countries Germany and Belgium accounted for large shares (14% and 10%, respectively). While small in comparison to the group of Polish migrants, migrants from Hungary are the only other significant group of temporary labour migrants from Central and Eastern Europe, representing 3%. All other EU member states collectively account for less than 12% of the stock, and non-EU migrants for only 5% (7 600 persons, mainly from Suriname, Morocco, and the Netherlands Antilles). This suggests that almost all temporary labour migration to the Netherlands takes place in the context of free movement within the European Union.

Almost one-fifth of temporary labour migrants were younger than 25 years and another fifth was aged between 25 and 29, according to the

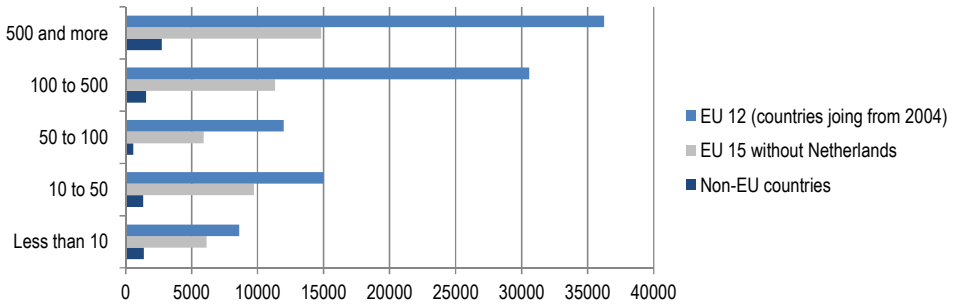
same data. Together, well more than half of the stock was aged less than 35. The remainder was mainly aged between 35 and 54, while comparatively few were between 55 and 64 years old. Overall, young workers appear substantially overrepresented among temporary labour migrants. This confirms earlier results reported by Berkhout and Hof (2012) who find that temporary labour migrants are often young, migrate without family, and typically carry out seasonal work over short periods before eventually returning. The study attributes the high rate of return to the proximity of migrants' home country and culture, to favourable economic developments in the home country, and to the fact that the right to stay is not given up by leaving.

Temporary labour migrants are more frequent in firms employing at least 100 employees than they are in smaller firms (see Figure 2.9). This applies especially to temporary labour migrants from new EU member states: in December 2012, about two-thirds of them worked in firms with more than 100 employees. By consequence, temporary labour migrants from non-EU countries were more frequent at smaller firms than temporary labour migrants from new EU member states (43% against 35%), and especially among firms with up to 50 employees (36% against 23%). The distribution of temporary labour migrants from non-EU countries resembled more that of temporary labour migrants from EU15 countries than that of temporary labour migrants from new EU member states.

The largest groups of temporary labour migrants work in administration and support: in 2012, this sector accounted for almost three-quarters of temporary labour migrants from countries that joined the European Union in 2004 or 2007, for 29% of those from non-EU countries and 28% of those from other EU15 countries (see Figure 2.10). The administration and support sector notably includes temporary employment agencies, which employ large numbers of migrants (see Box 2.2). This can partially explain both the distribution over sectors in Figure 2.10 and the tendency towards large firms in Figure 2.9.

Figure 2.9. Temporary labour migrants by firm size, 2012

Individuals aged 15-65



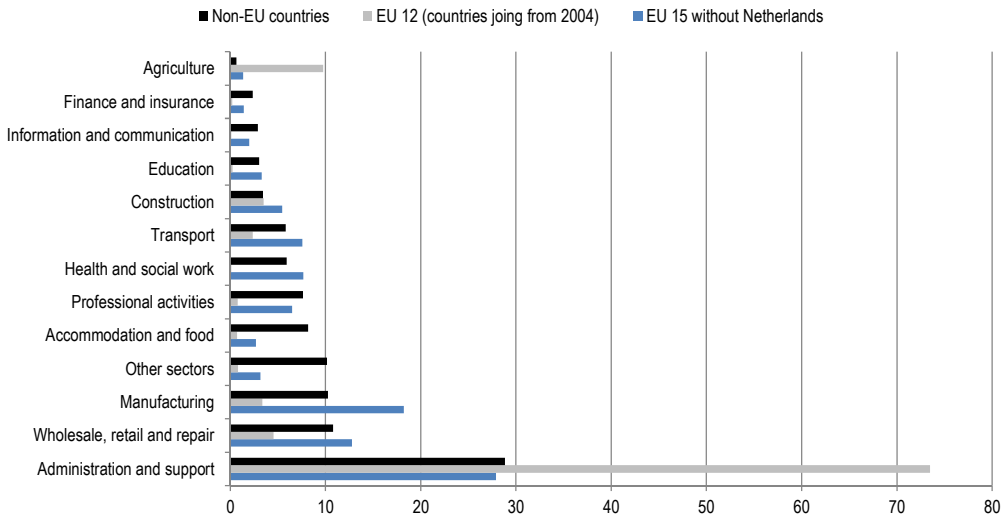
Note: Figures refer to persons aged 15 to 65 who were employed in the Netherlands in December 2012 but did not appear in the local population register (registration is compulsory only for stays of four months and more).

Source: CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

As shown in Figure 2.10, temporary labour migrants from non-EU countries are also found in wholesale, retail and repair (11%), manufacturing (10%) and accommodation and food (8%). Their distribution over sectors again largely follows that of migrants from EU15 countries, but differs strongly from that of migrants from new EU member states. For example, about 8% of temporary labour migrants from non-EU countries work in professional activities, which is comparable to the share of 6% from EU15 countries, but this sector account for less than 1% of temporary labour migrants from new EU member states. Conversely, 10% of the latter work in agriculture, against only 1% of temporary labour migrants from non-EU and EU15 countries. The low share of temporary labour migrants in construction, irrespective of origin, might reflect that these data refer to December, a month during which construction activities are less intensive than during warmer months.

Figure 2.10. Temporary labour migrants' sectors of work, 2012

Sector distribution of individuals aged 15-65, in percentages



Note: Figures refer to persons aged 15 to 65 who were employed in the Netherlands in December 2012 but did not appear in the local population register (registration is compulsory only for stays of four months and more). Administration and support notably includes temporary work agencies; other sectors include arts and entertainment, mining and quarrying, public service, electricity and gas, water and waste management, real estate activities, extraterritorial organisations and other services. The distribution of temporary migrants over sectors can change with seasons.

Source: CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

Box 2.2. Recruitment of migrants by temporary employment agencies

Temporary employment agencies are companies that send their employees to work temporarily for their clients. While employees are formally employed and paid by the temporary employment agency, they often work at the client firm much like the clients' own employees. Clients pay the temporary employment agencies as a service provider. The agencies therefore temporarily provide additional staff to their clients, not unlike the role of an intermediary. This can make temporary employment agencies especially relevant for migrants who lack direct contacts to employers in the destination country and who might look for arrangements that include travel and accommodation.

According to the European Labour Force Survey, temporary employment agencies in the Netherlands employed between 60 000 and 70 000 migrants in 2007 and 2008 (see Figure 2.11). The number decreased over the following years and in 2013 fell below 40 000 for the first time since 2005. These figures include all migrants irrespectively of migration motive or duration of stay. Among them, migrants from the new EU member states are only a small minority, while more migrants from EU15 and EFTA countries are employed by temporary employment agencies and migrants from non-EU countries account for the vast majority. The decrease in total employment was mainly driven by falling employment of migrants from non-EU countries; by contrast, about as many migrants from new EU member states were among the employees in recent years as in 2008.

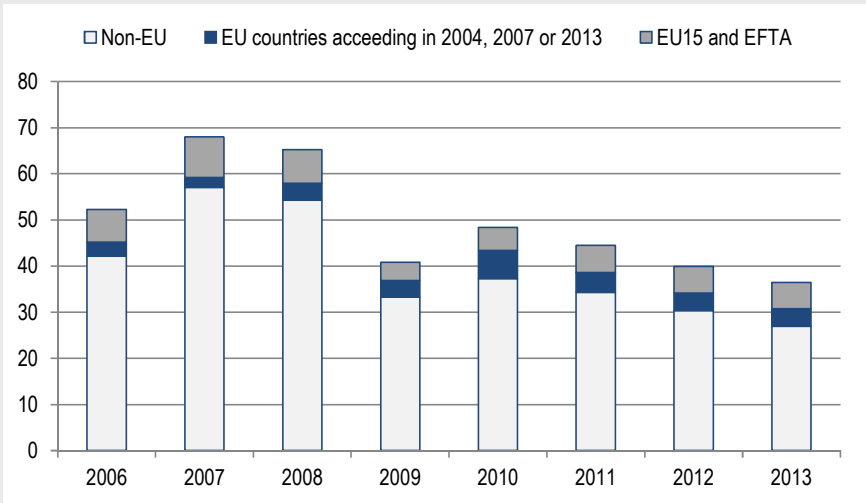
Temporary employment agencies have gained notoriety in the Netherlands for violations of employment and social standards. In the Dutch Lower House, a parliamentary commission on "Lessons from recent labour migration" was exasperated by the scale of malpractice associated with temporary employment agencies (see Tweede Kamer der Staten-Generaal, 2011). The commission estimated that between 5 000 and 6 000 temporary employment agencies underpaid the migrants they employed, overcharged them for accommodation, tricked them into unfavourable contracts or otherwise exploited them. Pointing out that few of these practices were explicitly legally banned, the commission proposed a number of measures to drastically reduce them. For the horticulture cluster in the Westland/Haaglanden region, SER (2014) finds that workers from Poland hired by temporary employment agencies appear to have replaced more permanently employed workers from Turkey and Morocco. The report similarly recommends to prevent the erosion of work standards and fair competition and to ensure better housing for temporary workers.

In 2012/13, several hundred temporary employment agencies and other employers of migrants were inspected and 29% were found to be in violation of legal requirements (see Klaver et al., 2015). The Dutch Government launched initiatives to end exploitative practices and to improve migrants' housing conditions. Chapter 3 discusses the enforcement of legislation on the employment of migrants. Addressing the housing conditions required more comprehensive registration also of EU migrants, so that municipalities could identify and prevent overcrowding. Migrants who are not correctly registered have faced penalties since 2014, and several municipalities offer accommodation for short stays to EU migrants (see Klaver et al., 2015). New legislation also allows authorities to temporarily use empty buildings for housing migrants and to close substandard accommodation.

Box 2.2. Recruitment of migrants by temporary employment agencies *(cont.)*

Figure 2.11. Foreign-born persons employed in temporary employment agencies, by origin, 2006-13

Employed individuals (ages 15-64) in thousands



Note: Administrative employees of temporary employment agencies are not included, nor are leased employees. Romanians and Bulgarians have been counted as EU citizens already since 2006; Croatians have been counted as EU citizens already since 2009. Whether or not they work for a temporary employment agency is unknown for between 3 000 and 9 000 employed foreign-born persons in each year.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

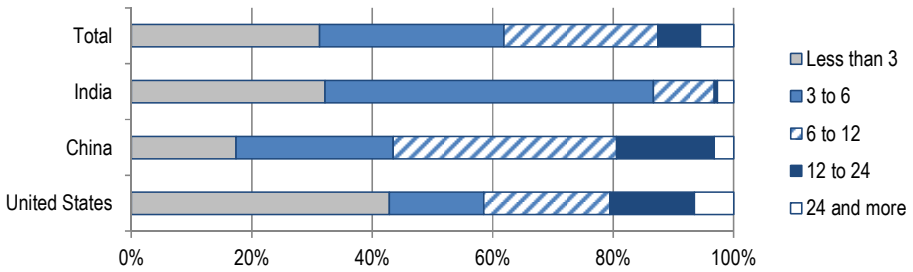
Work permit holders

Migrants from non-EU countries need a work permit to work in the Netherlands unless they immigrate through one of the programmes for highly skilled migrants, notably the knowledge migrant scheme (see Chapter 3). Figures on newly issued work permits thus refer to permanent non-EU migrants mainly in the category of "other workers" used above, but also to temporary labour migrants from non-EU countries. As migrants to whom the work permit is issued may already be resident in the Netherlands, the figures on newly issued work permits cannot be equated with any part of the inflow of labour migrants to the Netherlands; it rather corresponds to an inflow of non-EU migrants to the Dutch labour market.

In 2015, 4 600 new work permits were issued, which was only a fraction of levels in previous years (see Figure 3.3 in Chapter 3). The rapid fall in the issuance of work permits can partly be attributed to nationals of new EU member countries gaining unrestricted labour market access in 2007, ending their need for a work permit. In addition, as mentioned before, a shift may have occurred from the migration schemes that require work permits towards the schemes for high-skill migration that do not require work permits. The highest numbers of work permits in 2013 were granted to nationals of India (about 1 600), China (1 300) and the United States (800), according to UWV WERKbedrijf data (see Table 5.5 in Klaver et al., 2015 for more details).

The vast majority of work permits issued in 2013 were valid for less than one year, as Figure 2.12 shows. Just under one-third of work permits were valid for less than three months, while only about 5% were valid for two years and more. This suggests that the nature of labour migration through schemes requiring work permits tends to be rather temporary. While there is some variation by the nationality of the work permit holder, this conclusion applies to all three main groups of work permit holders. The prevalence of short-term work permits is particularly pronounced in the case of Indian nationals: only about 3% of the work permits held in this group are valid for more than one year. The share of work permits valid for less than three months is particularly large for United States citizens, reaching 43%.

Figure 2.12. Duration of work permits issued, selected nationalities, 2013



Note: The selected nationalities were the three most frequent nationalities in 2013. Totals of work permits in 2013 were 7 521 (all nationalities), 1 566 (India), 1 348 (China) and 812 (United States). The duration is known for all but three work permits.

Source: UWV WERKbedrijf as cited in Appendix Table 5.2a in Klaver, J., A. Odé and B. Witkamp (2015), "The Dutch SOPEMI Report 2015. Migration Statistics and Migration Policies in the Netherlands", Regioplan Beleidsonderzoek, Amsterdam.

Of the work permits granted in 2012 and 2013, almost 2 500 (13%) were issued for work in research (see Figure 4.12 in Chapter 4). Almost 1 900 (10%) were issued for work in IT development and consulting, another 1 900 (10%) for work in food preparation and about 1 200 (6%) for service as waiter/waitress. Data from UWV WERKbedrijf indicate that more than 1 500 of the work permits in food preparation were issued to Chinese nationals, as well as 500 of the work permits for waiters and waitresses (see Figure 5.3 in in Klaver et al., 2015). Indian nationals accounted for 1 200 of the work permits for IT development and consulting as well as for about 700 work permits in research.

International students

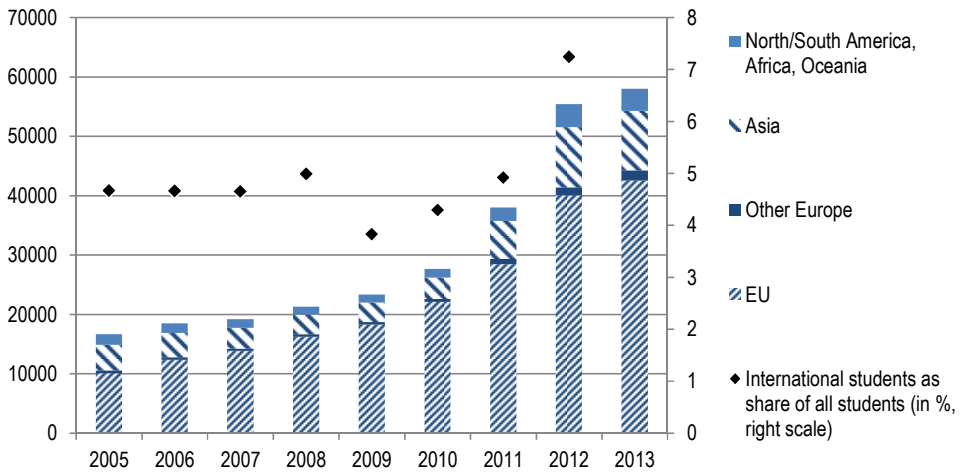
In addition to several kinds of labour migration, migrants who come to the Netherlands to study also deserve attention in an assessment of labour migration: if international students stay after graduation and find employment, they can be regarded as highly educated labour migrants. In fact, they may stand out among labour migrants due to two favourable characteristics: as local graduates, they possess a formal qualification that is readily recognised by employers, and they might have acquired some knowledge of the local language and culture during their studies. Therefore, international students can be considered a potentially important source of skilled labour migration.

Strong increase in the number of international students

The Netherlands are an increasingly popular destination for international students, especially from other EU countries. The total number of international students has more than doubled over the period 2005-13, according to figures from the UOE database on education (see Box 2.1). The Netherlands hosted 26 400 international students in 2005, but this number had climbed to 69 000 by 2013. The share of international students among all students enrolled in Dutch tertiary education has risen from 4.7% in 2005 to 7.2% in 2012 (see Figure 2.13). A large share of the international students came from neighbouring Germany alone: 24 700 in 2013, almost four times as many as in 2005. Chinese students make up the second largest group (about 4 800 in 2013, up from about 2 200 in 2005). Following in size were international students from Belgium (2 400 students in 2013), Greece (2 000), Bulgaria (1 600) and Italy (1 500). With the exception of China, the top six source countries were thus all member countries of the European Union. Only in 2005, Indonesia, Morocco and Suriname had

instead been among the top six source countries. Students from EU countries are not only by far the largest group but are also – together with international students from Asia – driving the overall increase in the number of international students.

Figure 2.13. International students by region of origin, 2005-13



Note: Only students of known geographical origin and enrolled in tertiary education are included. International students are defined as students who are not residents of the country they are studying in. The share of international students among all tertiary level students includes international students of unknown origin. A value for this share in 2013 is not available.

Source: UNESCO-OECD-Eurostat (UOE) database on education, http://dx.doi.org/10.1787/edu-data-en.

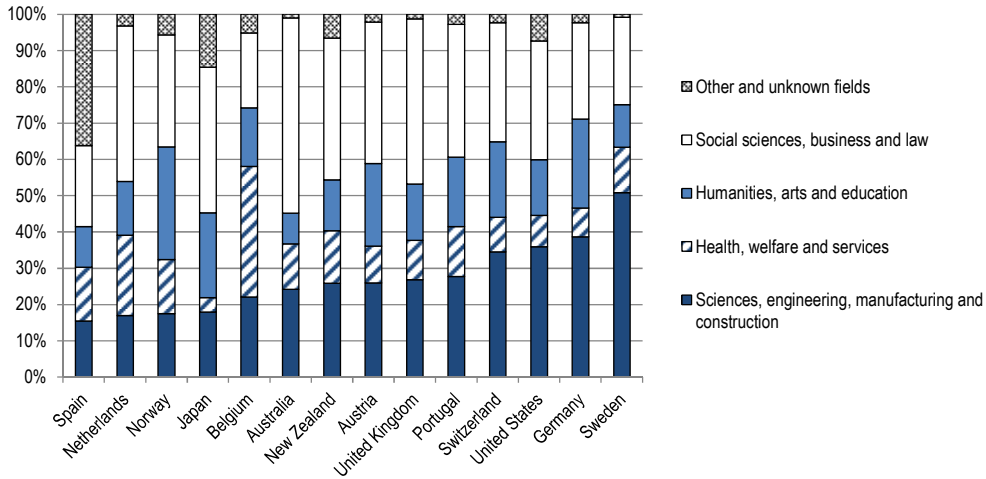
In comparison to the other OECD countries, few of the international students in the Netherlands are enrolled in sciences, engineering, manufacturing or construction – only 17% (see Figure 2.14). A still lower share in these fields in Spain might in fact be much higher, given that field of study is often unknown in Spain. In Switzerland, the United States, Germany and Sweden, these fields account for more than one-third of international students. Relatively many international students in the Netherlands (22%) are enrolled in health, welfare and services (including personal services and transport). Among the countries shown in Figure 2.14, this share is only higher in Belgium (36%). By far the largest group of international students in the Netherlands (43%) is enrolled in social sciences, business and law; similarly high shares are observed in several other OECD countries. Across all students in the

Netherlands, according to CBS data using the same definitions, 15% of all students in 2012/13 were enrolled in sciences, engineering, manufacturing or construction; 25% in health, welfare and services; 39% in social sciences, business and law; and 20% in humanities, arts and education. This overall distribution over fields is not too different from that of international students.

Non-EU nationals are especially often enrolled in academic degrees

In contrast to figures on international students, the Dutch statistics used below also include students who are (and might always have been) residents of the Netherlands but do not hold Dutch citizenship. Students at doctoral level, exchange students and students at private institutions are not included in these statistics. Reflecting the structure of the tertiary education system in the Netherlands, these figures also distinguish between academic degrees (*wetenschappelijk onderwijs*, WO) and higher vocational degrees (*hoger beroepsonderwijs*, HBO).

Figure 2.14. International students' fields of study, selected countries, 2012

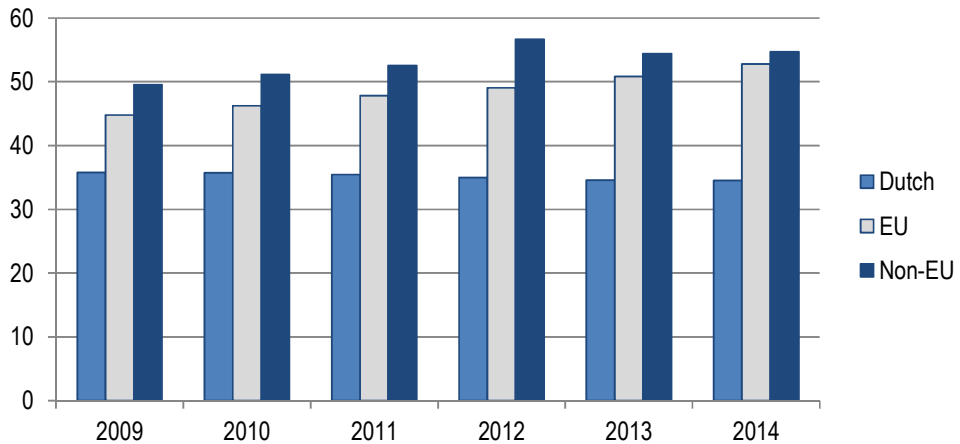


Note: Tertiary education only. International students are defined as students who are not residents of the country they are studying in. Figures for the Netherlands do not include international students in private education. Figures for Austria, Germany and Switzerland do not include international students in tertiary type-B programmes.

Source: Table C4.2 in OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888933118694.

It turns out that substantially more foreign students were enrolled in recent years in higher vocational degrees than in academic degrees: still in 2009, for example, the shares of both non-EU nationals and EU nationals enrolled in academic degrees was below 50% (see Figure 2.15). However, both shares exceeded 50% by 2014 and had thus moved far ahead of the share of Dutch students in academic degrees, which stood below 35% in 2014. Throughout the period, non-EU nationals exhibited the highest share in academic degrees, slightly above the corresponding share for EU nationals.

Figure 2.15. Share of students in academic degrees, by nationality, 2009-14



Note: Figures refer to students enrolled in academic degrees as opposed to higher vocational degrees. The figures on students of foreign nationality include those who are resident in the Netherlands, while international students are defined as non-resident students.

Source: Dutch Education Executive Agency (DUO) as reported in Appendix Table 7.2 in Klaver, J., A. Odé and B. Witkamp (2015), "The Dutch SOPEMI Report 2015. Migration Statistics and Migration Policies in the Netherlands", Regioplan Beleidsonderzoek, Amsterdam.

The distribution over study fields mainly differs between higher vocational and academic degrees in the prevalence of the most popular field, business and economics. According to figures reported by the Netherlands Universities Foundation for International Cooperation (Nuffic, 2014), this field alone accounted for almost half (14 100 students) of all international students in higher vocational degrees in 2012, followed by language and culture (4 200). By contrast, international students in academic degrees were more broadly distributed: 8 300 were in the field of business and economics in 2012,

6 100 pursued studies in behaviour or society and 3 900 in technical subjects. Very similar patterns were also observed in previous years.

Those pursuing a higher vocational degree in 2012 essentially always studied at Bachelor level, while those pursuing an academic degree were evenly split between Bachelor and Masters level (see Nuffic, 2014). In total, about three-quarters of all foreign students (42 500) were thus enrolled at Bachelor level. This almost exactly matches the split reported in CBS data for all graduates in the Netherlands in 2012/13: graduations from academic degrees were equally split between Bachelor and Masters level, while Bachelor degrees represented close to three-quarters of all graduations in 2012/13.

Beyond those studying towards a Dutch degree, a substantial number of students come to the Netherlands through the Erasmus exchange programme that is supported by the European Union. During the years 2006 to 2010, the largest groups among them came from Spain (1 300 students in 2010), France (900), Germany (800) and Italy (600). Also a certain share of these exchange students might later return to the Netherlands for a degree, or as highly skilled migrants after their graduation abroad.

Finally, it is worth noting that accommodating international students is not only a way to attract highly skilled migrants, but also a way of raising the qualifications of migrants who are already in the Netherlands. Based on residence permit data for the years 2006 to 2011, IND (2013) finds that between 600 and 850 Chinese citizens annually obtained a residence permit as student but had had a different residence permit before. To a much smaller extent, this is also observed for students from Saudi Arabia, Indonesia, and Viet Nam, among other countries. For individuals who do not need a residence permit, however, it is unknown to what extent they were already in the Netherlands before they began studying at a Dutch institution.

Labour migrants' characteristics

The remainder of this chapter discusses the socio-demographic composition and the labour market outcomes of labour migrants in the Netherlands. To this end, it draws on data on the stocks of labour migrants who reside in the country. It is easier to collect data on stocks than on flows, so that more detailed information is available for stocks. The composition of stocks, however, does not allow inferring the composition of migration inflows, because it may be a particular

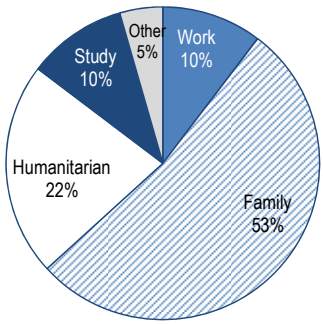
selection of migrants who have left by the time the stock data are collected. In particular, most temporary migrants from earlier years likely left again, so that stock data disproportionately reflect permanent labour migrants.

Information on stocks of labour migrants aged 15 to 64 years is available from the CBS for those who immigrated to the Netherlands between 1999 and 2012. As such data were not collected in previous years, this information captures only a part of the true number of labour migrants residing in the Netherlands. Labour migrants from non-EU countries are identified on the basis of their residence permit, while labour migrants from EU countries are identified as before based on further information, notably whether or not they are employed shortly after their arrival. At the end of 2012, the Netherlands hosted a total of close to 80 000 labour migrants who immigrated between 1999 and 2012. They represented 14% of 550 000 immigrants aged 15 to 64 years who arrived in this period. This stock of labour migrants included 37 000 persons born in non-EU countries, who represented only 10% of the 361 000 persons who had immigrated from non-EU countries in this period – the vast majority had come as family migrants (see Figure 2.16).

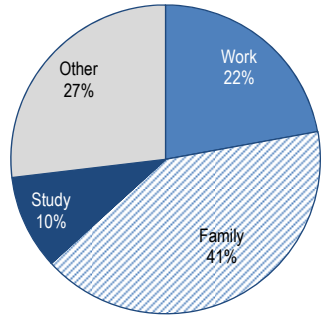
Labour migrants were less frequent among migrants who came from non-EU countries during this period than among migrants from EU countries. The share of labour migrants among non-EU migrants amounted to less than half the share of labour migrants among EU migrants: about 21 000 persons who immigrated to the Netherlands from other EU15 countries between 1999 and 2012 could be identified as labour migrants, accounting for 22% of all 95 000 immigrants from these countries during this period (see Figure 2.16). Of about 90 000 persons who immigrated from EU12 countries (i.e. countries that joined the European Union from 2004, except Croatia) during the same period, another 20 000 were likewise identified as labour migrants, also representing 22%.

Figure 2.16. Migrants aged 15-64 who arrived between 1999 and 2012, by migration category, 2012

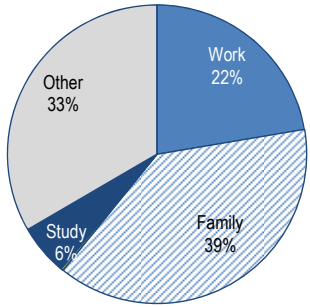
A. Non-EU countries



B. EU15



C. EU12



Note: As of December 31, 2012. EU12 refers to the countries that joined the EU in 2004 and 2007.

Source: CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

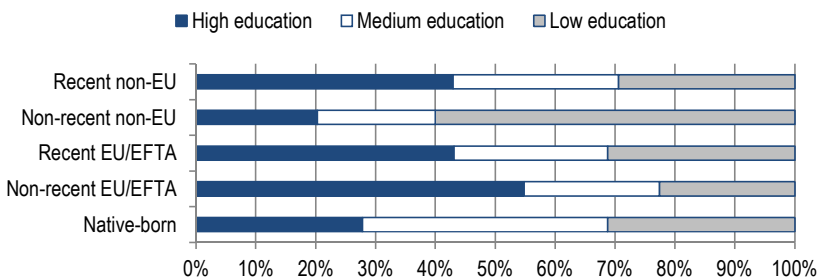
The available data on the stock of labour migrants does not provide information on their educational attainment. While data sets such as labour force surveys include information on migrants' education, it is normally not possible to identify labour migrants. If migrants' education was considered irrespectively of their migration category, the results would likely be dominated by the education of family migrants, given their large shares among all migrants (see Figure 2.16). As an exception,

labour migrants can be identified in the special module of the European Labour Force Survey (see Box 2.1), but these data are currently only available for 2008.

Drawing on the 2008 data, Figure 2.17 depicts the educational composition of labour migrants in comparison to that of the native-born population. A second comparison is that of recent migrants – who have resided in their current host country for less than five years – to non-recent migrants. Highly educated individuals accounted for 43% of recent non-EU labour migrants. They thus appear much better educated than non-recent ones: the share of highly educated was more than twice as high among the recent as among the non-recent, while the share of low-educated among the recent (29%) was only half this share among the non-recent. As a result, recent non-EU labour migrants were on average better educated than the native-born population (where highly educated individuals accounted for 28% in 2008), although non-recent non-EU labour migrants still had a lower average education than the native-born population. By contrast, the shares of persons with high or medium levels of education were lower among recent EU/EFTA labour migrants than among non-recent ones. In effect, the educational attainment of recent EU/EFTA labour migrants is very similar to that of recent non-EU labour migrants.

Figure 2.17. Educational attainment of recent labour migrants and the native-born population, 2008

Shares in the working-age population (age 15-64)



Note: Labour migrants are identified according to the main motive they indicate for having migrated. They are considered recent if they have resided in their current host country for less than five years. Persons are counted as highly educated if their educational attainment corresponds to ISCED level 5 or 6, as medium-educated if it corresponds to ISCED level 3 or 4 and as low-educated if it corresponds to lower ISECD levels.

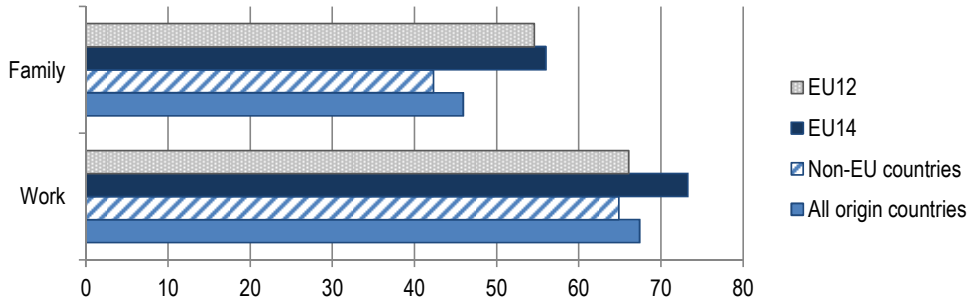
Source: OECD Secretariat calculations based on the ad-hoc module 2008 of the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Labour migrants' outcomes in the labour market

Figure 2.18 indicates that employment rates vary considerably by the reason of migration, while they vary comparatively little between migrants from different origins who have come for the same reason. Employment rates are considerably higher for migrants who are identified as labour migrants (67% on average) than for family migrants (46%). International students exhibited the lowest employment rates (35%), based on the same data. In each case, the employment rates of non-EU migrants were slightly below these average employment rates. Labour migrants from countries that joined the European Union before 2004 and international students from countries that joined the European Union after 2004 were particularly often employed, reaching employment rates of 73% and 42%, respectively.

Figure 2.18. Employment rates of migrants aged 15-64 who arrived between 1999 and 2012, by reason for migration, 2012

In percent



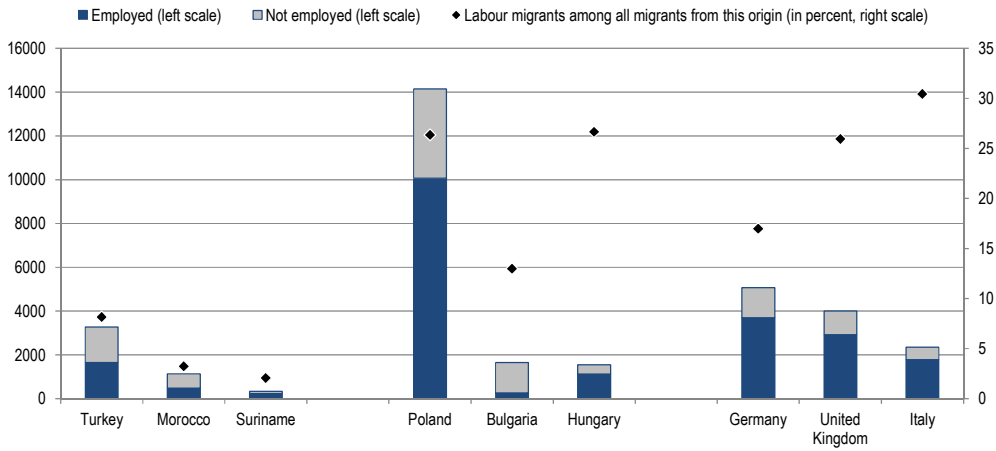
Note: As of December 31, 2012. EU14 refers to countries that joined the EU before 2004 (except the Netherlands). EU12 refers to the countries that have joined between 2004 and 2012.

Source: OECD Secretariat calculations based on CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

For selected countries of origin, Figure 2.19 shows the number of labour migrants by employment status. Just over half of labour migrants from Turkey were in employment at the end of 2012, against 42% of labour migrants from Morocco. By far the largest group of labour migrants was born in Poland: their number reached 14 000, of whom 10 000 were in employment, corresponding to 71%. Comparable employment rates were observed for labour migrants from Germany, the

United Kingdom, Italy and Hungary. By contrast, 84% of labour migrants from Bulgaria were not in employment. As Figure 2.19 also indicates, the high numbers of labour migrants from EU countries, compared to non-EU countries, are the result of especially low shares of labour migrants among the immigrants from the main non-EU countries of origin (e.g. 8% for Turkey and 3% for Morocco).

Figure 2.19. Labour migrants who arrived between 1999 and 2012, selected countries of birth, 2012



Note: As of December 31, 2012. The non-EU countries shown are the only ones available from the data; for EU15 and EU12 countries, those with the largest numbers of labour migrants were selected.

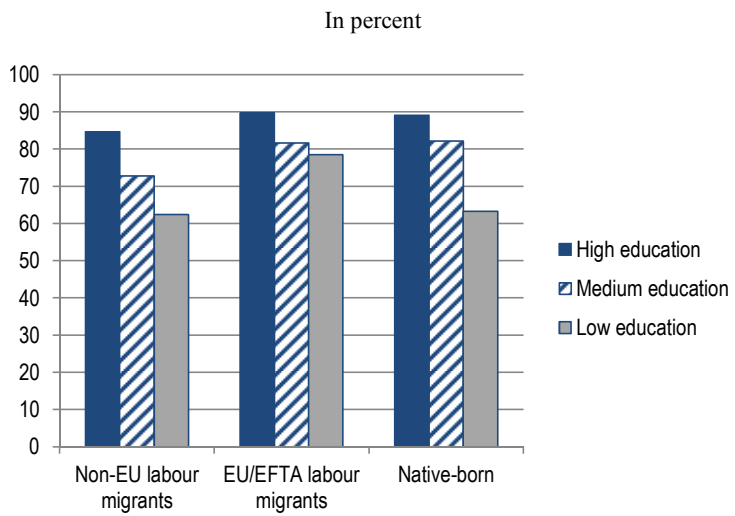
Source: OECD Secretariat calculations based on CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

One has to keep in mind that this information only covers a fraction of the foreign-born population in the Netherlands, whose total number reached 1.9 million in October 2015, based on (preliminary) CBS figures. However, the available data on labour migrants cover most of the main origin countries of the total foreign-born population residing in the Netherlands. In 2014, residents who were born in Turkey numbered 195 000, which made them the largest group in the foreign-born population, accounting for a share of 11%. Next, 181 000 residents were born in Suriname (10% of the foreign-born population), 168 000 in Morocco (9%), 110 000 in Indonesia and 106 000 in Germany (accounting for about 6% each). With the exception of Turkey and Morocco, the main origin countries of immigrants in the Netherlands are

colonies of the former Dutch empire (Suriname, Indonesia, Netherlands Antilles), neighbouring countries (Germany, Belgium, the United Kingdom) and Central and Eastern European Countries (Poland and former Yugoslavia).

To obtain employment rates by level of education, Figure 2.20 draws again on 2008 data from the EU Labour Force Survey. Among non-EU labour migrants, employment rates varied more strongly between different levels of education than they did among EU labour migrants. Almost 85% of highly educated labour migrants from non-EU countries were employed in 2008, against 73% and 62% of those with medium and low levels of education, respectively. While employment rates of non-EU labour migrants with high or medium education levels were lower than the employment rates of corresponding EU labour migrants or native-born persons, the employment rate of low-educated non-EU labour migrants was similar to that of low-educated native-born.

Figure 2.20. Employment rates of labour migrants (age 15-64) by education, 2008



Note: Labour migrants are identified according to the main motive they indicate for having migrated. Persons are counted as highly educated if their educational attainment corresponds to ISCED level 5 or 6, as medium-educated if it corresponds to ISCED level 3 or 4 and as low-educated if it corresponds to lower ISECD levels.

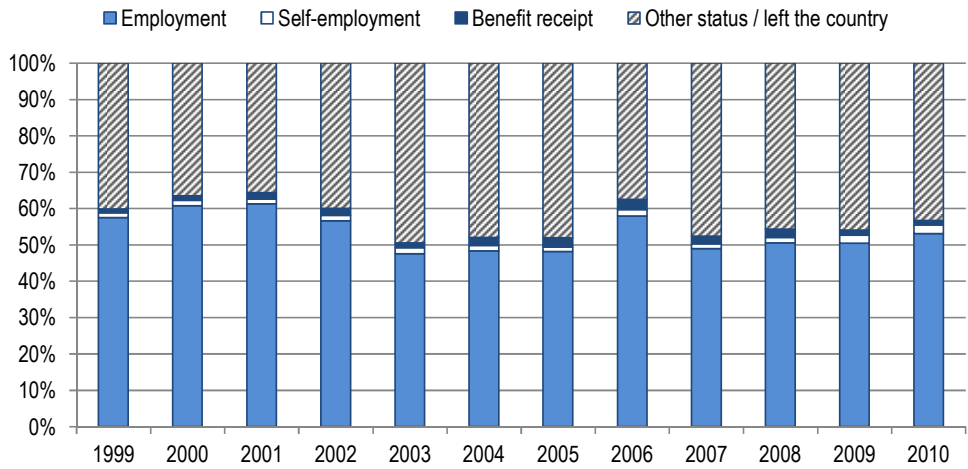
Source: OECD Secretariat calculations based on the ad-hoc module 2008 of the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Finally, Panel A of Figure 2.21 gives an indication of how labour market outcomes of the newly arriving non-EU labour migrants have evolved in recent years. For each cohort of non-EU labour migrants arriving in a given year, their labour market situation is shown one year after arrival. Across cohorts, only between 48% and 61% of the non-EU labour migrants are still employed in the Netherlands one year after their arrival. Small percentages of not more than 3% are found to be self-employed or receiving benefits. Between 36% and 50% of the non-EU labour migrants, however, are not observed in any of these situations. A likely explanation is that large numbers of non-EU labour migrants leave the Netherlands again, which highlights a challenge for migration policy: how to retain more of the labour migrants who have come to the Netherlands. Issues of retention are discussed extensively in Chapter 5. It is also possible that many non-EU labour migrants change to a different status, provided they can obtain a different residence permit. However, some evidence on status changes presented in Chapter 5 suggests that few labour migrants change to a student status or to a job-search year status. It therefore appears unlikely that status changes explain much of the attrition of non-EU labour migrants.

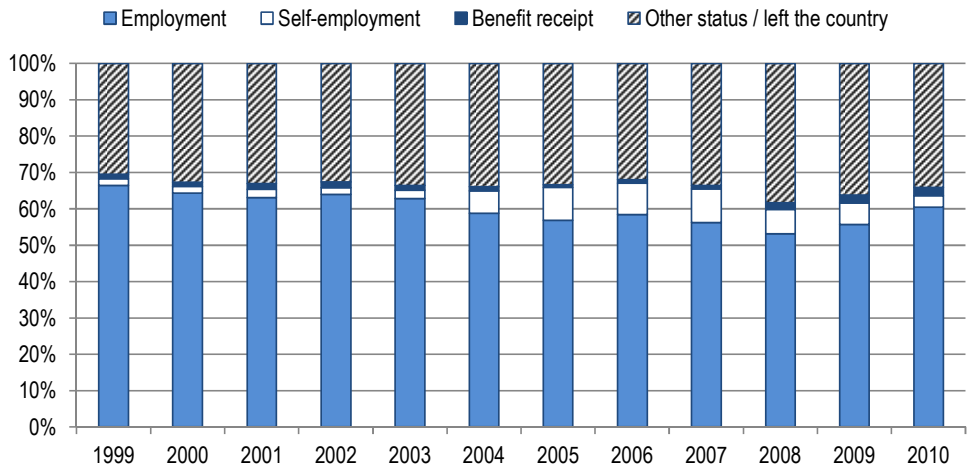
Panel B of Figure 2.21 shows the corresponding figures for EU migrants. In comparison to non-EU migrants, significantly more EU migrants are observed to be in employment in every cohort. The share of EU migrants who are not employed, self-employed or receiving benefits is accordingly smaller than for non-EU migrants. Self-employment is much more frequent among EU migrants than among non-EU migrants, while fewer EU migrants receive benefits, with the exception of those who arrived in the years 2008-10. Figure 2.21 further depicts differences in employment rates by year of arrival. These differences likely reflect cohort effects: the characteristics of the labour migrant intake in one particular year can differ significantly from the characteristics in another year and thereby lead to differences in employment rates. If the observed differences between employment rates after one year were instead driven by business cycles, one would also expect to find differences in how employment rates have evolved after two years, three years and so on. By contrast, Figure 2.23 will show further below that the employment rates evolve very similarly over time.

Figure 2.21. Labour market status of labour migrants a year after arrival, by year of arrival, 1999-2010

A. Labour migrants from non-EU countries



B. Labour migrants from EU countries



Note: Years indicate the year of arrival (the cohort), while the reported labour market outcome was recorded one year after arrival.

Source: OECD Secretariat calculations based on CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

Qualitative factors likely affect migrants' labour market outcomes

A number of other factors likely contribute to the differences in employment rates discussed above. For example, an education obtained outside the Netherlands may arguably be less useful on the Dutch labour market than a locally obtained education. This is confirmed in OECD/European Union (2015): among highly educated migrants aged 15-64, the employment rate is considerably higher for those who were trained in the Netherlands. The gap to those who were trained abroad (15 percentage points) is also one of the highest among OECD countries. This suggests that qualifications obtained abroad are strongly discounted on the Dutch labour market.

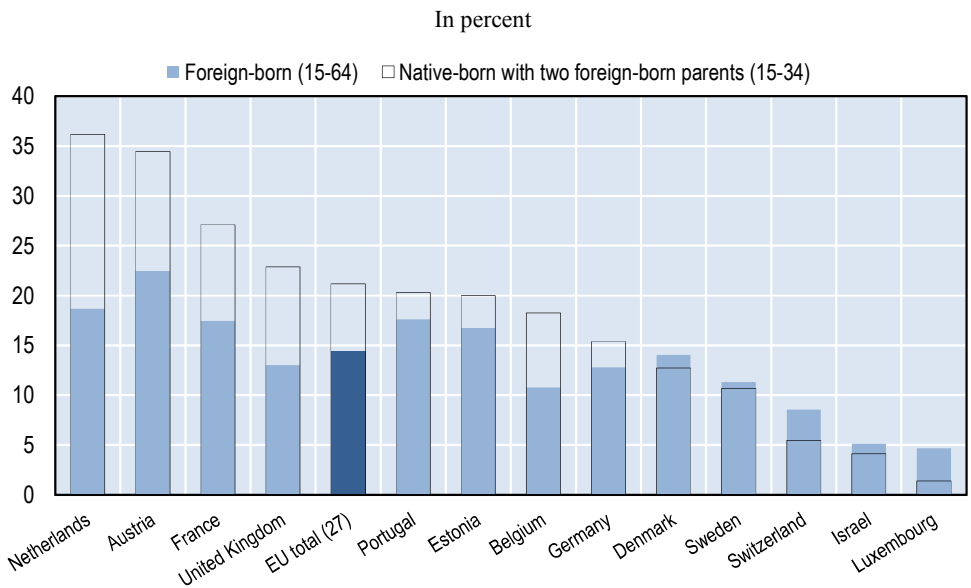
Another important factor is proficiency in the local language. Yao and van Ours (2015) use panel data for 2008-14 to investigate the impact of migrants' knowledge of Dutch on their labour market outcomes in the Netherlands. They find that migrants in the Netherlands often have a poor knowledge of both written and spoken Dutch. Yet their results indicate that this hardly affects the labour market outcomes of men in the foreign-born population, while it does seem to have an adverse effect on the wages that women in the foreign-born population command in the labour market. Based on data for a number of OECD countries, Bonfatti and Xenogiani (2014) find that migrants who are native speakers of the host-country language tend to have higher employment rates than migrants who are not (the difference for the Netherlands is estimated at 6 percentage points but is not statistically significant). Similarly, they find that migrants who are proficient in the host-country language are less likely to work in a job they are overqualified for.

Kok et al. (2011) investigate the role of culture for the labour market participation of migrant women from non-Western countries. They find a link between participation rates in the Netherlands and participation rates in the respective country of origin: after controlling for education and demographic characteristics, a high female participation rate in the country of origin significantly increases the probability that a migrant woman participates in the Dutch labour market. This effect appears larger for first-generation than for second-generation migrants, which the authors interpret as evidence of cultural influence on labour market participation. The behaviour of migrant women is also influenced by the behaviour of other women in the Dutch labour market: an increase in this rate is also associated with a significantly higher probability that a migrant woman participates.

Information on the reasons of foreign-born women not to participate in the labour market is also provided in OECD/European Union (2015). When surveyed in 2012, foreign-born women in the Netherlands with a child under six years most frequently cited family reasons for not participating in the labour market. The second most frequent reason was being discouraged from job search. Compared to other OECD countries, this last reason was given particularly often in the Netherlands. Such discouragement may be hard to measure and to analyse, but can in all likelihood significantly undermine migrants' labour market success. One way that migrants may be discouraged from job search is the experience of being discriminated against. For the discouraging effect of discrimination, it may not even matter much whether discrimination has objectively occurred or whether migrants have subjectively had the impression that they face discrimination on the labour market.

Based on survey data shown in Figure 2.22, about 19% of the foreign-born population in the Netherlands see themselves as belonging to a discriminated group. While this percentage exceeds the average across the European Union (14%), it is comparable to the corresponding percentages in a number of other European countries, including in neighbouring France. However, members of the second immigrant generation in the Netherlands who have two foreign-born parents report the feeling of being discriminated against more often than in any other country for which data are available: no less than 36% of them give this answer, a share that is twice as high as in the first immigrant generation. A significant difference between the first and the second generation occurs in a number of countries shown in Figure 2.22. But if the very high value for the second generation in the Netherlands reflects actual incidence of discrimination in the labour market, it can in itself explain part of the difference between labour market outcomes of migrants and native-born – irrespectively of any discouraging effect on migrants' job search.

Figure 2.22. Persons who consider themselves members of a group that is or has been discriminated against on the grounds of ethnicity, nationality or race, 2002-12



Note: Data refer to the sense of belonging to a group discriminated against on the grounds of race, ethnicity, or nationality.

Source: Figure 1.5 in OECD/European Union (2015), *Indicators of Immigrant Integration 2015: Settling In*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888933212057.

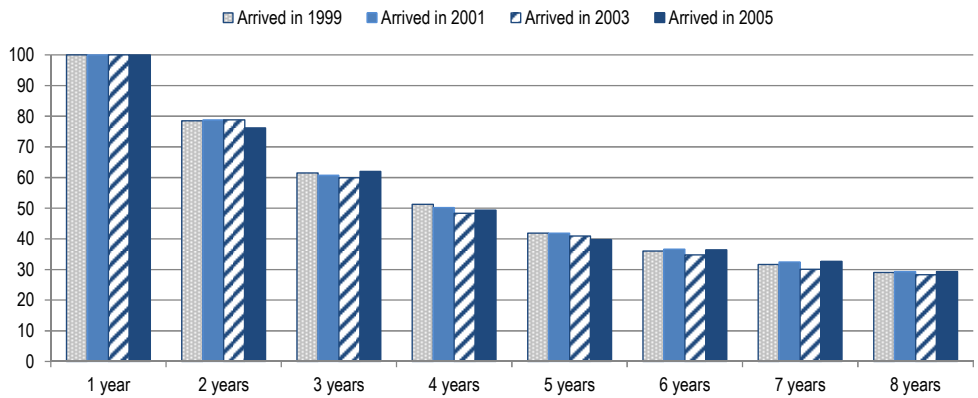
Impact of the financial crisis

Rising unemployment in the wake of the financial crisis in 2008 has affected both native-born and foreign-born residents in the Netherlands. Looking at migrants from non-western countries, Cerveny and van Ours (2013) find that their unemployment rates increased as a result of the financial crisis by a similar proportion (about 60%) as the unemployment rate of the native-born. However, because migrants' unemployment rate initially stood at a higher level, the absolute increase is higher for migrants than for the native-born. Once unemployed, foreign-born persons have a much lower estimated job-finding probability than native-born persons, but both job-finding rates have apparently responded similarly to the financial crisis. Hence Cerveny and van Ours (2013) conclude that non-western migrants were not affected differently from native-born workers.

Yet these general trends might not carry over to non-EU labour migrants, essentially because their stay in the Netherlands may be tied to their employment situation. Firstly, non-EU labour migrants typically need to have a job in hand to enter the Netherlands. Being employed already, they are unlikely to end up unemployed when a crisis hits. Those who do become unemployed might have to leave the Netherlands after some time, so that the unemployment rate of non-EU labour migrants would not adequately reflect the changes in their labour market situation. Therefore, Figure 2.23 rather shows how many non-EU labour migrants who arrived in a given year are still employed after one year, two years and so on. Four cohorts of labour migrants are considered: all those who arrived in 1999, in 2001, in 2003 or in 2005. The cohort from 1999 provides a benchmark because, even eight years after arrival, it is unaffected by the financial crisis. By contrast, the cohort from 2001 experienced the financial crisis seven years after arrival, the cohort from 2003 experienced it five years after arrival, and the cohort from 2005 experienced it already three years after arrival. To focus on the evolution rather than on initial differences between cohorts' employment rates, all employment rates have been indexed, setting the employment rate observed after one year to 100.

Figure 2.23. Evolution of employment rates of non-EU labour migrants, by year of arrival, 2000-13

Employment rates indexed by the employment rate after one year



Note: Years indicate the time elapsed since arrival.

Source: OECD Secretariat calculations based on CBS micro data (Centraal Bureau voor de Statistiek), http://www.cbs.nl/nl-NL/menu/informatie/beleid/zelf-onderzoeken.

As Figure 2.23 shows, the employment rates of the cohorts from 2001, 2003 and 2005 have evolved very much in line with the employment rates of the cohort from 1999. If there were major effects of the financial crisis on the employment rate of non-EU labour migrants, this would lead to a different evolution for the cohorts from 2001, 2003 and 2005, beginning roughly when these cohorts enter the time of the financial crisis. While there is some very limited variation in the evolution across cohorts, a systematic pattern pointing to an impact of the financial crisis does not emerge. This suggests that the particular group of non-EU labour migrants was largely unaffected by the crisis.

Bijwaard and Wahba (2014) study the case of labour migrants who did end up unemployed. Their results suggest that being unemployed for a longer period leads to the departure of labour migrants from the Netherlands. They consider labour migrants from less-developed countries who entered the Netherlands between 1999 and 2007. For unemployment durations from three to six months, a low propensity to leave is estimated, but estimates rise quickly as unemployment durations approach 24 months. Bijwaard et al. (2014) confirm that unemployment has a substantial effect on the departure of labour migrants even when accounting for the possibility that unobserved characteristics make certain migrants simultaneously more likely to be unemployed and more likely to leave.

In conclusion, labour migration to the Netherlands has grown in recent years. The growth in permanent labour migration was driven by migrants from EU and Asian countries, while migrants from Central and Eastern European EU countries have driven the growth in temporary labour migration. Among non-EU labour migrants, an increasing number comes to the Netherlands under programmes for skilled migration, while the number coming under other programmes has fallen. Strong growth has been observed in the number of international students, especially from EU and Asian countries. In the foreign-born population, however, more have come to the Netherlands as family migrants than as labour migrants or international students. Among these three groups, labour migrants exhibit the highest employment rates, but a large share of non-EU labour migrants appears to have left the Netherlands already one year after arrival.

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Chapter 3

The Dutch labour migration policy

This chapter presents the migration policies applied in the Netherlands to labour migrants who are not citizens of EU/EFTA countries. Recent changes to programmes for permanent labour migration, administrative procedures and the role of employers are discussed in detail. Based on quantitative evidence such as numbers of residence and work permits, processing times, and violations of employment laws for migrants, the chapter assesses the efficiency of the Dutch labour migration system and derives recommendations for improvements.

Dutch policies towards labour migrants from non-EU/EFTA countries have undergone a number of changes in recent years. As a result, the range of policies has increased and the functioning of the labour migration system has been reformed. Following a brief overview of the labour migration policy's evolution and of the actors behind it, this chapter discusses current regulations and recent changes for specific groups of permanent labour migrants (those who stay for more than 90 days): highly skilled persons, international graduates, entrepreneurs and migrants with medium or low skill levels. Some key administrative procedures are presented before the system of trusted sponsors and the enforcement of regulations are examined. The chapter concludes by laying out migrants' path to a permanent residence status and citizenship of the Netherlands.

Evolution of the Dutch labour migration policy[1]

It is still within living memory that the emigration of Dutch citizens was supported by official government policy: in the post-war years, many native-born Dutch left for the United States, Canada, or Australia. Yet when the post-war economic boom magnified the need for labour, the focus shifted to immigration. In the 1960s, recruitment agreements were concluded with a number of Mediterranean countries. In the following years, so-called guest workers flocked to the Netherlands notably from Italy, Spain, Portugal, Turkey and Morocco. Many of them came to stay and were eventually joined by family members from their home countries.

The oil crisis of 1973 and ensuing economic turmoil led to a fall in demand for labour migrants as unemployment in the Netherlands rose significantly, reaching 10% of the labour force by the mid-1980s. The previous recruitment abroad was thus not continued and the 1979 Labour of Foreign Workers Act (*Wet arbeid buitenlandse werknemers*, Wabw) instead reset the terms for the employment of foreigners. It was replaced in 1995 by the Labour of Aliens Act (*Wet arbeid vreemdelingen*, Wav). Observers have argued that these laws, while keeping some doors to the Dutch labour market open, already favoured highly skilled migrants and sought to limit low-skilled migration (see for example Böcker and Clermonts, 1995).

The European Union and its enlargements have brought the right of free movement to more and more of Europe's workers. For workers from outside the European Union, the principle was upheld – dating back to

the aftermath of the World Economic Crisis in the 1930s – that foreign workers in the Netherlands need a work permit. Until about a decade ago, a Dutch firm could typically fill a job with a migrant from a non-EU/EFTA country only if a suitable candidate from within the EU/EFTA was not available. To the Central and Eastern European countries joining the European Union in 2004 and 2007, the Dutch labour market became fully accessible after a transitional period.

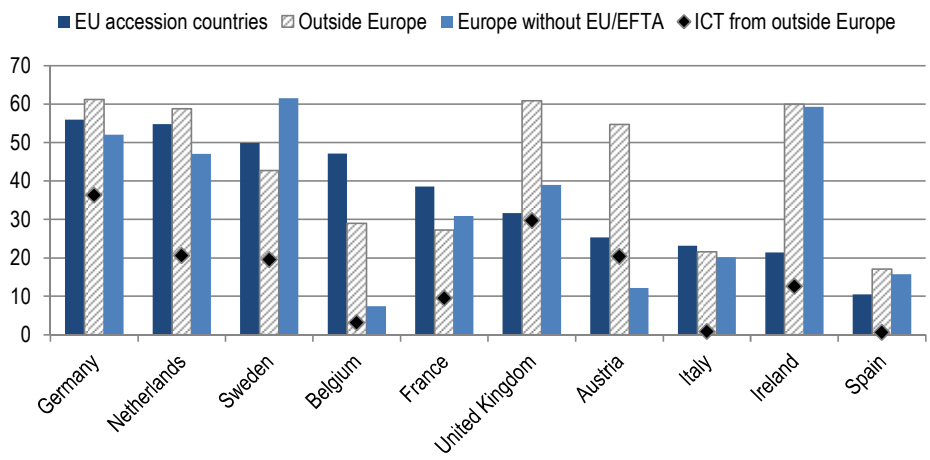
Over the course of the last decade, successive Dutch Governments have set up schemes for skilled migrants from outside the EU/EFTA. 2004 saw the introduction of the knowledge migrant programme (*kennismigranten regeling*): whenever a Dutch employer offers a sufficiently high wage to a worker from outside the EU/EFTA, a work permit is not required and no labour market test is applied. The knowledge migrant programme is thus similar in nature to the EU Blue Card that was introduced in the Netherlands only seven years later. Beginning with the knowledge migrant scheme, the Dutch labour migration system has been developed considerably. The introduction of several innovative schemes indicates that policy makers have adopted an active, deliberate approach to labour migration policy. On several occasions, new schemes were tested as pilots and scaled up – or discontinued – after an evaluation. While these evaluations could benefit from more rigorous quantitative methods, scientific advice has had a visible influence on the evolution of the Dutch labour migration policy.

Figure 3.1 shows the extent to which the Dutch labour migration system was demand-driven still in 2008. According to survey responses from migrants who identified themselves as labour migrants, shares of those who arrived with a job offer in hand were comparatively high in the Netherlands. Almost 60% of labour migrants who were citizens of countries outside Europe had found a job before arriving in the Netherlands. While the corresponding shares were about as high in Ireland, the United Kingdom and Germany, the shares in the latter two countries included a high share of intra-company transfers (ICTs). If ICTs had been equally frequent in all four countries, the share of non-European labour migrants with job offers in hand would have been significantly higher in Ireland and the Netherlands than in the other countries shown in Figure 3.1. For labour migrants from EU accession countries (EU enlargements of both 2004 and 2007) and for European labour migrants who are not EU/EFTA nationals, the share in the Netherlands of those with a job offer was again one of the highest among the countries shown. The high shares observed in the Netherlands

suggest that a job offer was particularly often made a condition for entry (or, in the case of EU accession countries, for labour market access), which points to a strong orientation towards demand-driven migration.

Figure 3.1. Labour migrants who indicated they had found a job before arrival, by citizenship, 2008

In percent



Note: Labour migrants are identified as those indicating that their main reason for the last migration was employment. Countries are ordered by the share of those with a job offer among labour migrants from EU accession countries, referring to 12 countries that acceded to the European Union in 2004 and 2007.

Source: OECD Secretariat calculations based on the ad-hoc module 2008 of the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

While there had been some possibilities for self-employed migrants to work in the Netherlands, supply-driven migration schemes for workers were mainly introduced from 2007 onwards. In these schemes, a job offer is not a precondition and migrants may instead be admitted based on their characteristics. The first such scheme allowed recent international graduates from Dutch universities to spend up to one year in the Netherlands searching for a job that, according to a salary criterion, qualifies as high-skilled employment. The scheme was complemented in 2009 by a very similar programme for recent graduates from recognised universities across the world, and the two programmes were merged in 2016.

The policy shift towards the recruitment and retention of skilled migrants was accompanied by tightening policies towards non-labour migration flows. The numbers of asylum seekers, still at high levels in the early 2000s, have decreased markedly in the following years. Changes were also made to the regulation of family migration: migrants can now bring their partner to the Netherlands only after one year, and may not bring anyone but their partner or their children. Family migrants are expected to reach a basic level in Dutch before their arrival. To combat illegal immigration, administrative requirements exclude illegal immigrants from legal employment and from public services. To assist the return of (legal) immigrants to their country of origin, financial support has been available since 1999.

But also the policies affecting labour migrants who settle permanently in the Netherlands have undergone profound changes over time.[2] The need for integration policies became apparent around 1980, as many guest workers had stayed and had been joined by their families. It led to the introduction of so-called Ethnic Minority Policies that supported migrants' participation in the Dutch society and economy as well as the establishment of migrants' cultural activities, often relying on initiatives from within the immigrant communities. From 1981, migrants had the same entitlement to social housing as Dutch citizens and they were given voting rights at municipal level in 1985.

By the beginning of the 1990s, however, several findings suggested that these "multiculturalist" policies had failed, notably with regards to migrants' outcomes in the labour market and in education. Integration policies shifted away from cultural towards socio-economic objectives, and from a focus on entire ethnic groups towards a focus on individual needs (see Bruquetas-Callejo et al., 2007). For example, unemployment among migrants would rather be addressed as part of a general employment policy than as part of a policy catering to migrants. Own efforts were henceforth expected from migrants to integrate into the Dutch society. Mandatory civic integration courses on Dutch language and society were introduced in the second half of the 1990s (see OECD, 2008 for details).

Integration policies were accompanied by policies to combat discrimination against migrants. Partly already before 1990, employers in both the public and the private sector began to engage in affirmative action, but the measurable results of these efforts proved disappointing. From 1998 to 2003, employers were obliged by law to report annually on their staff's diversity and their measures to ensure migrants' equal

representation (the *Wet Samen*; see OECD, 2008 for details). Starting in 2009, a comprehensive set of measures against discrimination was adopted. These measures consist of anti-discrimination policies at the local level, heightened reporting and monitoring of discriminatory behaviour, more stringent persecution of discrimination, and intensified education on discrimination (see Klaver et al., 2014 for details).

Key actors in the management of labour migration

To manage labour migration and migration more generally, a number of public institutions in the Netherlands co-operate. Policy formulation takes place in the government's ministries. The Ministry of Security and Justice (*Ministerie van Veiligheid en Justitie*) is responsible for the regulation of immigration. Within the ministry, immigration is the remit of the Secretary of State for Security and Justice. The ministry's Immigration and Naturalisation Service (*Immigratie- en Naturalisatiedienst*, IND) processes visa applications, grants residence permits, receives requests for naturalisations and monitors compliance with migration law. The IND deals with every immigrant in the Netherlands who needs a residence permit, which concerns all immigrants from outside the EU/EFTA who stay for more than 90 days.

Both labour market policy and integration fall into the realm of the Ministry of Social Affairs and Employment (*Ministerie van Sociale Zaken en Werkgelegenheid*). While this ministry has normally not had a direct influence on the day-to-day management of migration, the minister can limit migration from outside the EU/EFTA in sectors where employers are found to exert insufficient effort to recruit from within the EU/EFTA. This possibility, introduced in 2013, has thus far not been used and is regarded only as a last resort (see Mussche et al., 2013). It is therefore mainly through the UWV WERKbedrijf,[3] the Dutch public employment service, that labour market conditions feed back into migration management: if the UWV WERKbedrijf applies a labour market test, the IND will only grant a residence permit to a labour migrant if the labour market test is passed.

To enter the Netherlands, migrants from outside the EU/EFTA typically need a visa (for stays of up to 90 days) or a provisional residence permit (for stays of more than 90 days), unless they are nationals of a country exempt from this requirement. Granting these documents falls into the remit of the Ministry of Foreign Affairs (*Ministerie van Buitenlandse Zaken*). Applications can be processed by

embassies and consulates but are in some cases processed centrally by the ministry. For a range of purposes of stays up to 90 days, notably studies and internships, the ministry has delegated the processing of applications to the IND. In addition, the Ministry of Foreign Affairs is involved in the system of civic integration (*inburgering*), which includes a basic language test to be passed before arrival as well as courses in the Netherlands that need to be completed successfully.

Bruquetas-Callejo et al. (2007) argue that the division of responsibilities in migration policy between different ministries had adverse effects on the formulation of coherent policies in the past. The Dutch cabinet did include – with varying titles and responsibilities – a minister specifically for immigration, asylum and/or integration between 2002 and 2012 when immigration and integration were central to public debates and political controversies. Yet this was a so-called minister without portfolio because a corresponding ministry did not exist, and the cabinet position was eventually abolished.

The ministries that play a central role in the management of labour migration are linked with agencies responsible for the implementation and enforcement of migration policy. The Labour Inspection (*Inspectie SZW*) of the Ministry of Social Affairs and Employment assesses through controls whether migrants are employed legally (see below for more details). Associated with the Ministry of Security and Justice, the Alien Police (*Vreemdelingen Politie*) combats illegal residence, and the Correctional Institutions Agency (*Dienst Justitiële Inrichtingen*, DJI) arranges for detention of illegally residing migrants until their return through the Repatriation and Departure Service (*Dienst Terugkeer en Vertrek*, DT&V). Civic integration exams in the Netherlands are held by the Education Executive Agency (*Dienst Uitvoering Onderwijs*, DUO) of the Ministry of Education, Culture and Science. Finally, the Royal Marechaussee (*Koninklijke Marechaussee*, KMar) secures the Dutch borders on behalf of the Ministry of Defense.

Informally, the social partners wield a great influence on the formulation of labour migration policy. Past developments in labour migration policy can be interpreted as responding above all to the needs of employers. The social partners' joint council, the *Sociaal-Economische Raad* (SER), advises on issues of labour migration and receives considerable attention from government and parliament. For example, the introduction of the knowledge migrant programme in 2004 responded to requests from employers and universities, according to Kremer (2013).

It is a long-standing phenomenon in the Netherlands that advisory councils officially linked to the government assemble highly influential reports on issues of migration and integration policy (see Penninx, 2005). Their detailed policy advice has often been heeded to a large extent and has thus come to shape policies in these fields. The *Adviescommissie voor Vreemdelingenzaken* (ACVZ) consists of practitioners and academics in the field of migration, typically from a legal background. Its reports on migration policy and immigration law prompt responses from the government. Through the *Wetenschappelijke Raad voor het Regeringsbeleid* (WRR), academics from various subjects offer research-based advice to government and parliament, and the long-run issues that it covers have included migration policy. The *Sociaal en Cultureel Planbureau* (SCP) carries out studies on a wide range of societal issues, including migration and integration, with the objective of informing government policy. Similarly, the *Centraal Planbureau* (CPB) engages primarily in economic studies. Finally, a special role is played by *Nuffic*, a non-governmental organisation that promotes the internationalisation of study and academia in the Netherlands. It has de facto assumed a place in the administrative framework by assessing migrants' foreign diplomas.

Current labour migration regulations

As shown in Chapter 2, most labour migration to the Netherlands takes place through free movement within the European Union and EFTA. Only for Croatian nationals, transitional arrangements might uphold restrictions on access to the Dutch labour market until 2020. Hence, almost all EU/EFTA migration flows are not at the discretion of the Dutch labour migration policy, which therefore focuses on migrants from third countries. All nationals of third countries need residence permits if they wish to stay in the Netherlands for more than 90 days; Table 3.1 provides an overview of residence permits for labour migrants and students that were issued in 2014. Table 3.A1.1 in the annex gives the yearly totals of first permits issued to labour migrants and students.

Table 3.1. Descriptive statistics for residence permits issued to labour migrants and students, 2014

Residence permits for stays of more than 90 days

Permit type	First permits issued in 2014	Rejected requests (in %)	Median processing time (in days)	Application fees in 2015 (in EUR)	Renewals issued in 2014
Labour Migrant Permit	339	6.4	14	870	1824
EU Blue Card	< 10	11.1	1	870	<10
Posted worker	< 10	11.1	59	870	<10
Knowledge migrant	7162	0.2	1	870	5966
Intern	163	0.6	1	768	20
Scientific researcher (EG 2005/71)	2309	0.0	1	307	1404
Student in higher education	12264	0.0	1	307	1588
Student in continuing/ vocational educ.	74	0.0	1	307	10
Clerical worker	52	0.0	61	870	173
Searching for work	< 10	53.3	112	614	0
Job search year for graduates	1842	0.3	14	614	0
Highly educated persons	177	0.4	21	614	0
Bilateral treaties (w/o self-employed)	10	62.2	107	62	68
Self-employed	187	78.1	84	1279	328

Note: Rejection rates, processing times and application fees all refer to first permits. The rejection rate is calculated as the share of rejections among all requests for first permits. The median processing time is set to one day if the process concluded within one day. First permits for the job search year for graduates and for highly educated persons include permits recorded as status changes (typically from student permits) unless the previous permit is among those listed here; rejection rates and processing times for these permits are based on all permits issued in 2014. Figures for self-employed include permits and requests for self-employed work by persons to whom a bilateral treaty applies. First permits issued to seasonal workers are not observed in these data; the application fee for seasonal workers was EUR 768. Totals of first permits or renewals below 10 are not reported.

Source: OECD Secretariat calculations based on information from the Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Table 3.1 only includes permanent labour migrants, defined as those who stay or plan to stay for more than 90 days (see Chapter 2). Under the definition used in OECD typical data sources (e.g. the International Migration Database), all seasonal workers, posted workers and interns would instead be counted as temporary labour migrants because the length of their stay is a priori limited and normally cannot be extended. Given that Table 3.1 lists only some interns, hardly any posted workers and no seasonal workers at all (who were not observed in previous years

either), applying the definition of the OECD for permanent migrants would not make a large difference.

Recent programmes for skilled labour migration do not require work permits

In recent years, most permanent labour migration to the Netherlands from outside EU and EFTA has come through two demand-driven programmes. The younger one, introduced in 2004, is explicitly geared towards highly skilled migrants. It is intended as a channel for knowledge migrants, known in the Netherlands as *kennismigranten,* who are expected to contribute scarce skills and support the transition of the Dutch economy to a knowledge economy (see Tweede Kamer der Staten-Generaal, 2004). In practice, however, applications for the knowledge migrant scheme are decided not based on skills, but based on a sufficiently high wage offer by a Dutch employer. For 2016, the salary thresholds have been set at a gross monthly salary of EUR 4 240 for individuals from the age of 30, and EUR 3 108 for individuals below age 30. As an exception, lower salaries are acceptable for academic researchers and doctors in training.

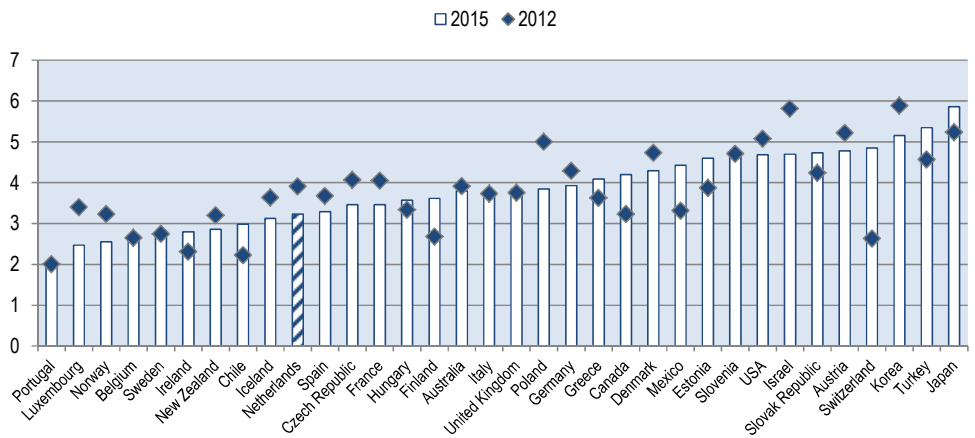
With a residence permit for knowledge migrants, a migrant can take up the job offer without a work permit. The simplicity of this programme, due to the use of salary thresholds rather than labour market tests, likely contributes strongly to the comparatively high satisfaction of employers with the Dutch labour migration system, which has improved over recent years (see Figure 3.2). The residence permit for knowledge migrants will be valid for the duration of the employment contract, but has to be renewed after five years at the latest. The migrant is bound to the particular employer unless the migrant successfully applies for another residence permit. The migrant's spouse/partner and children (under the age of 18) can enter the Netherlands and even enjoy full access to the Dutch labour market without further conditions.

The original knowledge migrant scheme, introduced in 2004, covers stays of more than 90 days. In 2012, this programme was complemented by a short-term knowledge migrant programme that covers stays of up to 90 days. The same salary thresholds apply, and while a work permit is needed in this case, it is meant to be provided within two weeks. The programme was initially set up as a pilot. It was evaluated by Heuts and Klaver (2014) who find that participating employers, the IND and the UWV WERKbedrijf were satisfied, while there was no evidence of opportunistic use by employers. The programme responds to the need of

Dutch businesses to have foreign experts deliver short-term work or services in the Netherlands without long waiting times for a work permit. In this context, however, it is difficult to verify that the required salaries are indeed paid into the knowledge migrants' foreign accounts. Other safeguards to prevent abuse of the scheme might be more transparent.

Figure 3.2. Constraints on employers from labour migration laws in OECD countries, 2012 and 2015

Index of domestic employers indicating to be constrained by immigration laws, from 0 (lowest) to 10 (highest)



Note: Figures are based on surveys recording employers' approval of the statement: "Immigration laws do not prevent your company from employing foreign labour". The original question and rating scale have been reversed for clarity; the new index is found as 10 minus the original index.

Source: Institute for Management Development (2015), *World Competitiveness Yearbook 2015*, Lausanne, http://www.imd.org/wcc/.

The requirements of the EU Blue Card, introduced in the Netherlands in 2011, are directly comparable to the knowledge migrant programme. Applicants have to have a job offer that would pay a monthly gross salary of at least EUR 4 968 and thus more than the salary required for knowledge migrants. Further, applicants must hold a three-year tertiary degree. If they meet these requirements, their rights will be very similar to those of knowledge migrants. The EU Blue Card holder obtains a residence permit for five years and may change jobs as long as the salary threshold continues to be met. Family reunification with partners and minor children is allowed and the family has full access to

the Dutch labour market. The only significant advantage of the EU Blue Card vis-à-vis the knowledge migrant status appears to be the right to take up work anywhere in the European Union. Given that the salary and education requirements are significantly higher than for knowledge migrants, this may explain why the take-up of the EU Blue Cards in the Netherlands has remained very low (see Box 4.1 in Chapter 4).

As shown in Table 3.1, a programme for scientific researchers represents the largest permanent labour migration programme after the knowledge migrant scheme. Also in the case of researchers, the programme is demand-driven but does not require work permits. Instead of a salary requirement, participants can only work in a research establishment that is recognised by the IND (the recognised sponsor system in the Netherlands is discussed below). Their permit is for valid for the duration of the employment contract but has to be renewed after five years at the latest, as for knowledge migrants. The programme for researchers implemented the EU Directive 2005/71 in the Netherlands in 2008 and largely replaced several existing schemes for researchers. When the first 200 permits were issued under the new programme in 2008, a combined number of 650 first permits were issued under older programmes for researchers (see Table 3.A1.1 in the annex). The new programme subsequently generated much higher numbers than all earlier schemes together: 1 100 already in 2009, rising to 1 600 in 2011 and exceeding 2 300 in both 2013 and 2014.

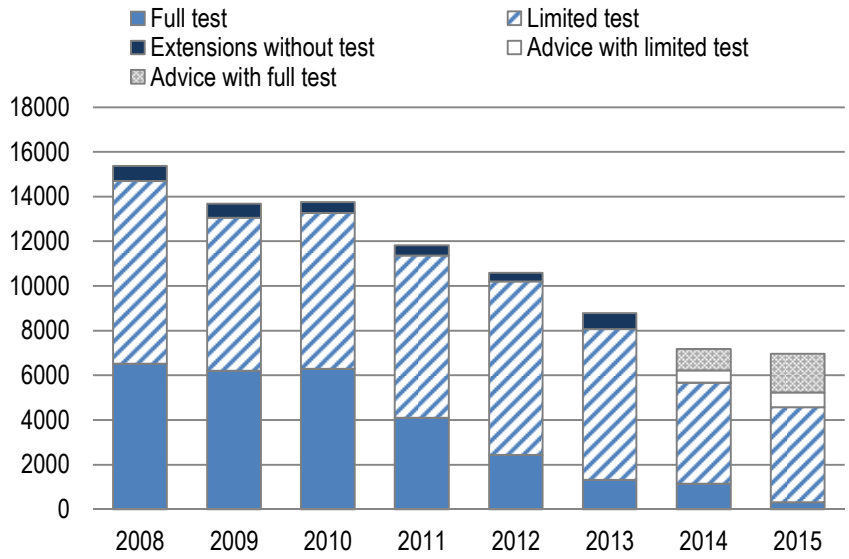
The older one of the two main demand-driven programmes for permanent labour migration is the Labour Migrant Permit. The programme is known in Dutch as *Arbeid in loondienst*. It grants a work permit to someone from outside the EU and EFTA countries who is being offered a job in the Netherlands, including less well-paid jobs. However, a labour market test has to establish that a suitable candidate is not available within EU or EFTA countries. The labour market test is conducted by the UWV WERKbedrijf within five weeks. It bases its decision on the current labour market situation and on indicators for the availability of EU/EFTA candidates – such as vacancies and unemployment as well as shortage measures by region, sector, and occupation (see Mussche et al., 2013 for a brief overview). By using EU/EFTA candidates as reference group, this labour market test differs from labour market tests applied in other EU countries, which typically use the local or national pool of candidates as reference group (see Table 3.2 in OECD and EU, 2016).

The work permit can be refused on the grounds that the Dutch employer has not exerted sufficient efforts to recruit from within EU/EFTA countries – employers are expected to search for suitable EU/EFTA candidates through all available channels for at least five weeks, and even for three months for vacancies that are known to be hard to fill. In some cases, the employer can be expected to train apprentices rather than recruit from outside the EU and EFTA countries; such links between migration policy and the training of local workers exist, in various forms, in several OECD countries (see Box 3.3 in OECD, 2014). The work permit has to be refused if the employer does not register the vacancy at the UWV WERKbedrijf at least five weeks before the application for a work permit or if the employer offers less than the legal minimum wage for a worker aged 23 or above. For 2016, this is set at a gross monthly wage of EUR 1 525. More generally, the employer is expected to prove that the offered wage corresponds to market wages and respects collective bargaining agreements. The work permit can further be refused if the migrant is not between 18 and 45 years old, the employer does not ensure that the migrant is adequately housed or the employer has violated rules in the past. Finally, the UWV WERKbedrijf can exceptionally grant a work permit on the condition that the employer improves the working conditions or exerts greater recruitment efforts in the future. Between 1996 and 2005, such conditions were imposed in at most 4% of the work permits granted (see de Lange, 2007).

In any case, work permits have become much less prevalent than some years ago. As reported in de Lange (2007), more than 40 000 work permits were granted in 2004 and 2005, followed by 75 000 in 2006. By 2008, this number had decreased to less than 16 000 work permits and then further declined to about 4 600 in 2015 (Figure 3.3). Between 2008 and 2015, the relative reduction in work permits granted only after a full labour market test has been particularly large. These developments reflect that many labour migrants from Central and Eastern Europe did not need a work permit anymore, as the citizens of new EU member states successively gained access to the Dutch labour market. Nationals of Romania and Bulgaria – who needed work permits until transitional arrangements ended in 2013 – accounted for a total of 1 100 work permits in 2012, but for 600 in 2013 (see Klaver et al., 2014). The number of work permits has also fallen because non-EU/EFTA labour migrants have in recent years primarily participated in programmes that do not require a work permit. The most recent numbers are further affected by the single permit procedure introduced in April 2014, issuing

combined residence and work permits. Based on a limited or full labour market test, the UWV WERKbedrijf contributes advice on an application for a combined permit. In 2014 and 2015, positive advice was given in 1 500 and 2 400 instances, respectively (see Figure 3.3).

Figure 3.3. Work permits granted with and without labour market test, 2008-15



Note: The number of extensions without test in 2015 is not available.

Source: UWV WERKbedrijf, http://www.uwv.nl/overuwv/kennis-cijfers-en-onderzoek and UWV WERKbedrijf (2016), "Kwantitatieve informatie 2015" (on advice).

While Table 3.1 does not list a separate programme for intra-company transfers (ICTs), a Labour Migrant Permit can be given to ICTs without a labour market test if some special conditions are met: the employer's annual turnover is at least EUR 50 million, the ICTs have leading or specialist positions at least at higher vocational level and their salaries meet a threshold (EUR 4 579 in 2016) that is comparable to that of knowledge migrants above 30. These rules carry over to trainees from abroad, with the exception that their salary has to meet market wages (at least the minimum wage) rather than a specific threshold. In practice, transfers for up to 90 days are often arranged under the programme for short-term knowledge migrants.

Windows of opportunity for international graduates

A number of supply-driven programmes for permanent labour migration have been set up over the last decade. In 2007, a job search year by the name *Zoekjaar afgestudeerde studenten* was introduced for international students who graduate with a Bachelor or Masters degree from a Dutch university. Within a year of graduation, they could apply to spend up to one year in the Netherlands searching for employment as knowledge migrant. As for other knowledge migrants, employers could hire these graduates without a work permit, while the salary threshold was substantially lower than for other knowledge migrants: only a monthly gross salary of at least EUR 2 201 was required in 2015.

The possibility of a job search year was extended in 2009 to other graduates, notably from universities outside the Netherlands if they appear in the top 200 ranks of certain university rankings.[4] Graduates with a Masters or a PhD from these institutions, or again from a Dutch institution, could apply within three years of graduation for a job search year. Applicants under this programme for highly educated persons (called *Regeling hoogopgeleiden*) faced the same salary threshold as participants in the *Zoekjaar afgestudeerde studenten*. However, the applicant also needed to reach a sufficiently high score in a points system based on education, language abilities, age and previous contact with the Netherlands (for details see Nuffic, 2013).

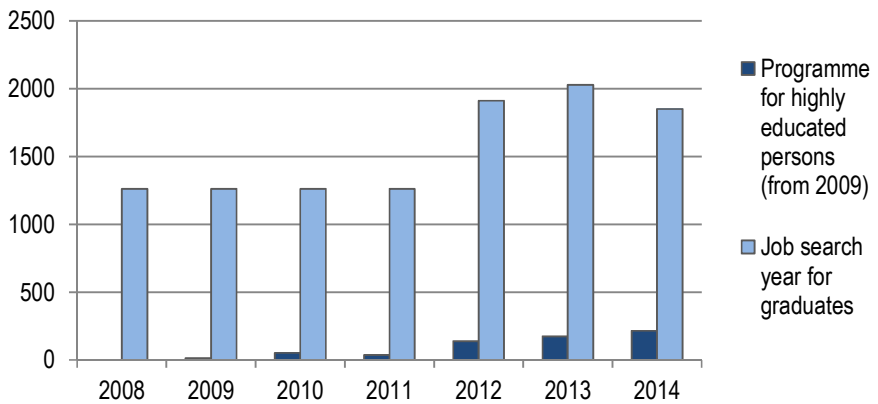
During the search year, participants in the *Zoekjaar afgestudeerde studenten* could take up any work, without the need for a work permit. By contrast, a work permit was required for participants in the *Regeling hoogopgeleiden*. Another notable difference between the two programmes concerned the access of the migrant's family to the Dutch labour market: while participants in either programme were allowed to bring a spouse or partner and children under the age of 18, only the family members of participants in the *Zoekjaar afgestudeerde studenten* could be employed without a work permit.

Figure 3.4 shows that the annual number of participants in the job search year for graduates has approached 2 000 in recent years. While the numbers of participants in the programme for highly educated persons has grown steadily, they have remained far behind those of the job search year for graduates. A first evaluation of the programme for highly educated persons (see IND, 2011) suggested that the disappointingly low number of participants may be explained by the programme being little known, the limitation to graduates of certain

institutions, or by the requirement of a work permit if the salary is not sufficiently high, which can make it hard for recent graduates to sustain themselves during the search year. Drawing on more data, a second evaluation (see WODC, 2014) found that most participants already resided in the Netherlands; to them, the programme often provided a more convenient way to extend their stay when another residence permit expired. On the other hand, WODC (2014) reports that about half of the participants found work as knowledge migrants, that they worked particularly often in science and technology, and that a clear majority of them was satisfied with the programme.

Given the lower than expected numbers of participants, it does not seem necessary to keep regulations that make the programme for highly educated persons more restrictive than the very similar job search year for graduates. The seemingly small differences in rules and eligibility criteria can easily create confusion among applicants. Indeed, cases have been reported that international graduates apply for one programme when the other is more favourable for them. On this background, the merging of the two programmes in March 2016 promises to improve this channel of labour migration, and the merged programme can likely be promoted more effectively to potential candidates.

Figure 3.4. Job search permits for international graduates from Dutch nd foreign institutions, 2008-14



Note: Series refer to the "Zoekjaar afgestudeerde" (job search year for graduates) and the "Regeling hoogopgeleiden" (programme for highly educated persons). Yearly figures for the job search year for graduates are not available before 2012 and are replaced by annual averages based on a total of 5 050 permits over the entire period 2008-11 (see IND, 2013).

Source: OECD Secretariat calculations based on information from the Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

The merged scheme (called *Zoekjaar hoogopgeleiden*) is open to international graduates both from Dutch universities (at Bachelor, Masters or PhD level) and from universities outside the Netherlands that are ranked in the top 200 worldwide (Masters or PhD). They can apply for the search year within three years of graduating. This contrasts with the previous scheme for graduates of Dutch universities who had to apply within one year of graduating, so that in particular those graduates who returned home for a while or took another degree elsewhere before looking for a job in the Netherlands could find themselves ineligible. The merged scheme also allows certain researchers to apply for a search year within three years of finishing their research: this includes post-doctoral researchers at one of the top 200 universities abroad, post-doctoral researchers in the Netherlands and those who previously held a residence permit for research work in the Netherlands.

A points system is no longer applied under the merged scheme, but applicants need to prove their proficiency in Dutch or English, either through a test certificate or by possessing a degree at least at Masters level in which Dutch or English were the language of instruction. Provisions that were previously limited to the *Zoekjaar afgestudeerde studenten* apply to all participants in the merged scheme: they can work without work permit during the search year and the same holds for their spouse or partner as well as children under the age of 18. As before, participants in the merged scheme face much lower salary thresholds when they are recruited as knowledge migrants: only a monthly gross salary of at least EUR 2 228 is required in 2016. Participants need not necessarily find work as knowledge migrants – they can also change to residence permits for scientific researchers or for start-up entrepreneurs (see below). In short, the merged scheme retains the privileged access to a knowledge migrant permit while applying more liberal rules and extending eligibility. These changes should make the merged scheme significantly more attractive than its predecessors, so that the number of participants can be expected to rise.

Irrespectively of the individual programme, employed migrants can benefit from tax incentives that have been in place for a number of years to help attract and retain skilled migrants. According to the rules dating from 2012, employees recruited from abroad can be paid up to 30% (previously 35%) of their total gross salary as a tax-free allowance, for a maximum duration of eight years (previously ten years). The employees from abroad can qualify if they offer scarce expert knowledge. In practice, researchers, teachers, medical personnel, and employees

earning a gross yearly salary above EUR 35 000 normally meet this criterion. To graduates younger than 30, the tax treatment applies at a much lower salary level, and international graduates from Dutch PhD programmes even qualify although they are not recruited from abroad (see Ernst & Young, 2012).

Tight regulations for migrant entrepreneurs become more flexible

Several supply-driven programmes for permanent labour migration allow migrants from outside EU and EFTA to become entrepreneurs or investors in the Netherlands. The vast majority of such permits are still issued under the long-established programme for self-employed, although almost 80% of requests for this residence permit were rejected in 2014 (see Table 3.1). To be eligible, applicants must prove that they have sufficient means to support themselves and, in case of regulated professions, possess the necessary certificates. Directors and shareholders of companies can apply as self-employed if they own at least 25% of the shares, incur risk, and are able to influence their own income level.

A points system may be applied to applicants for a permit as self-employed, in which the same number of points has to be reached in each of three categories. In the first, personal requirements for the applicant can be met entirely through education or entrepreneurial experience, while work experience, income, and previous experience with the Netherlands are minor contributors. In the second category, the business plan is assessed by its market potential, its organisation, and especially its financing. The assessment is carried out by the *Rijksdienst voor Ondernemend Nederland*, a service for entrepreneurs. For the third category, the *Rijksdienst* seeks to determine whether the proposed business would serve an essential Dutch interest – through innovation, investment or job creation.

The complexity of this procedure likely contributes to the comparatively long processing times for requests under the programme for self-employed: in 2014, the median processing time was 87 days, longer than for any other programme that admitted more than ten persons in 2014 (see Table 3.1). In line with the EU Directive 2003/109, EU long-term residents are exempt from the points system. The same exemption applies to nationals of the United States, Japan and Turkey due to bilateral treaties (see IND, 2013). But this does not mean that applicants from these three countries are automatically accepted: in

2014, most of the rejected applications had been made by Turkish nationals.

As the conditions in the programme for self-employed can be hard to fulfil with innovative business ideas, especially when undertaken by inexperienced entrepreneurs, an additional programme for start-ups has been introduced in 2015. This residence permit allows entrepreneurs to come to the Netherlands and try for one year to establish an innovative business. According to the Ministry of Social Affairs and Employment, close to 100 applications were received in 2015 and 20 residence permits were granted, mainly to nationals of the United States, Russia and Canada. The permit cannot be renewed; the entrepreneur is expected to qualify under the programme for self-employed from the second year onwards. To qualify initially for the start-up programme, the start-up has to create a product or service that is new to the Netherlands or that uses either novel technological approaches or novel work procedures. Entrepreneurs must provide a plan how they will set up a viable business within a year, register with the business registry and have the resources to support themselves. Entrepreneurs also need an experienced mentor ("facilitator") who supports setting-up the business through contacts or marketing experience, for example. This mentor can recommend the application of the entrepreneur for a permit as self-employed, in case the start-up does not yet fully meet the requirements.

A programme specifically for investors was introduced in October 2013 (the *Regeling voor buitelandse investeerders*), following the introduction of investor programmes in a number of OECD countries (see OECD, 2011 for an overview). The Dutch programme allows a foreign investor to obtain a residence permit and freely access the labour market for initially one year (renewable if the investment is sustained). The investment needs to verifiably add value to the Dutch economy, e.g. by creating jobs; this is assessed by the *Rijksdienst voor Ondernemend Nederland*. A minimum amount applies: at least EUR 1.25 million from one's personal fortune need to be invested in the Netherlands. As part of the application for the programme, an accounting firm present in the Netherlands and in the applicants' home country has to confirm that this capital does not originate from illegal sources.

The various conditions for investors have since been mentioned as a likely reason for the lack of participation: by early 2015, only one investor had been admitted to the Netherlands based on this programme (see Klaver et al., 2015). As a result, the rules have been changed in July 2016, liberalising the criteria for the investment and dropping the

requirement to involve an accounting firm. The validity of the residence permit has also been extended from one to three years. However, another reason for the lack of participation might be that many potential applicants can more easily obtain a residence permit as self-employed. While the main hurdle – the requirement to add value to the Dutch economy – is common to both programmes, a minimum amount is not required under the programme for self-employed. It remains to be seen whether the recent changes make the investor programme more attractive. But unless the investor programme caters for applicants who cannot be admitted through the programmes for self-employed and start-ups, it might better be abolished altogether.

Migration at medium and low skill levels is largely limited to temporary migration

In contrast to the introduction of new programmes for high-skilled labour migration in recent years, comparatively limited changes have been made with respect to labour migration at medium or low skill levels. Attempts to create an innovative new scheme for circular migration have not gone beyond the pilot phase (see Box 3.1). While the knowledge migrant scheme was also intended for workers with scarce skills at medium education levels (see de Lange, 2007), few of these workers can be expected to meet the salary thresholds. Knowledge migrants' level of education is not observed, but the evidence on their sectors of work (see Figure 4.13 in Chapter 4) suggests that a large majority are high-skilled.

Therefore, temporary labour migration for up to 90 days likely remains the main channel for labour migrants with low and medium skill levels. As shown in Chapter 2, non-EU migrants made up only 5% of temporary labour migrants in December 2012, while the vast majority came from other EU countries through free movement. The EU migrants enjoy the same employment rights as Dutch citizens, with an exception for citizens of Croatia during a transition period. Temporary labour migrants from non-EU countries and Croatia need a work permit (while residence permits are generally only needed for stays of more than 90 days). To obtain a work permit, their employers normally have to meet the same conditions as laid out above for the Labour Migrant Permit, which notably include a labour market test. The alternative offered by the scheme for short-term knowledge migrants is again, due to the same salary thresholds, unlikely to be used by migrants who are not high-skilled.

A small number of schemes does not involve labour market tests and nevertheless appears targeted at migrants with low or medium skill levels: schemes for posted workers, interns and au pairs. While they allow for stays well above 90 days, none allows for stays longer than one year. Posted workers only need a work permit if their employer is based outside the European Union. There is no condition on posted workers' qualifications, but a basic language requirement has been introduced in 2013 for posted workers in professions associated with the risk of accidents: their knowledge of Dutch has to be sufficient to understand security instructions and to communicate with emergency services, for example, even if their work in the Netherlands only lasts a few days. As other rules on the employment of foreigners, this requirement is controlled by the Labour Inspection.

Box 3.1. A pilot scheme for less-skilled circular migration

A pilot scheme for temporary, semi-skilled migration from outside the EU/EFTA, called "Blue Birds", was implemented after public tender by the HIT Foundation in 2010/11. The objective was to explore whether a win-win outcome for migrants, Dutch employers, developing countries, and the Netherlands can be realised in practice. In the event, only migrants from Indonesia or South Africa were eligible for the pilot. They possessed vocational qualifications but could not be considered highly skilled. Dutch employers could obtain a special work permit for these migrants if they offered them a two-year contract. The job had to be at the migrant's skill level and had to pay a salary in line with market wages. The migrants were not allowed to bring family members and necessarily had to return to their home country at the end of the two-year period. The role of HIT Foundation lay in matchmaking and facilitating the arrival and return of the migrants.

According to the HIT Foundation (2011), the pilot programme encountered considerable practical difficulties. Few employers were prepared to accept the scheme's limitations to two particular source countries and two-year contracts only. Given that Dutch candidates could be hired also for shorter contract durations, recruiting a migrant might not have appeared worth the trouble with selecting applicants abroad, requesting residence permits, and providing accommodation for the migrants. After little more than a year, the Ministry of Foreign Affairs, under whose auspices the pilot was implemented, stopped the scheme. By this time, a special work permit had been granted in no more than eight cases, while a further 30 migrants had been selected for the scheme.

Nevertheless, some more widely applicable insights were obtained from the pilot. The HIT Foundation (2011) emphasises that the necessary efforts in recruitment, transfer, and housing of migrants are much more likely to be undertaken by intermediary service providers (including temporary employment agencies) rather than by the firms where the migrants ultimately work. Further, the provisions and the implementation of such a scheme should be sufficiently flexible to respond to the problems encountered. Finally, one has to be aware that the involved parties' interests still diverge even in a potential win-win situation.

Box 3.1. A pilot scheme for less-skilled circular migration *(cont.)*

While the "Blue Birds" pilot has not been pursued further, the Netherlands participate in most of the so-called Mobility Partnerships between EU countries and non-EU countries, arranged by the European Commission. As part of these partnerships, institutional capacities are built to offer legal migration opportunities and irregular migration is discouraged. The Netherlands have signed such agreements with Cape Verde, Georgia, Azerbaijan, Armenia and Morocco. NGO-led projects in migration and development are supported by the Dutch Ministry of Foreign Affairs, as is the return and reintegration of migrants who had come to the Netherlands as asylum seekers (see Klaver et al., 2015).

The possibilities for interns from non-EU/EFTA countries are tightly regulated, which might reflect the potential for the abuse of internship programmes. Those who want to do an internship while they are still in education need to be enrolled in a regular education programme that includes an internship as a mandatory part. A work permit is required but does not normally include a labour market test. Depending on the level of the education enrolled in, internships may last up to six months or up to one year. The share of interns among staff must not exceed 10%, and they must be paid the minimum wage for persons aged 23. Different rules apply to interns who are already employed abroad: they need to provide proof of an agreement between their employer abroad and the Dutch employer, which needs to aim at preparing the intern for work with the employer abroad upon return. The intern cannot assume a regular workplace at the Dutch employer, and interns must not make up more than 10% of staff. The internship may only last for a maximum of 24 weeks, during which a wage has to be paid that aligns with market wages and does not fall below the minimum wage for persons aged 23. Notwithstanding these tight regulations, a significant number of first permits has been issued to interns in recent years (see Table 3.A1.1 in the annex).

To come as au pair to the Netherlands from a non-EU/EFTA country, the migrant must be aged between 18 and 31 years. Only light household work may be performed for at most 30 hours per week (no more than 8 hours per day), in return for board and lodging with a host family. This arrangement may last for up to one year. The migrant cannot be a relative of the host family. Since 2013, host families and au pairs have been required to use au pair agencies as intermediaries, and these agencies have to be recognised sponsors (like sponsors of knowledge

migrants, for example). The requirement to involve an agency also applies to au pairs from EU/EFTA countries.

None of these schemes cater to non-EU/EFTA labour migrants with medium or low skill levels who seek to work full-time for a Dutch employer in a standard employment relationship. Therefore, such applicants have to resort to the Labour Migrant Permit or to temporary work, both of which require a work permit and passing a labour market test. This notably includes applicants in highly demanded occupations or with scarce skills, as long as their salaries are not sufficiently high to give them access to the knowledge migrant scheme. In fact, such applicants face particularly high hurdles, as Mussche et al. (2013) emphasise: to obtain a work permit for a non-EU/EFTA migrant in highly demanded occupations, employers are expected to make every recruitment effort for three months instead of five weeks to fill the vacancy otherwise, which is the longest period for a labour market test used in any OECD country.

Within the group of applicants in highly demanded occupations, this creates a stark contrast between those who have low or medium skill levels and those who are highly skilled. The highly-skilled enjoy a privileged access to the Dutch labour market through the knowledge migrant scheme, without work permit and without labour market test. Those with low or medium skill levels do not only need to obtain a work permit and pass a labour market test, but face a stricter labour market test than any other applicants. This appears somewhat contradictory and also counter-intuitive. Labour market tests serve to avoid adverse effects of migration on the job prospects of the domestic workforce, and such adverse effects are particularly unlikely to occur from labour migrants in occupations where, thanks to high demand, labour migrants are likely to be absorbed without serving as substitutes for domestic applicants.

To put applicants in highly demanded occupations and their potential employers on equal footing with other applicants and employers, it could be considered making the time that employers need to search before they are allowed to recruit non-EU/EFTA migrants the same for all occupations. Chapter 1 documents that high levels of demand are also expected at medium skill levels, with shortages especially in technical occupations. At these skill levels, a privileged access could be implemented through a public list of shortage occupations, so that the labour market test is waived for occupations on this list. Such lists are a

commonly used tool in the migration policies of European countries (see Table 1.1 in OECD and EU, 2016).

Exceptions for certain occupations would not be entirely new to the Dutch labour migration policy either. From 2014 to 2016, cooks specialised in Asian cuisines are exempt from the labour market test. Between 2000 and 2005, simplifications were made for some occupations in information and communication technology (see de Lange, 2007). A shortage list would replace ad-hoc exemptions by a more systematic approach. It can be based on the analyses that are already being undertaken to determine the highly demanded occupations where employers are required to search for three months instead of five weeks. Constant monitoring of the labour market would be needed to quickly adapt the shortage list to changing labour market conditions, and to prevent counterproductive effects: if employers believe that an occupation will remain on the shortage list indefinitely, they might have little incentive to invest in training staff for these occupations instead of recruiting migrants.

While only limited evidence is available on the impact of immigration more generally on the Dutch labour market, this evidence suggests that the impact is small. Early analyses mostly examined the impact of "guest workers" on the Dutch economy. A more recent paper examining the impact of immigration is an analysis by Zorlu and Hartog (2005) based on data for 1998. They find small negative effects from non-EU migrants on the wages of low-skilled workers in the Netherlands and small positive effects on the wages of high-skilled, while they find no significant effect from EU migration to the Netherlands. These results suggest that immigrants are substitutes for low-skilled and complements for high-skilled labour. For the years 1999-2008, Berkhout et al. (2011) specifically considered the impact of labour migrants from Central and Eastern European countries that acceded to the EU. They find small negative effects on the job prospects of the domestic workforce in some contracting segments of the labour market, but also positive effects in expanding segments. Overall, they conclude that the job prospects of the domestic workforce were not significantly affected.

Entry procedures and administrative issues

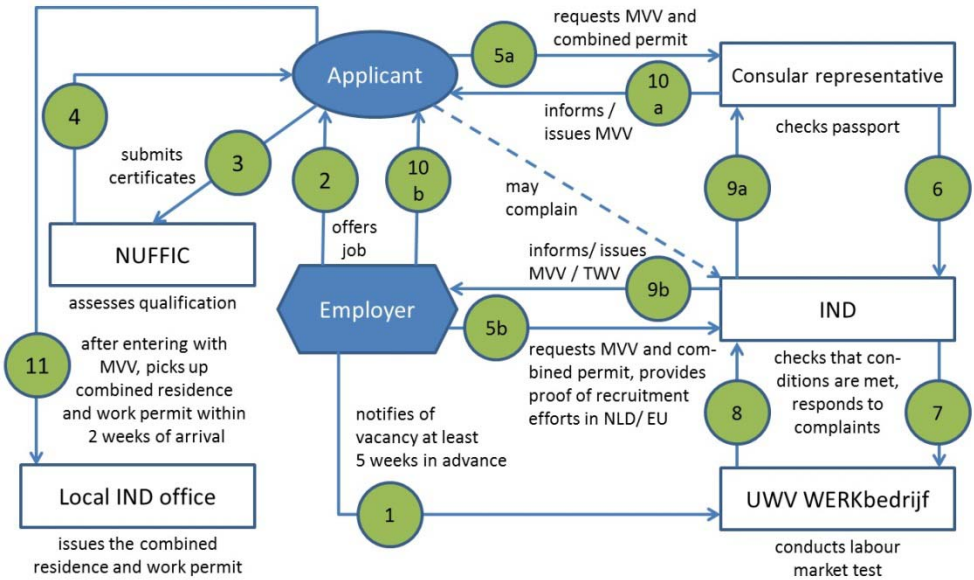
This section presents procedures that labour migrants from outside the EU/EFTA have to follow in order to enter the Netherlands and stay for more than 90 days. In most cases, labour migrants from outside the

EU/EFTA need a visa to enter the Netherlands, while nationals of a few countries are exempt.[5] The visa required for a stay of more than 90 days is the provisional residence permit *(Machtiging tot Voorlopig Verblijf*, MVV). The Entry and Residence procedure (*Toegang en Verblijf*, TEV) to obtain a MVV may be initiated by either the migrant or by the Dutch employer on the migrant's behalf. The public body in charge of this procedure is the IND, and consular representatives act as intermediaries for applications from abroad.

If the Dutch employer wants to recruit under the programme *Arbeid in loondienst*, a combined residence and work permit (*Gecombineerde vergunning voor verblijf en arbeid*, GVVA) will be needed. In line with the EU Directive on the single permit, this combined procedure replaced two procedures in 2014, for the residence permit and work permit (*Tewerkstellingsvergunning*, TWV). A separate TWV remains necessary in some cases, notably for intra-company transferees, seasonal workers, students and nationals of Croatia. However, these exceptions will tend to disappear as further EU Directives on seasonal workers and intra-company transferees are implemented, and as transitional arrangements for Croatian nationals expire. The work permit is granted by the UWV WERKbedrijf; in the case of a combined residence and work permit, this has turned into advice from the UWV WERKbedrijf to the IND. The IND will only approve the request for a MVV if the advice is positive or if the TWV is granted. If an application is successful, the foreign worker can enter with the MVV and pick up the residence permit (either as a GVVA or with a TWV) after arrival.

Figure 3.5 depicts the procedure for an applicant who applies from abroad and needs a MVV to enter the Netherlands. Whenever formal foreign qualifications play a role, migrants are expected to first provide information on them. In many cases, Nuffic assesses the foreign qualifications, but some other institutions may also offer this service. The procedure is generally simpler whenever workers from outside the EU/EFTA do not need a MVV: they can apply directly to the IND for a residence permit, or may even enter the Netherlands first and then apply for it.

Figure 3.5. Procedure for a Labour Migrant Permit (combined residence and work permit)

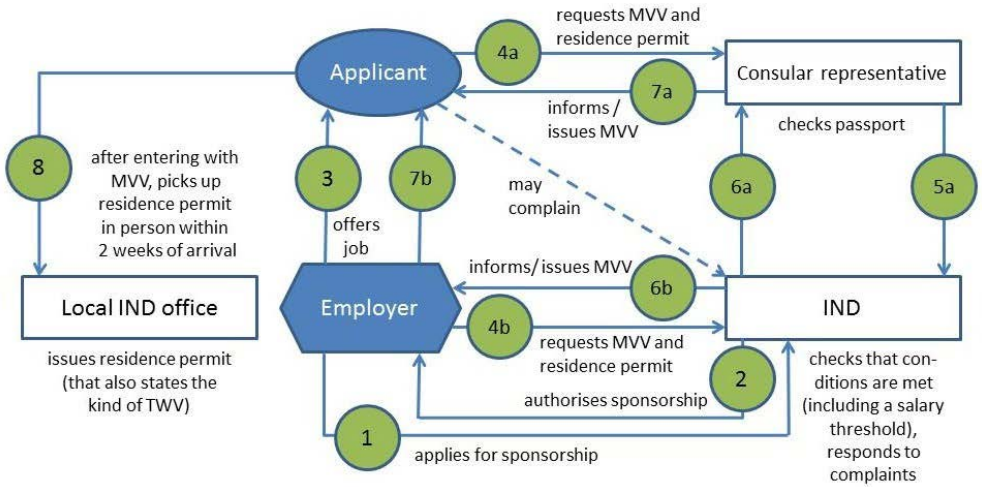


MVV: Provisional residence permit (*Machtiging tot Voorlopig Verblijf*); TWV: Work permit (*Tewerkstellingsvergunning*).

Source: OECD Secretariat analysis based on information published by IND and UWV WERKbedrijf.

Procedures under the knowledge migrant scheme and the search year for highly educated persons (*Zoekjaar hoogopgeleiden*) differ notably by the absence of a work permit, so that the UWV WERKbedrijf is not involved. While knowledge migrants have to meet a salary threshold, they do not face educational requirements, so that Nuffic will not be part of the procedure either. In contrast to the programme for *Arbeid in loondienst*, where employers may become sponsors recognised by the IND before they make any request, this is compulsory for employers in the knowledge migrant scheme (the next section discusses recognised sponsors' rights and obligations). With this exception, Figure 3.6 thus indicates a substantially simpler procedure, in which the order of the remaining steps is still the same as under *Arbeid in loondienst*.

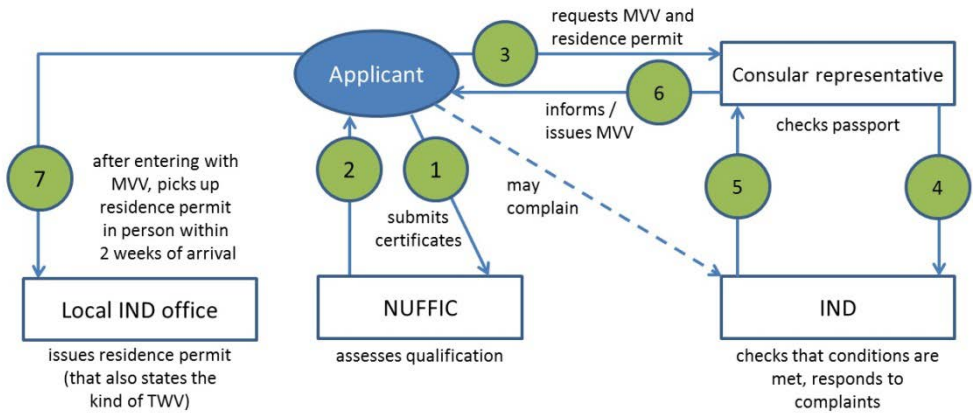
Figure 3.6. Procedure for a residence permit as knowledge migrant



MVV: Provisional residence permit (Machtiging tot Voorlopig Verblijf); TWV: Work permit (Tewerkstellingsvergunning).

Source: OECD Secretariat analysis based on information published by IND and UWV WERKbedrijf.

Figure 3.7. Procedure for a residence permit under the search year for highly educated persons (in case of an applicant with a foreign qualification applying from abroad)



MVV: Provisional residence permit (*Machtiging tot Voorlopig Verblijf*); TWV: Work permit (*Tewerkstellingsvergunning*).

Source: OECD Secretariat analysis based on information published by IND and UWV WERKbedrijf.

The procedure under the search year for highly educated persons (see Figure 3.7) likewise constitutes essentially a selection from the more comprehensive procedure under *Arbeid in loondienst*: in this case, there is no employer and hence no need for a work permit, so that the UWV WERKbedrijf is again not involved. By contrast, formal qualifications play a central role in this programme. While qualifications from Dutch institutions do not need to be assessed, Nuffic is charged with assessing foreign qualifications. Applicants who are already in the Netherlands do not need to obtain an MVV and can send their application directly to the IND.

For non-EU/EFTA nationals who need a MVV to enter the Netherlands, Table 3.A1.2 in the annex indicates the share of residence permits issued to applicants who were already in the Netherlands. While virtually all students in this group of nationalities were still abroad when they received the residence permit, the vast majority of the international graduates who were issued a residence permit for a search year were already in the Netherlands (or still had a valid residence permit). This suggests that the search year programmes mostly retained international graduates who had come to the Netherlands as students, but attracted only few international graduates who had not previously stayed in the Netherlands. By contrast, almost all knowledge migrants and researchers in this group of nationalities were abroad when the residence permit was issued, according to Table 3.A1.2. The share of other labour migrants who were already in the Netherlands was below 8% in most years but rose to 26% in 2014, driven by a strong decrease in the number of Labour Migrant Permits issued (see Table 3.A1.1).

To support the filing of complete applications under the various programmes, the IND and the UWV WERKbedrijf jointly offer the *Digital loket*, an online tool that in particular allows employers to prepare the requests for both the MVV and the TWV at the same time. Thus far, the process only begins after the employer has sent paper versions of the forms assembled online, but further development of the *Digital loket* may soon allow applicants to also submit the forms online. An especially useful function of the *Digital loket* is a guide that, through a set of screening questions, leads all applicants (individuals as well as employers) to the information that is relevant in their case and typically indicates a unique residence permit. Yet for the time being, this guide (the *klantdienstwijzer*) is only available in the Dutch language, although many potential migrants would rely on comprehensive online information being available in English.

Dedicated "expat centres" offer a one-stop service for knowledge migrants, researchers and their family members to collect residence permits, to be entered in the local register, and to obtain information about living and working in the Netherlands. Expat centres have been set up not only in the largest cities Amsterdam, Rotterdam, Den Haag and Utrecht, but also across the provinces – in Eindhoven, Enschede, Groningen and Wageningen. Their role will be discussed in Chapter 5.

Modern Migration Policy, recognised sponsorship and enforcement

After years of preparations, the so-called Modern Migration Policy came into force in June 2013. The bill had been drafted across party boundaries by the justice commission in the Dutch Lower House. It simplified and streamlined some of the most important procedures of admitting labour migrants. The administrative burden involved with the recruitment from abroad has likely fallen considerably, for both employers and migrants. For example, the TEV procedure outlined above replaced the previous requirement to apply first for an MVV and then apply again for the residence permit itself.

More fundamentally, the Modern Migration Policy emphasises the role of the sponsor – for labour migrants, this is the employer offering the migrant a job. The sponsor can start the immigration procedures on behalf of the migrant. Sponsors can be recognised by the IND and thereby obtain certain benefits: the IND then aims at completing the TEV procedure within two weeks and often accepts sponsors' assurances that a migrant meets the legal criteria, rather than insisting on written proof. To be recognised, the sponsor must appear in the business register or be a recognised institution in research and education, must not be close to bankruptcy and must as of 2016 pay a one-time fee of EUR 5 183.

Sponsors of knowledge migrants (including stays for less than 90 days), researchers according to EU Directive 2005/71 and students necessarily have to be authorised by the IND.[6] Recognised sponsors of researchers can be public research institutions but also private entities. In the latter case, the sponsor has to be member of the National Academic Research and Collaboration System or be eligible for tax reductions targeted at research and development activities. Sponsors of students must be institutions of tertiary education (academic or vocational), institutions of continuing education or those leading towards the

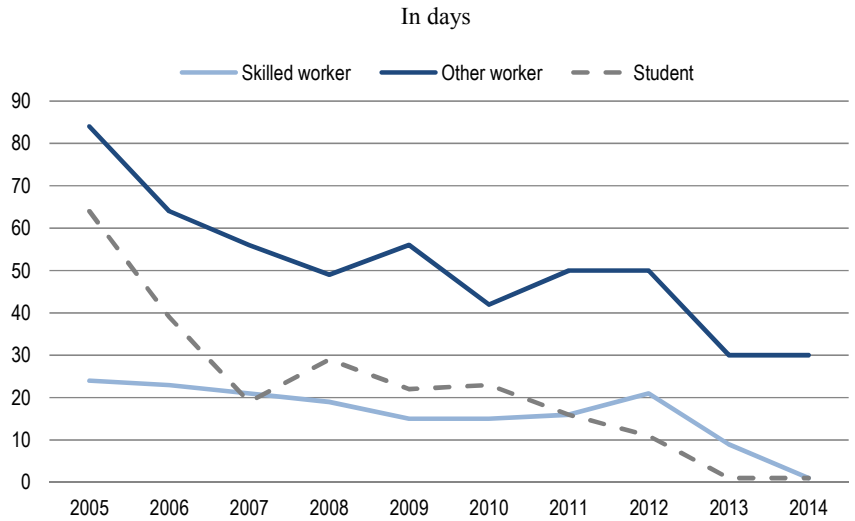
International Baccalaureate. All these educational institutions must be recognised as such under Dutch law.

With the introduction of the Modern Migration Policy in 2013, processing times for residence permits have been reduced dramatically, as shown in Figure 3.8. By 2014, most residence permit requests for skilled workers and students were processed within a day. Prior to 2013, requests for skilled workers were processed in a median time of two to three weeks; the median time taken to process requests for students had been between ten and 30 days. In the case of requests for other workers, the median processing time fell from 50 days in 2011/12 to 30 days in 2013/14. Still in 2005, the median processing time for other workers' permits was close to three months.

Recognised or not, sponsors face a number of obligations towards the IND. They have to ensure that the migrants continuously – that is, not only at the time of application – meet the legal conditions for their stay. When the situation changes such that the conditions are not met anymore, the sponsor has to report the change. For example, an early end of employment would have to be reported, as would a salary change that leaves it below the threshold. The Modern Migration Policy has also given the IND greater possibilities to enforce that sponsors meet their obligations. In the case of a recognised sponsor, the IND can simply withdraw the recognised status. After a warning, fines might be incurred, and the costs of returning a migrant who illegally stayed can be billed to the sponsor.

The obligations of recognised sponsors might deter small and medium-sized enterprises (SMEs): as their small size cannot support substantial overhead costs, they often lack the administrative capacity to analyse and monitor the legal situation themselves. To reduce the risk of fines, employers might feel compelled to obtain a work permit even in cases when none is needed, or might shy away from employing migrants altogether. And while not insurmountable, the one-time fee involved in recognition would appear very high for a start-up wishing to employ a knowledge migrant, but negligible for a large conglomerate. SMEs are therefore less likely to use the trusted sponsor system. Since only recognised sponsors can use the schemes for knowledge migrants and scientific researchers according to Directive EG 2005/71, SMEs are therefore less likely to benefit from these schemes. Public authorities could respond by offering legal assistance or by waiving the fee for SMEs with certain characteristics.

Figure 3.8. Median processing times for issued first residence permits, 2005-14



Note: Processes completed within a day are counted as lasting for one day. Skilled workers hold a first residence permit as knowledge migrant, researcher, holder of an EU Blue Card, or a job-search year permit for graduates (including status changes in 2012-14, as most of these permits were recorded). Other workers hold (as first residence permit) a Labour Migrant Permit, a permit based on bilateral treaties or as self-employed, intern, clerical or posted worker.

Source: Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Does private law enforcement replace public inspections?

In practice, the shift of both rights and obligations especially to recognised sponsors may lead to the substitution of private activities for state activities. As de Lange (2011) points out, the recognised sponsor in effect decides – by simply meeting the salary threshold for a knowledge migrant – that the residence permit is granted. Further, the responsibility for enforcement coupled with the possibility of substantial fines might lead employers to engage in private "policing" so as to ensure that neither they nor any subcontractors – such as temporary employment agencies – employ migrants illegally, knowingly or not.

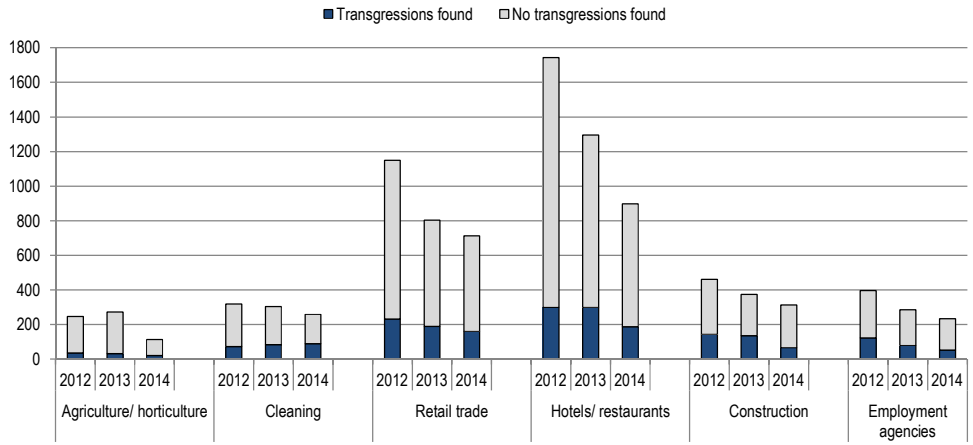
Some private enforcement activities are already carried out by the social partners. Both employers and unions have an interest that collective labour agreements between them are adhered to. In so far as a firm employing migrants under illegal terms does not comply with the collective agreement, enforcement of the collective agreement will

overlap with the enforcement of migration regulation. While social partners do not have a legal mandate, they do co-operate with the public institution that oversees working conditions and also the employment of migrants.

Founded in 2012, the Labour Inspection of the Ministry for Social Affairs and Employment (*Inspectie Sociale Zaken en Werkgelegenheid*) is the public institution in charge of enforcement. For every migrant found in illegal employment, the Labour Inspection can fine the business EUR 12 000 (EUR 6 000 if the employer is a private person), but higher penalties can be set for repeat offenders or when more than 20 migrants are illegally employed (see Klaver et al., 2015). In 2012, the fines due to violations of the Labour of Aliens Act (Wav) amounted to a total of EUR 33.4 million, by far the largest amount across the laws that the Labour Inspection enforces (see Inspectie Sociale Zaken en Werkgelegenheid, 2013a).

Measured in full-time equivalents, about 1 000 civil servants worked for the Labour Inspection at the end of 2014, after significant reductions in staff levels since 2012 (see Inspectie Sociale Zaken en Werkgelegenheid, 2015). Figure 3.9 indicates accordingly that the number of standard controls carried out over the years 2012 to 2014 has fallen across the sectors shown, which account for most of the standard controls. Including all controls carried out by task forces with a specific remit, a total of about 5 000 controls were carried out in both 2014 and 2013, after 7 200 in 2012. Each year, transgressions were found in around 20% of the inspected cases. Close to 1 600 persons were thus found to be illegally employed in 2014, after about 2 300 in 2013 and 2 600 in 2012. Among the migrants found in illegal employment, Bulgarian, Romanian, Chinese and Turkish workers were consistently the most frequent over the years 2010 to 2015 (see Inspectie Sociale Zaken en Werkgelegenheid, 2013a and 2015).

Figure 3.9. Inspections of compliance with laws on employment of migrants, minimum wages and employment agencies, selected sectors, 2012-14



Note: Figures include EU/EFTA migrants as well non-EU/EFTA migrants. Compliance with the law on employment of foreigners (*wet arbeid vreemdelingen*, Wav) is inspected jointly with minimum wage laws (*wet minimum loon*, WML) and laws on employment agencies (*Wet allocatie arbeidskrachten door intermediairs, Waadi*). Figures on transgressions record transgressions of any of these. Sectors are selected based on exhibiting significant numbers of inspections in all three years considered.

Source: Inspectie Sociale Zaken en Werkgelegenheid (2015), "Jaarverslag 2014"; Inspectie Sociale Zaken en Werkgelegenheid (2014a), "Jaarverslag 2013"; Inspectie Sociale Zaken en Werkgelegenheid (2013a), "Jaarverslag 2012".

Overall, these numbers create the impression that transgressions have been found to be especially frequent among employers of knowledge migrants and international graduates, based on a small number of controls focussed on them. Of about 80 inspected employers of knowledge migrants in 2014, 19% were found to be in violation of laws on employment of foreigners, on minimum wages or on employment agencies. In 2013 and 2012, transgressions were found in 38% of 120 and in 30% of 140 inspected cases, respectively (see Inspectie Sociale Zaken en Werkgelegenheid, 2015, 2014a and 2013a). While only around 120 controls on the employment of international graduates were carried out in each year, very high shares with transgressions were found: 69% in 2012, 42% in 2013 and 48% in 2014. Between 30 and 80 supposed knowledge migrants and between 90 and 200 international graduates annually were found to be illegally employed. As public enforcement activities are being scaled back at the same time as enforcement responsibilities are shifted to recognised sponsors, the net effect on the

enforcement of the rules for knowledge migrants and international graduates is uncertain.

However, a quantitative reduction of public inspections may be offset by a qualitative improvement of how inspections are targeted. To use its resources efficiently, the Labour Inspection prioritises controls according to an assessment of risks (see Box 3.2). Such efforts likely explain why the number of detected law transgressions, shown in Figure 3.9, has not always fallen in line with the number of inspections: the share of controls that detect transgressions has risen in agriculture/horticulture and cleaning, has roughly remained stable in retail trade and hotels/restaurants, and has fallen in construction and for temporary employment agencies. The highest shares were found in construction and cleaning where in some years every third control detected transgressions. While non-compliance especially in temporary employment agencies has caused a lot of concern among policy makers in recent years, several measures were taken and the employment of migrants in such agencies has fallen (see Box 2.2 in Chapter 2).

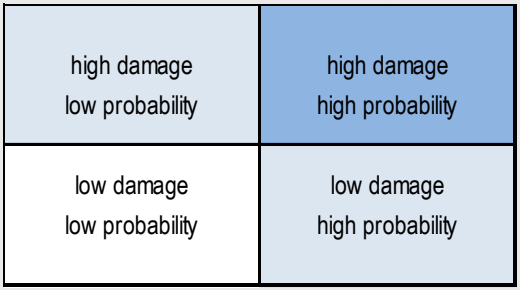
Box 3.2. Assessment of risk in compliance with labour regulations

The *Inspectie Sociale Zaken en Werkgelegenheid*, the Labour Inspection of the Ministry for Social Affairs and Employment, controls compliance with a range of employment laws and regulations. The law on the employment of foreigners (Wav) is only one among a number of other laws and regulations, ranging from the re-integration of formerly unemployed persons to the prevention of major accidents at the workplace. The Labour Inspection allocates enforcement efforts between these various objectives based on a classification of the associated risks (see Inspectie Sociale Zaken en Werkgelegenheid, 2013b and 2014b). Inspections are planned for the year ahead following an update of the risk classification, which responds to observed trends.

Risks are classified along several dimensions. Firstly, the extent of damage is assessed that may result from violations of a given employment law or regulation. Secondly, the probability is estimated that such damages materialise. These two dimensions are captured in the diagram below. This approach identifies risks that do not only cause considerable damage, but that are also relatively likely to happen. For example, grave accidents at the workplace are associated with high damages, but occur with a low probability. By contrast, workers being overburdened by long working hours can happen frequently, but would normally not lead to high damages.

In the Labour Inspection's classification, illegal employment is associated with limited damages and a relatively high probability, which places it in the middle of the border between the quadrants "low damage, high probability" and "high damage, high probability". The extent of the damage reflects considerations that illegally employed migrants might displace domestic job seekers, that they might give their employer an undue competitive advantage, that they are vulnerable to exploitation and that trust in the rule of law might be affected.

Box 3.2. Assessment of risk in compliance with labour regulations *(cont.)*



Beyond probability and extent of damage, risks are weighted by how fast they are growing. For example, the risk that minimum wage laws are violated was perceived to be growing in 2013, due to the opening of the Dutch labour market to workers from Romania and Bulgaria. In particular, if migrants work as pseudo self-employed, the minimum wage may be circumvented. During 2012, 90% of the detected cases of pseudo self-employment concerned citizens of Bulgaria or Romania (see Inspectie Sociale Zaken en Werkgelegenheid, 2013a). The Labour Inspection therefore allocated additional resources to this kind of control. A fourth dimension in the risk analysis is the number of employees affected by a risk. In this respect, illegal employment of foreigners receives only a small weight because likely less than 500 000 persons are exposed to this risk, while more than 5 million are found to be exposed to risks such as unsafe workplaces.

The insights and the logic of this classification of risks also inform how the Labour Inspection identifies individual employers for controls. Controls are meant to focus on cases for which a medium or high risk has been identified based on probability and extent of damage. Larger employers and those associated with a growing risk thus have priority. The efforts against illegal employment of foreigners give special attention to fraudulent use of the programmes for knowledge migrants, graduates, interns and au pairs.

While the highly targeted inspections might use the resources of the Labour Inspection very efficiently, a small number of random inspections in addition to the targeted approach might have a disproportionately large effect on compliance, so that a combined approach might be most effective. As long as at least a small number of random inspections are conducted, every employer has a certain probability of being inspected. If employers are aware that random controls can occur, this possibility can discourage illegal employment of migrants, and the effect might be strongest if employers do not know how high the probability of inspections is. By contrast, the targeted approach allows many employers to conclude that inspections are extremely unlikely in their case.

Based on a survey among Dutch employers, Groenewoud and van Rij (2007) conclude that the effectiveness of inspections depends on the probability of receiving fines. Other factors are the economic gains from illegally employing migrants and the possibilities of recruiting migrants illegally, but also employers' perceptions to what extent illegal employment of migrants is considered undesirable. Groenewould and van Rij (2007) also find that employers' beliefs about the probability of inspections responds to public information, such as advertisements.

Such evidence suggests that there may be a role for random inspections of Dutch employers, notwithstanding the targeted approach recently taken by the Labour Inspection. In the programmes for permanent labour migration that require sponsors to be recognised by the IND, random inspections are conducted by the IND, albeit with a different focus than applied by the Labour Inspection: the IND verifies whether the required salaries are paid and the required documentation is available. However, these inspections are limited to recognised sponsors and might therefore not be sufficient to create a general impression that employing migrants illegally is associated with a real risk of high fines.

Recently, the problem of self-employed who work like employees but are paid like service providers – therefore without social security contributions and often below collectively bargained wages – attracted the attention of policy makers and agencies charged with enforcement of employment laws. For example, SER (2014) points to self-employed construction workers involved in the construction of two power plants close to Eemshaven in the province Groningen. Together with temporary and posted construction workers, they form a large part of the workforce in construction but are not covered by collective agreements in the Netherlands. According to Tweede Kamer der Staten-Generaal (2011), self-employed from Central and Eastern Europe work above all in construction, but also in transport, business services and trade. In response to growing concerns about self-employment, measures taken in 2015/16 require companies to better document employment and payments to self-employed, holding them responsible also for their subcontractors (see Klaver et al., 2015).

For the coming years, the Labour Inspection has identified three challenges related to the employment of migrants. Firstly, EU citizens who pursue a substantial part of their work in the Netherlands might nevertheless be registered for social security in the country where the employer is seated, to avoid higher contributions. Secondly, lower pay

for posted workers from another EU country might undermine collective wage agreements in the Netherlands. Thirdly, migrants seeking a residence permit might for this purpose take up employment on paper, but in fact return the wage to the employer in cash.

Status renewals and the path to citizenship

Most of the residence permits granted to labour migrants can be renewed, provided the conditions for these permits are still met. Depending on the type of residence permit, it has to be renewed at the latest after two years (programme for self-employed), three years (*Arbeid in loondienst* and the programme for investors) or five years (knowledge migrants, researchers and EU Blue Card holders). In practice, permits may have to be renewed much sooner if the duration of the employment contract is shorter, as these permits then expire with the contract. However, a few residence permits cannot be renewed, notably residence permits for interns, au pairs, the start-up scheme and for the search year for highly educated persons. Holders of the latter two permits are expected to change to a different status by the end of this time. Likewise, holders of renewable permits may apply for a different status at any point. Successful status changes generally require that migrants meet the same conditions as applicants who are not already residing in the Netherlands.

The total number of residence permits for labour migrants that were issued following a renewal or change of status has grown slightly in recent years, from 13 300 in 2012 to 13 900 in 2014, according to data from the IND (including several changes or renewals by the same person within one year). This growth in overall figures is driven entirely by an increase of residence permits for skilled workers: 11 100 persons obtained renewed or changed to such permits in 2014, after 9 900 persons in 2012. By contrast, the number of persons renewing or changing to permits for other workers has fallen, from 3 400 in 2012 to 2 800 in 2014. The diverging developments reinforce the shift towards permits for skilled workers discussed in Chapter 2. In addition, around 10 000 persons renewed or changed to residence permits for students in both 2012 and 2013.

After five years of continuous legal residence in the Netherlands, migrants who hold a residence permit for non-temporary purposes[7] can apply for a permanent residence permit, in the form of either an EU long-term residence permit or a residence permit for an undetermined time

period. Either long-term residence permit has to be renewed every five years. According to the IND, both of these residence permits are associated with the same rights and obligations in the Netherlands; however, the EU long-term residence permit may confer advantages when migrants move to or work in other EU countries.

Therefore, the residence permit for an undetermined time period is only considered for applicants who do not meet the conditions for the EU long-term residence permit: while stays for temporary purposes fully count towards the residence requirement of five years in the case of the residence permit for an undetermined time period, such stays do not count at all (internship and au-pair) or only half (study) towards this requirement in the case of the EU long-term residence permit. For both permits, applicants have to demonstrate sufficient and durable income and need to have passed the civic integration exam. This test examines migrants' knowledge of Dutch language and society at the end of mandatory civic integration courses.

Civic integration may require extensive courses

Civic integration courses were introduced already in 1996, but the regulations governing them have since been changed repeatedly. The most recent rules that specify who is obliged to take the civic integration exam date from the beginning of 2013. These rules require migrants aged from 18 to 65 years who arrive for non-temporary purposes to pass the exam within three years of arrival. Labour migrants are exempt from this requirement, but have to pass the exam before they can obtain a permanent residence permit. Citizens of EU/EFTA countries, Switzerland and Turkey are also exempt, as are persons who have obtained a secondary or tertiary education in the Netherlands. While studying, international students are exempt because study is considered a temporary purpose of stay.

When first introduced, civic integration courses typically consisted of 500 hours of language tuition and 100 hours of introduction to Dutch society, and they were free of charge (see OECD, 2008). From 2015, according to instructions published by the Education Executive Agency (DUO) that holds civic integration exams, not only proficiency in Dutch language and knowledge of Dutch society is tested in the exam, but also some knowledge of the Dutch labour market. It is the migrants' responsibility to attend the courses necessary for them to pass the test, and to pay for the tuition fees (which can be reimbursed to humanitarian migrants). The costs can be substantial: Groenendijk (2011) mentions the

figure of EUR 6 000 for a full course, and the exam itself costs EUR 350; the fact that DUO offers loans of up to EUR 10 000 to pay for courses also attests to their costs.

Witvliet et al. (2013) report a pass rate of 82% over the years 2007-10 for newly arrived migrants who were obliged to take the exam (excluding humanitarian migrants). Successfully completing the civic integration course took these migrants almost 20 months on average. The question naturally arises whether the considerable efforts and costs involved in the civic integration system have had measurable effects on migrants' integration in the Netherlands. Using data on migrants' civic integration exams and their socio-economic situation, Witvliet et al. (2013) evaluate the impact of the civic integration system. For recently arrived migrants, they find that successful completion of the civic integration courses has a positive effect on migrants' labour market participation. This effect is found to be greater for migrants with a low level of education than for those with a high level of education. For migrants who have resided in the Netherlands for considerable time, however, a significant effect could not be found.

The number of naturalisations has fallen

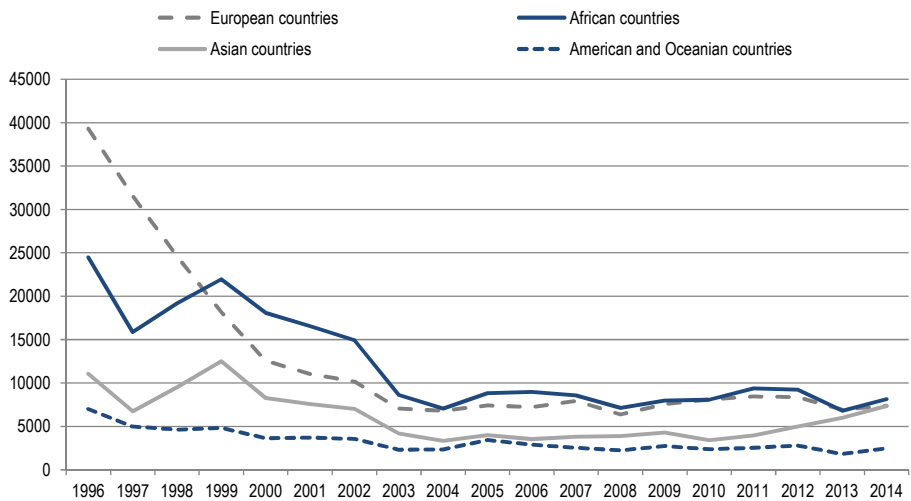
Migrants can apply for Dutch citizenship normally after five years of continuous legal residence in the Netherlands. This requirement reduces to three years in some cases, notably for those married to a Dutch citizen. Applications after two years of continuous legal residence are possible if the total time of legal residence adds up to ten years or more. To obtain Dutch citizenship, migrants also need to hold a permanent residence permit or residence permit for non-temporary purposes; they must not have a criminal record or face proceedings for a crime; they may be required to renounce their previous nationality; and they may need to have passed the civic integration exam at a certain level. While persons who obtained a secondary or tertiary education in the Netherlands are again exempted from this last requirement, EU/EFTA citizens are not. By contrast, there is no requirement on the migrant's income.

The naturalisation procedure takes about one year, according to the IND, and successful applicants have to participate in a citizenship ceremony at the end. An alternative route to Dutch citizenship (the so-called option procedure) is available, mainly for those who were born in the Netherlands as foreign citizens or who can demonstrate a continuous legal residence of at least 15 years: these persons can obtain Dutch

citizenship within three months, and they neither need to pass the civic integration exam nor renounce their previous nationality.

Figure 3.10 shows developments in levels of naturalisations over time. Groenendijk (2011) provides an overview of changes in naturalisation law and ascribes the high levels in the 1990s to the removal in 1992 of the requirement to renounce the previous nationality. The strong fall in naturalisations in the late 1990s may thus be the result of partly re-introducing this requirement in 1997, while the fall in 2003 coincides with the introduction of a naturalisation test – comparable to the civic integration exam, which ultimately replaced the naturalisation test in 2007. As shown in Figure 3.10, levels after 2003 have almost always remained below levels before 2003. The only discernible trend in recent years is a rise in naturalisations of migrants from Asian countries.

Figure 3.10. Naturalisations by group of previous citizenship, 1996-2014



Note: Naturalisations via the option procedure are included.

Source: CBS Statline (*Centraal Bureau voor de Statistiek*), http://statline.cbs.nl.

In principle, naturalisation can have a positive effect on migrants' labour market position: it might function as a signal to employers of the migrant's motivation and the probability that the migrant will stay, and it may open up job opportunities only available to citizens, e.g. in the public sector. However, there is little evidence on the labour market effect of naturalisation in the Netherlands. Beevelander and Veenman

(2006) study the situation of Turkish and Moroccan immigrants who obtained Dutch citizenship through naturalisation. They do not find any positive effect of naturalisation on labour market outcomes. As migrants who naturalise have resided in the Netherlands for at least five years and often for much longer, the result in Beevelander and Veenman (2006) aligns with the result in Witvliet et al. (2013) that passing the civic integration exam does not affect the labour market position of migrants who have long resided in the Netherlands. For these migrants, neither civic integration courses nor the Dutch citizenship might add much to their labour market position. Information on naturalisations by duration of residence is available from the CBS: of those who naturalised in 2013 (not counting naturalisations through the option procedure or the children of principal applicants), 43% had resided in the Netherlands for five to ten years, but another 43% had been resident for longer than ten years; only 14% had been resident for less than five years.

In conclusion, the Dutch labour migration policy towards migrants from outside EU and EFTA countries has undergone profound changes in recent years. Initially strongly demand-driven, the policy has in several cases adopted a supply-driven approach. New programmes target highly skilled labour migrants, international graduates and entrepreneurs, while comparatively few opportunities are available for labour migrants with medium or low skill levels. Most new programmes do not require work permits nor labour market tests. Together with procedural changes and a trusted-sponsor system, this has made the Dutch labour migration system considerably more efficient. Enforcement of regulations is informed by a risk assessment and partly delegated to employers, with unclear effects on compliance. Employers' satisfaction is high, but small and medium-sized companies might find it harder than large companies to use the system. The labour migrants benefited from a reduction of requirements and new services provided by public authorities, but the path to a permanent status or citizenship can be long and costly.

Notes

1. This overview of the historical development of the Dutch labour migration policy necessarily has to remain short. More details can be found in Penninx (2005) and Nicolaas et al. (2011), and a comprehensive account of developments from the post-war period up to 2006 is offered by de Lange (2007).

2. The evolution of integration policy is described in detail in OECD (2008) and Bruquetas-Callejo et al. (2007).

3. The UWV WERKbedrijf is a part of the *Uitkeringsinstantie Werknemersverzekeringen* (UWV), a social security provider. The *Centrum voor Werk en Inkomen* (CWI) became (part of) the UWV WERKbedrijf in 2009.

4. The relevant rankings are (the latest edition of) the Times Higher Education World University Rankings, the QS World University Rankings, and the Academic Ranking of World Universities compiled by Shanghai Jiao Tong University; see Nuffic (2013).

5. Nationals of Australia, Canada, Japan, Monaco, New Zealand, South Korea, the United States, and the Vatican are exempt from the requirement of a MVV, as are EU permanent residents. In October 2015, another exemption was introduced for persons who hold a valid residence permit in a Schengen country and come to the Netherlands to work for a recognised sponsor.

6. A discussion of arrangements for recognised sponsors in other OECD countries can be found in OECD (2014).

7. Seasonal work, internship, study and the job search year fall under temporary purposes, while those *Arbeid in loondienst*, work as knowledge migrant and EU Blue Cards fall under non-temporary purposes.

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EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Immigratie- en Naturalisatiedienst (IND), www.ind.nl.

UWV WERKbedrijf, http://www.uwv.nl/overuwv/kennis-cijfers-en-onderzoek.

Annex 3.A1

Additional tables

Table 3.A1.1. First residence permits issued to labour migrants and internationals students, 2005-14

First residence permits for stays of more than 90 days

Programme	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Knowledge migrants	1612	3591	5177	6641	5055	5435	5879	5804	7201	7162
Scientific Researcher EG 2005/71	n.a.	n.a.	n.a.	216	1102	1411	1608	1694	2352	2309
Other programmes for researchers	253	593	701	651	217	66	25	19	22	<10
Labour Migrant Permit	3127	2086	2045	2222	2216	1424	1752	1780	1074	339
Interns	389	420	376	374	433	329	380	407	541	163
Self-employed	117	131	126	63	81	162	160	230	149	187
Posted workers	<10	<10	<10	<10	<10	10	143	59	39	<10
Students	7041	7000	7489	7943	8812	9634	9831	9921	12206	12338
Search year schemes for graduates	n.a.	n.a.						2048	2213	2019
Other labour migrant programmes	108	160	105	163	181	160	207	260	104	74

Note: The schemes for start-ups and investors are not included. "Other labour migrant programmes" refers to clerical workers and religious purposes, bilateral treaties without self-employed, permits to search for / carry out work, permits for work on ships/ in mines/ on platforms, and EU Blue Cards. n.a. indicates that a programme was not yet introduced. From the available data, first permits issued in the search year schemes for graduates cannot be determined for 2007-11; in 2012 to 2014, numbers for the search year schemes include permits recorded as status changes, except permits that can be identified as status changes from other labour migrant permits. Numbers below 10 are not reported.

Source: OECD Secretariat calculations based on information from the Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Table 3.A1.2. Residence permits issued to applicants who are in the Netherlands, 2011-14

Percentages among applicants who need a visa (MVV)

Permit types	2010	2011	2012	2013	2014
Skilled labour migrants w/o search years for graduates	1.04	0.95	0.62	1.02	0.66
Other labour migrants	6.52	7.06	7.46	6.32	26.19
Students	0.45	0.55	0.24	0.35	0.26
Search year (graduated in the Netherlands)			100.00	100.00	100.00
Search year for highly educated persons			86.40	72.39	72.60

Note: Figures are based on whether or not the issued permit includes a visa (MVV), which is not needed when applicants are already in the Netherlands or still hold a valid residence permit. As nationals of Australia, Canada, Japan, Monaco, New Zealand, South Korea, the United States, and the Vatican are exempt from the requirement of a MVV, they are not included in the figures. EU permanent residents who are not in the Netherlands may be included in the figures, as they do not need a visa. Only those migrants are counted who (plan to) stay in the Netherlands for more than 90 days. Skilled workers hold a first residence permits as knowledge migrant, researcher or hold an EU Blue Card. Other workers hold (as first residence permit) a Labour Migrant Permit, a permit based on bilateral treaties or as self-employed, intern, clerical or posted worker. Posted workers are not included because they do not need a visa. From the available data, first permits issued in the search year schemes for graduates cannot be determined before 2012. Numbers for the search year schemes from 2012 to 2014 include permits recorded as status changes.

Source: OECD Secretariat calculations based on information from the Dutch Immigration and Naturalisation Service (IND, *Immigratie- en Naturalisatiedienst*), www.ind.nl.

Chapter 4

Matching labour migrants with labour demand in the Dutch economy

This chapter examines three aspects of matching labour migrants with labour demand in the Netherlands: how is the selection of highly skilled labour migrants affected by the use of salary thresholds in the knowledge migrant programme? Is the Dutch top sector approach reflected in the distribution of migrants over sectors? Have regions in the periphery of the Netherlands attracted their fair share of labour migrants? Most analyses in this chapter include EU/EFTA as well as non-EU/EFTA migrants, but particular attention is given to highly skilled migrants.

How well labour migrants are matched with labour demand is a key element of the effectiveness of labour migration policy. This chapter investigates the matching in the Netherlands along three lines of inquiry. The first examines how the use of salary thresholds affects the selection of highly skilled migrants through the Dutch knowledge migrant scheme, drawing on econometric analyses conducted for this review by SEO Economisch Onderzoek (Amsterdam) and published as Berkhout et al. (2016). The second line of inquiry considers the distribution of both EU/EFTA and non-EU/EFTA migrants over sectors of activity in the Netherlands. Particular attention is given to the question whether migrants also find employment in those sectors targeted by the Dutch top sector approach. Thirdly, the chapter turns to the distribution of both EU/EFTA and non-EU/EFTA migrants over employers in regions, i.e. the provinces of the Netherlands, with a focus on highly skilled migrants and top sector employers.

Selection of skills using salary thresholds

As the Dutch economy undergoes structural and technological change, high-skilled labour plays a role of growing importance in the production process. This development will likely contribute not only to growing labour demand for specific skills, but also to generally higher skill requirements across sectors and occupations. Chapter 1 has documented expectations that a large number of new positions with high skill requirements will be created in coming years. In the field of migration policy, the programme for knowledge migrants (*kennismigranten*) can be regarded as a response to such developments. This programme has the distinctive feature that applicants essentially only need to be offered a job in the Netherlands with a sufficiently high salary. This section discusses the benefits and drawbacks of this approach for a policy that aims at facilitating high-skilled migration.

To recall the main elements of the admission procedure for knowledge migrants (see Chapter 3 for details), employers that are recognised sponsors make a job offer to a non-EU/EFTA citizen. Immigration authorities then verify that the salary paid in this job meets a publicly specified threshold. If this condition is met, the recruitment is approved without further delays – in particular, a work permit is not needed, a labour market test is not applied and the employer is not expected to try and fill this position with an EU citizen. Despite the name of the programme, knowledge migrants are also not required to possess certain qualifications, know-how or expertise. Although knowledge

migrants will very often have them, their high skills are not assessed or verified in any way. Instead, policy makers regarded a high salary as a sufficient indication of valuable skills and considered it both a simple and objective criterion for selecting knowledge migrants (see de Lange, 2007).

Benefits from simple and transparent procedures

Considerable benefits result from the simplicity of the selection procedure for knowledge migrants, which essentially relies on salary thresholds. A criterion as clear as a salary threshold is very practical for immigration authorities and allows them to process applications quickly. For employers, the salary thresholds make decisions by immigration authorities very transparent and predictable, with important consequences for their recruitment behaviour: employers might be more willing to incur the significant costs involved in international recruitment if they are confident that their efforts will not be invalidated by an unexpected administrative decision. In particular, small and medium-sized enterprises (SMEs) might engage in international recruitment only in such reliable circumstances. In turn, employers whose recruitment would not be approved can anticipate this decision and refrain from initiating them in the first place; by consequence, immigration authorities are not burdened with unsuccessful applications.

There are some indications that these benefits accrue in practice. Applications under the knowledge migrant scheme were mostly processed within one day in 2014, and only 0.2% of the applications were rejected (see Table 3.1 in Chapter 3). Similarly low rejection rates were also observed in previous years (see IND, 2013). Fast and predictable procedures likely contribute to the attractiveness of the Netherlands for highly skilled migrants: among several opportunities, they might choose to invest their time and effort in a Dutch option, perceiving it as safer and paying off sooner. Circumstantial evidence, such as first-hand accounts of employers and highly skilled migrants, suggest that both groups are very satisfied with their experience of the knowledge migrant scheme.

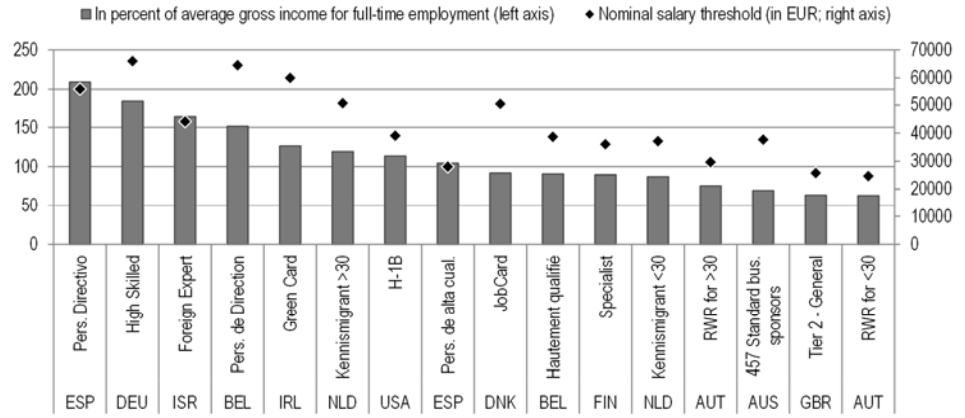
More fundamentally, the use of salary thresholds makes the knowledge migrant scheme responsive to developments in labour demand. In principle, any employer willing to offer a sufficiently high salary can recruit non-EU citizens under the knowledge migrant scheme, irrespective of sector, occupation or skill content of the job. Entirely unforeseen labour shortages, as long as they sufficiently drive up offered

wages, can thus be addressed through the existing scheme. This frees immigration authorities from the task of monitoring labour demand developments and of frequently redefining the characteristics of eligible applicants.

Salary thresholds also go a long way to avoid that employers recruit migrants so as to pay lower wages. If other criteria were used instead of salary thresholds, avoiding such "social dumping" might often still require some assessment of the wages to be paid to the applicant, or might necessitate a possibly lengthy labour market test. As such, the salary thresholds cannot guarantee that the salary declared in the application is in fact paid to the knowledge migrant, so that there may be a need to implement the salary requirement once the knowledge migrants has started working. In practice, however, employers need to be recognised sponsors before they can employ a knowledge migrant. The threat to lose this status and thus access to knowledge migrants gives employers strong incentives to pay the declared salaries.

As with any threshold, it matters how the salary threshold is set. To account for substantial wage differences between age groups, a lower threshold has been introduced for applicants aged less than 30 years. From 2015 to 2016, both thresholds were raised by 1.2% to EUR 4 240 and EUR 3 108, respectively, for the gross monthly salary. In comparison to salary requirements for skilled migrants in other OECD countries, the threshold for applicants below 30 appears rather low, while that for applicants above 30 appears rather high (see Figure 4.1). It is possible that the level of salary requirements has implications for a country's competitiveness. This may even hold for differences between nominal levels that do not carry over to differences in real terms: from outside the country, migrants might have poor information on the wage level they can expect to earn, so that high nominal requirements as such can have a deterrent effect.

Figure 4.1. Salary thresholds in national schemes for highly skilled migrants, 2010-12



Note: Salary thresholds for "kennismigranten" reflect the 2011 levels.

Source: OECD Secretariat calculations based on published national information.

Thresholds have limited selection effects

To some extent, the effect of salary thresholds on the selection of applicants can be studied from the age-dependent thresholds for knowledge migrants, focussing on those just below and those just above the age limit of 30 years. A priori, the characteristics of knowledge migrants hired at the age of 30 should not differ much from the characteristics of those hired at the age of 29: after all, their recruitment is presumably brought about by the same economic forces and it should not matter to an employer whether an applicant is 30 years old rather than 29. However, the salary threshold for knowledge migrants hired at age 30 is around one-third higher than for those hired at age 29. This substantial increase can mean that applicants with certain characteristics do not qualify as knowledge migrants if they are to be hired at age 30, but would qualify at age 29.

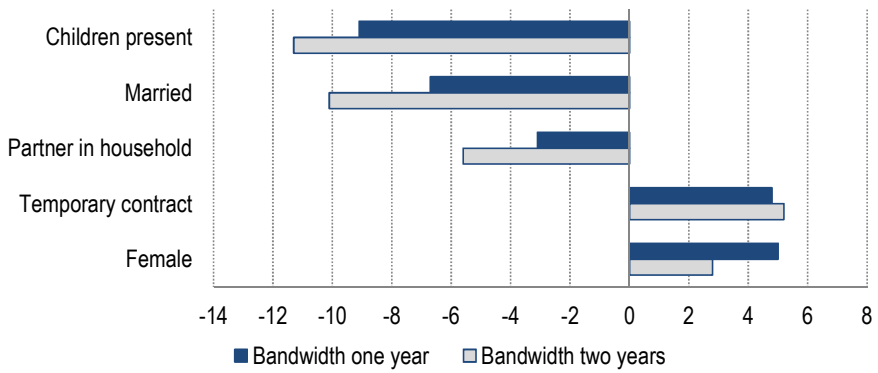
For example, applicants for jobs in a particular sector might qualify for the lower threshold but not for the higher one, as the wages paid in this sector normally only meet the lower salary threshold. If knowledge migrants hired at age 30 are observed to differ significantly from those hired at 29, the reason may well be that particular groups of applicants are excluded by the more restrictive threshold for those aged 30. This way, differences in characteristics can point to selection effects of the thresholds. Since applicants cannot manipulate their age, it is unlikely

that observed differences instead arise from particular groups of applicants and employers choosing which threshold applies to them. However, it cannot be ruled out that some recruitment processes were accelerated so as to conclude a hiring while the applicant is still 29 years old. In a comparable study, Kabátek (2015) finds that jobs are more likely to end before birthdays that change the minimum wage and more likely to start after such a birthday, but the reported effects are small.

Figure 4.2 depicts the largest observable differences between the characteristics of knowledge migrants below and above the age of 30. Differences between those aged 29 and those aged 30 are small: the share of those aged 29 with children is 9 percentage points lower than the corresponding share among those aged 30; the share with a spouse or other official partner is 7 percentage points lower. The share of women and the share employed on a temporary contract are 5 percentage points higher among those aged 29. While most differences grow when ages 28 and 31 are also included, they remain limited. In particular, these differences arise in characteristics that appear unrelated to wages but not in sector of employment, region or nationality (see Berkhout et al., 2016).

Figure 4.2. Characteristics of knowledge migrants aged above and below 30 years, 2005-12

Differences in shares of knowledge migrants with a given characteristic, in percentage points



Note: Differences are obtained by subtracting the share of knowledge migrants with a given characteristic aged below 30 from the corresponding share of those aged above 30. The series labelled as bandwidth one year compares those aged 29 to those aged 30; the series labelled as bandwidth two years compares those aged 28-29 to those aged 30-31. Knowledge migrants employed by universities are excluded.

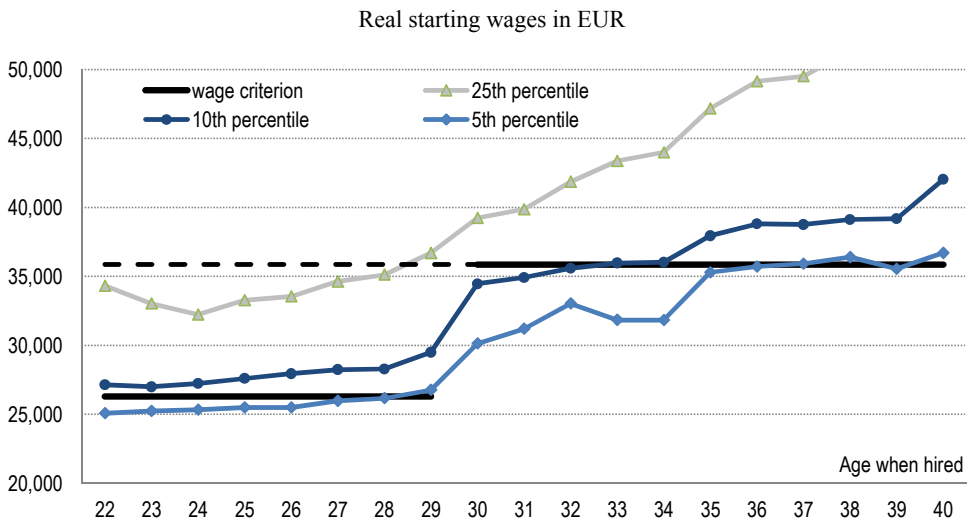
Source: Calculations by SEO Economisch Onderzoek based on micro data of the Centraal Bureau voor de Statistiek (CBS).

The small differences documented by Figure 4.2 suggest that selection effects of the change in threshold are also small: the higher threshold at age 30 and above appears to select knowledge migrants in much the same way as the lower threshold at age below 30, despite the considerable difference between these two thresholds. This can be explained with the wages of knowledge migrants hired at an age below 30: although they only have to meet the lower salary threshold, almost 80% of them nevertheless earn wages that would also meet the higher threshold (see Berkhout et al., 2016). In other words, only 20% of knowledge migrants hired at age 29 would have been directly affected by the salary threshold if they had been hired at age 30.

It therefore appears likely that the higher salary threshold for those hired at an age above 30 only excludes few persons who would have been among the knowledge migrants if the lower threshold had been applied. The group of those hired at 29 with wages below the higher threshold may be regarded as the closest available approximation to the group of persons excluded by the higher threshold. However, their observed characteristics again do not differ much from the characteristics of more highly paid knowledge migrants hired at the same age (see Berkhout et al., 2016), which implies that their exclusion would hardly change the distribution of characteristics. By consequence, knowledge migrants below and above 30 would still have roughly the same characteristics. An alternative interpretation of the evidence is that essentially no-one is excluded by the higher threshold, and those hired at 29 with low wages instead receive sufficiently high wages when hired at 30. Also in this case, knowledge migrants below and above 30 would have the same characteristics. Both interpretations are therefore in line with the findings in Figure 4.2.

In short, the higher threshold from age 30 seems to change little else than ruling out those wages that – for some unknown reason but not explained by sector or region – fall into the lowest fifth of wages paid to knowledge migrants hired at 29. This is depicted in Figure 4.3: while the evolution of the 25th percentile in the wage distribution is not significantly affected by the rise in the salary threshold at age 30, the low wages at the 10th and the 5th percentile exhibit unusually strong increases at this point. (That they still fall short of the higher threshold is likely due to definitional problems in the wage data, which were obtained from tax authorities rather than immigration authorities.)

Figure 4.3. Effect of a higher salary threshold on the wages of knowledge migrants, 2005-12



Note: To make wages comparable, they are deflated to 2012. Knowledge migrants employed by universities are excluded.

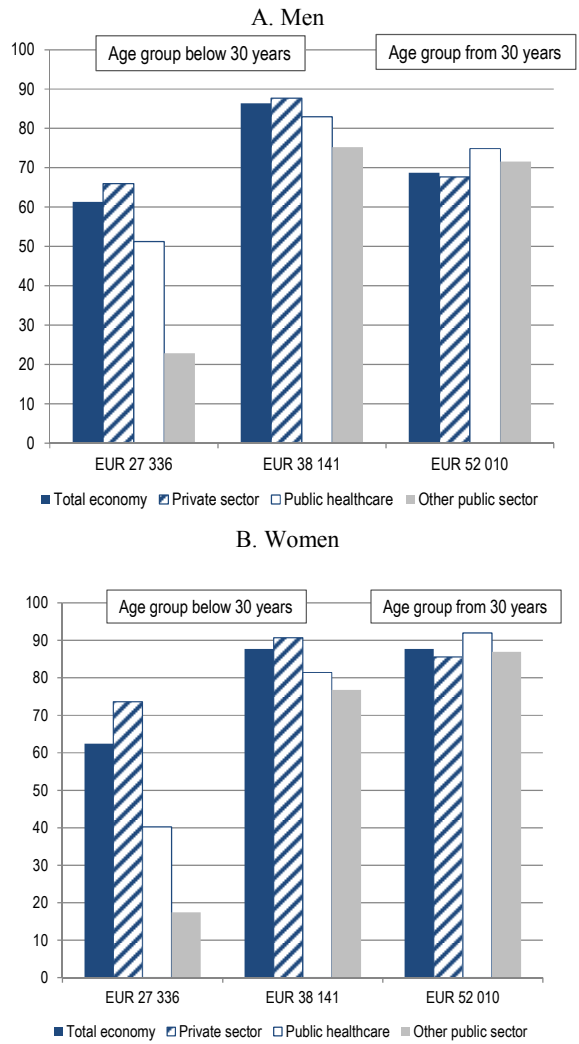
Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

One threshold cannot fit all

The use of different salary thresholds for knowledge migrants below and above 30 years highlights a broader problem: the same nominal threshold can be more or less restrictive for different socio-demographic groups. Essentially, one size does not fit all, as average wages can vary considerably – not only over age groups but also between men and women and over sectors, occupations and regions, for example. Separately for men and women as well as for the private and public sectors, Figure 4.4 depicts the shares of employees in the Netherlands whose full-time salaries are below the threshold that would apply to them if they were highly skilled migrants. The higher the share of employees earning less than the threshold, the more restrictive the threshold is for this group. For example, Panel B shows that female knowledge migrants above 30 years needed a salary in the top 14% of the private-sector wages to pass the salary threshold of EUR 52 010 in 2013, as 86% of the private-sector wages fell below the threshold.

Figure 4.4. Position of salary requirements in the domestic wage distribution, by gender and sector, 2013

Shares of employees in the Netherlands who earn gross yearly wages below the age-dependent threshold



Note: Wages of part-time employees were scaled up to full-time equivalents. Thresholds correspond to gross yearly salaries required for participants in either the job search year for graduates (*Zoekjaar afgestudeerde*) or the job search year for highly educated persons (*Regeling hoogopgeleiden*) who find employment in the Netherlands (EUR 27 336 in 2013), other knowledge migrants aged below 30 years (EUR 38 141) and knowledge migrants aged 30 years and over (EUR 52 010).

Source: Calculations by the Dutch Ministry of Social Affairs and Employment (SZW).

The three thresholds considered in Figure 4.4 correspond to three groups of applicants for knowledge migrant status: international graduates who have been accepted to a year of job search in the Netherlands, knowledge migrants aged below 30 years and those aged from 30 years. The most salient difference between Panel A and Panel B is that the threshold for knowledge migrants from 30 years is considerably more restrictive for women than for men: to pass the threshold, men need to earn a salary in the top 31% of wages earned by men in this age group (across all sectors), while women need to earn a salary in the top 12% of wages earned by women in this age group. With only minor variations, this same result arises in both the private and public sectors as well as in public health care.

These findings highlight an issue that is inherent to selection mechanisms based on salaries: as long as a gender wage gap exists, women will find it harder to meet any given salary threshold. This may be part of the explanation why men accounted for 77% of the first permits issued to knowledge migrants over the years 2005-14. Over the course of this period, men have accounted for a growing share of these first permits, from 73% in 2005 to 76% in 2008 and 78% in 2014. To address this kind of inherent gender bias, one needs to reflect on the use of salary thresholds as such and consider alternative selection criteria.

Figure 4.4 further shows that the thresholds for the age group below 30 are roughly equally restrictive for men and women, since the gender wage gap is smaller for this age group than for the age group from 30. This correlates with the finding of a more balanced gender ratio among knowledge migrants who had been international students before: in 2012-14, men accounted for 53% to 62% of those persons who became knowledge migrants after being an international student, and for 47% to 60% of those who become knowledge migrants after participating in one of the search years.

Also within gender groups, there are important differences between the restrictiveness of the three salary thresholds. Panel A of Figure 4.4 indicates that the salary threshold of EUR 38 141 for male knowledge migrants below 30 is significantly more restrictive than the threshold of EUR 52 010 for those from 30 years: passing the former threshold requires a salary in the top 14% of wages earned by men in this age group (across all sectors), while the latter only requires a salary in the top 31%. Compared to the two higher thresholds, the threshold of EUR 27 336 faced by international graduates who participate in search years is considerably less restrictive: it requires men to have a salary in the top 38% of men's wages in the age group below 30, and requires

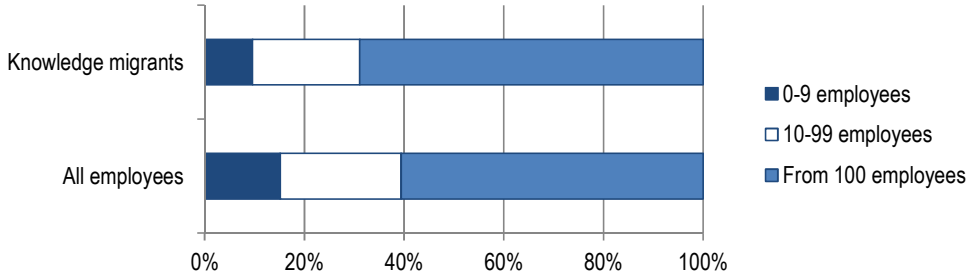
women to have a salary in the top 37% of women's wages in this age group. However, the threshold is somewhat more restrictive for jobs in the private sector than for jobs in public health care or elsewhere in the public sector. By contrast, the other two thresholds are similarly restrictive across the private and public sectors.

The problem that thresholds are not equally restrictive for everyone generally arises when wages differ between any two socio-demographic groups. Substantial wage differences are not only observed between men and women and between age groups, but also between regions, sectors, occupations and firm sizes. Later sections of this chapter examine if labour migrants are matched well to those sectors and regions that have high labour demand. A blanket salary threshold is likely to affect this matching: it favours those sectors and regions where wages are already high, as the threshold is then less restrictive. This facilitates matching migrants to labour demand in as much as high wages are a consequence of high labour demand. By contrast, sectors and regions that exhibit high labour demand but come from a low level of wages might find themselves at a disadvantage.

As to the size of firms, it is often observed that larger firms pay higher wages. By consequence, a given salary threshold can appear less restrictive to large firms than to SMEs when compared to the wages they are paying to existing staff. Figure 4.5 shows that, compared to the average of all employees in the Netherlands, knowledge migrants are over-represented in firms with 100 employees and more, while they are under-represented in smaller firms. However, this results from a number of factors; for example, larger firms are more likely to be involved in business abroad, which might in turn increase the likelihood of recruiting from abroad.

The logic likewise carries over to occupations: the salary threshold will be more easily met for knowledge migrants in well-paid occupations. A number of high-skill occupations, however, are not necessarily well-paid, so that even very highly qualified persons might be excluded by a high salary threshold. Probably for this reason, the knowledge migrant programme exempts researchers and doctors in training from the salary requirement. Alternatively, lower thresholds could be set for them. If it is clear which applicants qualify as researchers or doctors in training, such exceptions do not undermine the simplicity and transparency of the admission procedure. Therefore, exempting certain occupations can be a pragmatic addition to a scheme based on salary thresholds. In the knowledge migrant scheme, this approach could be appropriate for several further occupations.

Figure 4.5. Distribution of knowledge migrants and all employees by firm size, 2012



Note: "All employees" refers to the entirety of persons employed in the Netherlands in 2012.

Source: Calculations by SEO Economisch Onderzoek based on micro data of the Centraal Bureau voor de Statistiek (CBS).

Do the thresholds select highly skilled migrants?

A natural alternative to the selection of highly skilled migrants based on salary thresholds would be a selection based on formal qualifications. Yet this would inevitably involve an assessment of applicants' qualifications, which have mostly been obtained abroad, typically outside the European Union. Not only would such an assessment make the procedure significantly more complicated for immigration authorities and for applicants because certified copies of diplomas have to be provided, their assessment requires substantial knowledge of foreign educational systems, and the assessment leads to delays and additional costs. It would also re-introduce uncertainty about the procedure's outcome: in some cases, foreign qualifications at tertiary level may be found not to correspond to the standards required at tertiary level in the Netherlands. By consequence, employers and applicants may be less prepared to make the necessary investments for international recruitment to happen.

It is informative in this context to compare the knowledge migrant scheme to the EU Blue Card scheme as operated in the Netherlands (see Box 4.1). Both schemes involve salary thresholds, but applicants for the EU Blue Card also have to provide proof of a formal qualification at tertiary level. The additional requirement likely offers a partial explanation why take-up of the EU Blue Card is only a very small fraction of the take-up seen under the knowledge migrant scheme. This implies that the absence of an educational requirement might be an important reason for the popularity of the knowledge migrant programme.

Box 4.1. Why are so few EU Blue Cards issued in the Netherlands?

The EU Blue Card is a residence permit that is available from national authorities across the European Union under comparable conditions. Its introduction reflects efforts to make the European Union as a whole more attractive for highly skilled migrants. Since 2011, it has been possible to apply to the Dutch Immigration and Naturalisation Service (IND) for an EU Blue Card. However, by the end of 2014, only a negligible number of EU Blue Cards had been issued in the Netherlands, according to IND data. By contrast, more than 26 000 residence permits were issued during the same four years under the national scheme for highly skilled migration, the knowledge migrant programme.

This stark difference in take-up may be a result of different requirements involved in the two programmes, although both target highly skilled migrants. To qualify for an EU Blue Card issued for an initial stay in the Netherlands, applicants need to be offered a job there that passes a salary threshold. This salary threshold is set by the Dutch Government, is revised every year and concerns employment in the Netherlands only; other EU member states have set different thresholds. In addition, applicants for the EU Blue Card need to possess a diploma of a post-secondary higher education programme that lasted at least three years. As part of the application process, this diploma is assessed by Nuffic.

Compared to the knowledge migrant programme, the monthly gross salary required for the EU Blue Card (in 2016, EUR 4 968) is substantially higher than the salary required for knowledge migrants aged 30 or above (EUR 4 240) and much higher than the requirement for knowledge migrants below 30 (EUR 3 108). Further, the knowledge migrant programme does not specify any requirement on the applicant's education, so that there is no need either to have any qualifications assessed.

While requirements for applicants differ, the two kinds of residence permits confer roughly similar rights. Under both programmes, successful applicants can take up their job offer without a work permit and without a labour market test. The EU Blue Card is valid for five years, and a knowledge migrant whose job lasts as long likewise receives a residence permit for five years. Under both programmes, migrants can bring close family members, who then enjoy free access to the labour market. Migrants may change employer as long as their new job also meets the requirements, and holders of EU Blue Cards can do so without reapplying for the residence permit. A notable advantage for holders of an EU Blue Card is their right to take up employment also in other EU member states (see EMN, 2013a for details), which can be difficult for holders of other residence permits even if they have legally stayed in the Netherlands for many years (see EMN, 2013b).

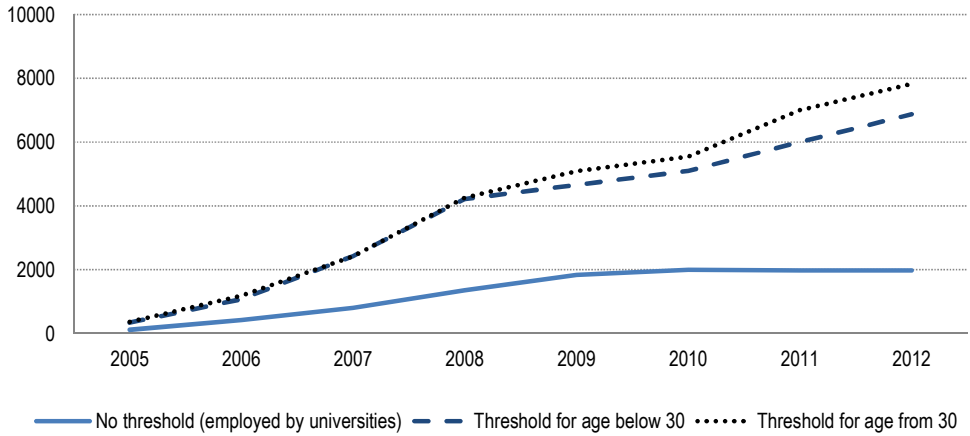
In short, it appears that a residence permit as knowledge migrant confers most of the rights that holders of EU Blue Cards receive. At the same time, requirements are unambiguously more restrictive for the EU Blue Card, so that fewer migrants qualify for an EU Blue Card than for the status of knowledge migrant, and so that everyone who does qualify for the EU Blue Card also qualifies as knowledge migrant. In practice, the knowledge migrant programme is therefore likely regarded as a much easier option to obtain about the same status as through the EU Blue Card. Even if some migrants who qualify for both prefer the EU Blue Card, their employers might prefer the knowledge migrant programme due to the simpler, and therefore faster, procedure.

Beyond considerations of take-up and procedural efficiency, the question remains whether a programme for highly skilled migration that does not assess qualifications nevertheless selects highly skilled migrants. Possibly as a by-product of the reliance on salary thresholds in the knowledge migrant scheme, information on the educational attainment of knowledge migrants is unfortunately not available. Therefore, one cannot directly verify that knowledge migrants are highly educated, or at least more highly educated on average than participants in other labour migration programmes.

In itself, an increasing number of participants in a programme for highly skilled migrants, alongside decreasing numbers in other labour migration programmes, cannot constitute sufficient evidence of a shift in the labour migration system towards highly skilled migration if migrants' actual education is unknown. It is entirely possible that many applicants would qualify under several programmes and that they begin switching to a programme for highly skilled migrants when the programme is introduced or when it is promoted by employers and immigration authorities. As noted in Chapter 2, in some respects the composition of migrants is surprisingly similar between the programmes for skilled migrants and the programmes for other labour migrants, which could be an indication that the pools of applicants eligible under these programmes overlap substantially. There is thus the possibility that also the skill composition of the overall labour migrant intake has changed little, despite the introduction and the growth of the knowledge migrant programme shown in Figure 4.6.

To assess this possibility without direct evidence on the educational attainment of knowledge migrants, one can try and identify trends in stock data that include information on education. While knowledge migrants cannot be identified in data from the EU Labour Force Survey, one can identify employed migrants from outside EU15 countries. Figure 4.7 further focuses on the recent migrants among this group, as they are more likely to reflect changes in the composition of the migration flow. Figure 4.7 provides tentative evidence that the share of highly educated migrants in the intake from outside the EU15 countries has over time caught up with the corresponding share among labour migrants who benefit from free mobility. This development may be linked to the growing role of the knowledge migrant scheme.

Figure 4.6. Stock of knowledge migrants by salary threshold passed, 2005-12

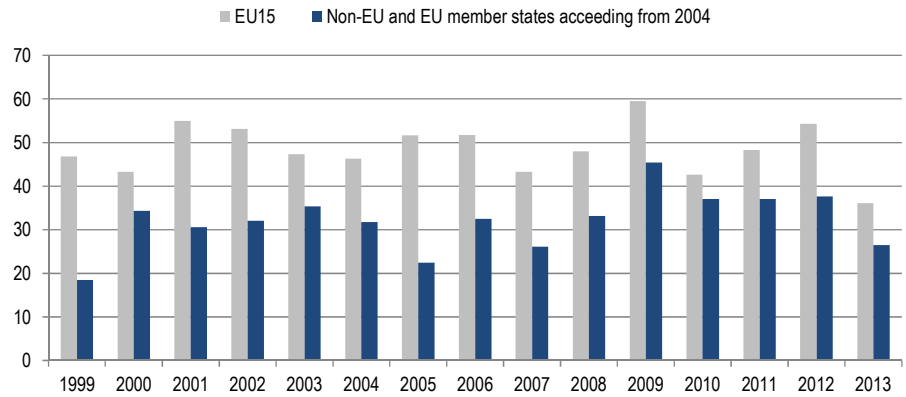


Note: Only migrants are included whose first residence permit is a knowledge migrant permit.

Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Figure 4.7. Share of highly educated among employed recent migrants, by citizenship, 1999-2013

In percent



Note: To exclude students, only persons aged 25 and above are considered. Recent migrants are defined as foreign-born persons who arrived in their country of residence within the previous five years.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

It is a different question whether the apparent rise over time in the share of highly skilled migrants meets the expectations that may have been associated with the introduction of the knowledge migrant scheme. Figure 4.8 puts the development in the Netherlands in international comparison and suggests that the share of highly skilled migrants among the employed recent migrants from outside the EU15 countries has remained behind that found in European countries around the Netherlands, with the exception of Belgium and Austria. Several European countries have seen this share increase more strongly than in the Netherlands; especially large increases are observed for Luxembourg and the United Kingdom. By this measure, the introduction of the knowledge migrant scheme thus appears to have left the position of the Netherlands in the "war for talents" by and large unchanged, at least relative to European countries in its vicinity. Chapter 5 will use a range of indicators to discuss in greater detail how attractive the Netherlands is to highly skilled labour migrants.

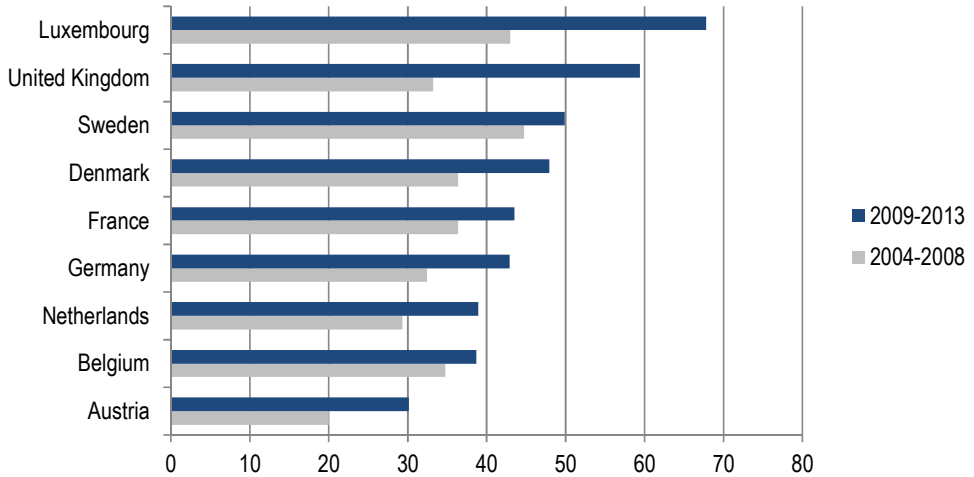
At the same time, a strong focus on highly skilled migrants might be too narrow. As shown in Chapter 1, there may be high future demand also for migrants with a medium level of skills, including in important sectors (e.g. horticulture) and in technical occupations. In many cases, salaries for migrants with a medium level of skills will be too low to meet the thresholds. In other instances, however, high demand may translate into sufficiently highly salaries, so that migrants with a medium level of skills can be recruited through the knowledge migrant scheme. The absence of an explicit requirement on educational attainment thus makes the scheme flexible enough to accommodate some of these cases.

Finally, there is a risk that highly skilled migrants are falsely regarded as substitutes of migrants with medium skill levels, as if increasing numbers of highly skilled migrants implied phasing out the available channels for migrants with medium skill levels. As shown in Table 3.A1.1, the number of permits issued under the Labour Migrant Permit scheme has steadily decreased as the number of knowledge migrants grew. In fact, high and medium skills might be complements, so that the positive impact expected from highly skilled migrants is undermined by persistent shortages at medium skill levels. After all, even jobs at medium skill levels typically require specialised training over several years, and it would take accordingly long to respond to shortages at medium skill levels by relying exclusively on domestic sources of labour. Maintaining the incentives of labour market entrants

and of unemployed to (re-)train for highly demanded jobs at medium skill levels may therefore be balanced with efforts to alleviate bottlenecks quickly through migration.

Figure 4.8. Average shares of highly educated among non-EU/EFTA nationals who are recent migrants in employment, selected countries, 2004-08 and 2009-13

In percent



Note: To exclude students, only persons aged 25 and above are considered. Recent migrants are defined as foreign-born persons who arrived in their country of residence within the previous five years.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

In conclusion, the available evidence suggests that the knowledge migrant scheme functions well, not least due to the use of salary thresholds that make the scheme practical for migrants and employers alike. Although the salary thresholds are used in lieu of a requirement on migrants' educational attainment, the knowledge migrant scheme has likely contributed to a greater frequency of highly skilled individuals in the labour migration intake. While there is no evidence that the thresholds strongly constrain any particular group of knowledge migrants, one has to keep in mind that the same threshold can represent quite different requirements across men and women, across sectors and across large and small firms. If and when necessary, exceptions from the salary requirement can make the knowledge migrant scheme more flexible while maintaining the advantages of the salary thresholds.

Strategic development of sectors

In an effort to maintain and strengthen competitive advantages of the Dutch economy, the Dutch cabinet in 2011 identified nine economic sectors as so-called "top sectors": agriculture & food, chemicals, creative industries, energy, high technology, horticulture, life sciences & health, logistics and water. The development of the top sectors and in particular their capacity to innovate has since become a central topic in Dutch industrial policy (see Box 1.1 in OECD, 2014d). Chapter 1 of this review has discussed the role that labour migration could play for the top sectors' future performance. This section examines in detail the contribution that migration, in particular managed labour migration from outside EU/EFTA countries, has made to the development of the top sectors in recent years.

The top sectors represent a substantial part of the Dutch economy. According to CBS (2015), these nine sectors together generated one-quarter of the entire value added in the Netherlands in 2014 and one-fifth of the employed population worked in the top sectors. By both value added and employment in 2014, high technology and logistics were the largest the top sectors, while water and life sciences & health were the smallest. The energy sector generated relatively high added value but accounted for relatively little employment. Labour productivity levels in chemicals, food and especially logistics are among the highest in the European Union, while energy, food and chemicals exhibit a very strong export performance (see OECD, 2014d).

Some top sectors also display high levels of labour demand. In recent years, most of the top sectors have opened between 10 and 20 vacancies per 1 000 jobs in the sector (see Figure 1.8 in Chapter 1). High vacancy rates were observed in high technology (24 to 32), life sciences & health (18 to 26) and the water sector (18 to 25). However, vacancy rates in energy stood out, exceeding 60 in every year from 2010 to 2012 and therefore higher than any vacancy rate shown in Figure 1.3 in Chapter 1. Across all top sectors, vacancy rates were slightly lower in 2012 than in 2011, but not necessarily lower than in 2010.

For the development of the top sectors, labour migration policy can be crucial. Not only does labour migration allow rapid adjustment to bottlenecks in the top sectors and thereby to continue the expansion of these sectors, as has been discussed above. The high export orientation of the top sectors also implies substantial cross-border business practices in these sectors, sometimes including multi-national

structures. In this context, individuals with experience in export markets are recruited from abroad, recruits of company units abroad are trained in the Netherlands and transfers across borders become a part of developing the company's human resources. Similarly, research and development often requires an international setting because experts are scarce and may have to be recruited from abroad, because the transfer of technology and know-how might require temporary employment of staff who deliver it, and because research activities often benefit greatly from international exchange.

Such cross-border business practices appear to be very much a reality in the top sectors. Based on CBS data for 2010, van der Linden et al. (2013) point out that more than 40% of technologically innovative businesses in chemicals and also in life sciences & health co-operate with business partners abroad. Among technologically innovative business in agriculture & food, water, energy high technology, this share stands at or above 20%. The average across all top sectors reached 19%. Van der Linden et al. (2013) emphasise that two-thirds of the business partners abroad are located in non-EU countries, so that any staff moving from these business partners to the partner in the Netherlands would normally be subject to Dutch labour migration policy, in contrast to such moves from within the European Union. Therefore, the Dutch policy on labour migration can greatly affect international recruitment and exchange in the top sectors, for better or worse: depending on how the policy is designed, it can play a supportive or restrictive role.

Top sector employment of highly skilled non-EU migrants has declined

To determine the role of migrants in the development of the top sectors over recent years, Figure 4.9 depicts the percentage change in employment observed in each sector among native-born persons, foreign-born persons from EU countries and foreign-born persons from non-EU countries. The available data do not allow applying the same detailed delimitation of the top sectors as is used by the CBS, and this may affect the results shown in Figure 4.9. As a consequence of the cruder sector delimitation, research & development activities are not allocated to the sector in question but appear together as additional sector, while the two top sectors agriculture & food and horticulture are lumped together (Table 4.A1.1 in the annex gives details on sector delimitation). Applying this delimitation to the EU LFS data, one finds that non-EU migrants accounted for 4% to 10% of employment in the

top sectors in 2014 while EU migrants accounted for up to 8% (see Figure 1.10 in Chapter 1).

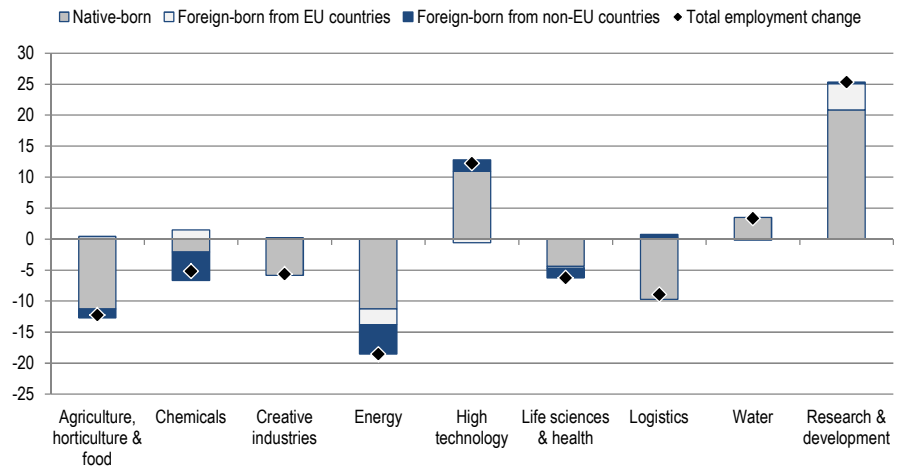
The results in Panel A of Figure 4.9 indicate strong employment growth between 2010 and 2014 only in research and development (plus 25%) and in high technology (plus 12%). Employment declined significantly over the same period in energy (minus 19%), agriculture, horticulture and food (minus 12%) and logistics (minus 9%). While migrants from EU countries contributed largely to employment growth in research and development, non-EU migrants contributed more than EU migrants to employment growth in high technology. Falling employment of migrants from non-EU countries explains large parts of the employment decline in energy and chemicals. In the latter case, migrants from non-EU countries even appear to drive the change in the sector's employment. In all other sectors, however, it is the employment of native-born persons that drives employment change.

The picture that emerges when only the employment of highly skilled persons is considered, as shown in Panel B of Figure 4.9, is quite different. In five out of the nine sectors shown, employment of highly skilled persons increased between 2010 and 2014 although employment in these sectors fell overall, as shown in Panel A. Moreover, the rises observed for employment of highly skilled persons in research & development and in high technology are larger than the rises in these sectors' overall employment. In a sixth sector (water), employment of highly skilled persons fell although overall employment rose.

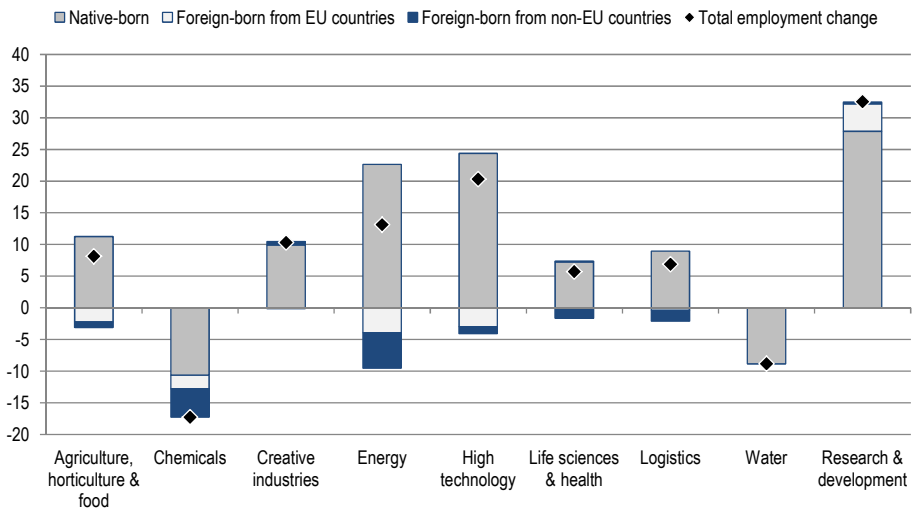
Changes in the employment of highly skilled native-born persons also appear to drive the changes in employment of highly skilled persons. Significantly growing employment of highly skilled non-EU migrants has been observed in the water sector, while their employment has declined substantially in energy and chemicals. The employment of highly skilled EU migrants has grown notably in research & development but fallen in energy and high technology. In chemicals and energy, the employment of highly skilled non-EU migrants again changed more strongly than employment of highly skilled EU migrants.

Figure 4.9. Change in employment in so-called top sectors, by origin, 2010-14

A. Individuals aged 15-64, in percent of 2010 level



B. Individuals (ages15-64) with a tertiary education, in percent of 2010 level



Note: See Table 4.A1.1 in the annex for sector definitions. As sector-specific research & development could not be subsumed under the respective top sector, a sector "research & development" is added here. Numbers of foreign-born employees in the water sector were too low to be statistically reliable, except for foreign-born from non-EU countries in Panel A.

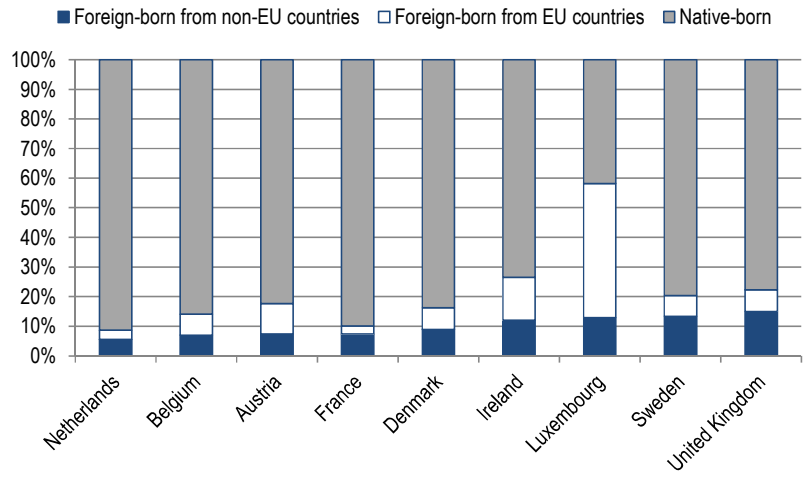
Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Two over-arching trends can be identified for non-EU migrants. Firstly, changes in their employment appear generally larger in the group of highly skilled employees. Secondly, there are few sectors with increasing employment of non-EU migrants, be it highly skilled or all non-EU migrants. In other words, employment of highly skilled non-EU migrants – that is, the kind of migrant targeted by the knowledge migrant scheme – has fallen in the top sectors between 2010 and 2014. This trend arose despite growing employment of highly-skilled in all top sectors but chemicals and water, and despite growth of 6% over 2010-14 in the valued added generated by the top sectors, according to CBS (2015). On this background, one would expect increasing employment of highly skilled non-EU migrants as a sign that labour migration policy is supporting the top sectors.

The decline in the employment of highly skilled non-EU migrants in the top sectors appears more significant on the background that comparatively few such migrants work in the top sectors in the first place. As depicted in Figure 4.10, non-EU migrants accounted for less than 6% of highly skilled employees in the Dutch top sectors in 2014. This percentage was below the corresponding share observed for the same sectors in EU countries in the vicinity of the Netherlands. The shares in Ireland, Luxembourg, Sweden and the United Kingdom were more than twice as high as the share in the Netherlands. Similarly, all countries shown except France also exhibit a higher share of EU migrants among highly skilled employees in the top sectors than is observed in the Netherlands. A feature that the Netherlands have in common with Sweden, the United Kingdom and France is that the share of non-EU migrants among highly skilled employees in the top sectors exceeds that of EU migrants.

Figure 4.10. Highly skilled foreign-born persons employed in the so-called top sectors, by country, 2014

Employed individuals (ages 15-64) with tertiary education



Note: Germany is not included because details on country of birth are missing for Germany in this data set. See Table 4.A1.1 in the annex for sector definitions. Countries are ordered by the figures for foreign-born from non-EU countries.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

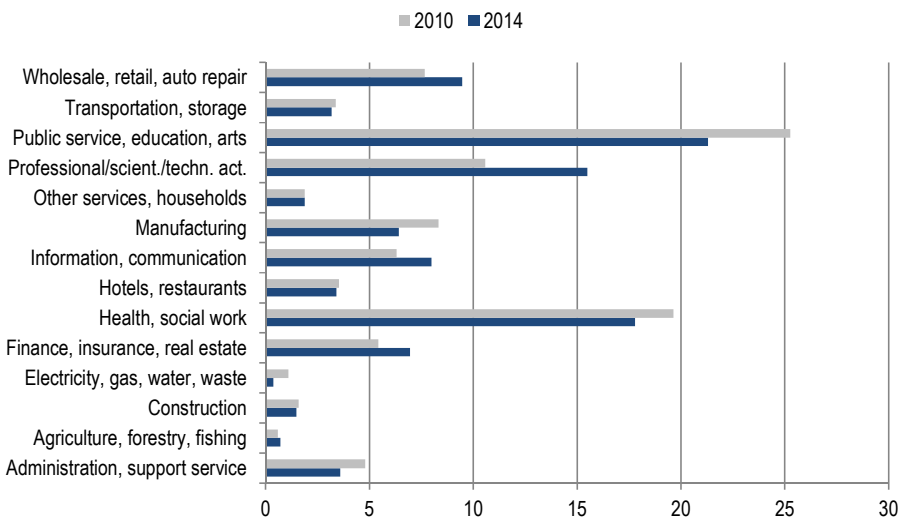
At the same time as employment of non-EU migrants has tended to fall in top sectors, a substantial number of labour migrants from outside the European Union have come to the Netherlands as knowledge migrants (documented in Figure 4.6). It is possible that most of them did take up work in the top sectors and that employment levels still declined because more non-EU migrants stopped working in these sectors during this period. Alternatively, many if not most of the labour migrants from non-EU countries might have taken up work outside the top sectors.

Figure 4.11 therefore takes a broader look at the distribution of non-EU migrants over sectors. It shows that public service, education and arts accounted for more than 20% of employed highly skilled non-EU migrants in both 2010 and 2014, which makes this their main sector of employment. This sector includes non-EU migrants who work in international organisations seated in the Netherlands. Accounting for 18% in 2014, the second most important sector for the employment of highly skilled non-EU migrants is health and social work, which reflects

a high yet falling number of non-EU migrants in the health sector. While health is a top sector, public service, education and arts is not. Employment in both sectors has fallen, but it has risen considerably in the third most important sector – professional, scientific and technical activities – which in 2014 accounted for 16% of the employed highly skilled non-EU migrants. This sector covers parts of top sectors and notably research & development. Figure 4.9 only indicated strong employment growth in this top sector among native-born persons and EU migrants; this implies that many non-EU migrants have taken up other work within professional, scientific and technical activities.

Figure 4.11. Distribution of highly skilled non-EU migrants over sectors, 2010 and 2014

Employed individuals born in non-EU countries (ages 15-64) with tertiary education, in percent



Note: Individuals employed in extraterritorial organisations are included under "public service, education, arts". Information on the sector of employment was missing for 39% and 37% of the non-EU migrants in question in 2010 and 2014, respectively.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

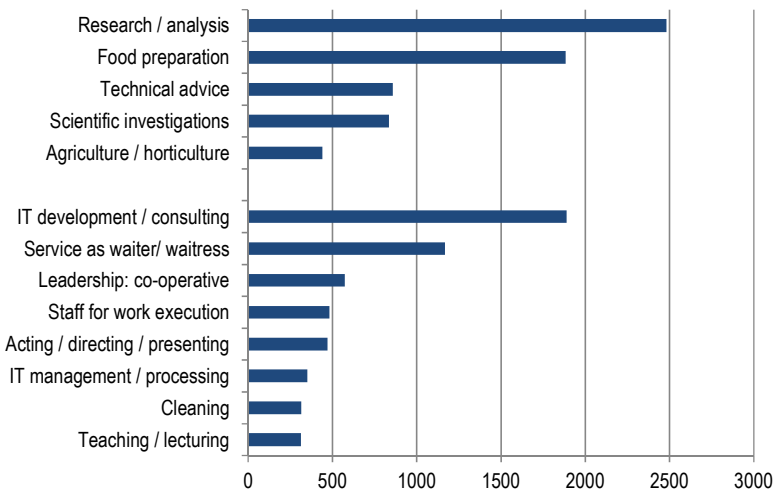
The employment of highly skilled non-EU migrants has also risen, however, in broad sectors that overlap rather little with the top sectors: in wholesale, retail and automotive repair (from below 8% in 2010 to 9% in 2014); in information and communication (from 6% to 8%); and in finance, insurance and real estate (from 5% to 7%). Together, the results

displayed in Figure 4.9 and Figure 4.11 suggest that recent inflows of highly skilled non-EU migrants to the Netherlands might have largely been absorbed by sectors that do not count towards the top sectors.

Top sectors account for a large share of work permits but few knowledge migrants

Whether non-EU/EFTA labour migrants take up work outside the top sectors can concretely be examined for some specific migration programmes, notwithstanding varying sector definitions that reduce the comparability of results derived from different data sets. Figure 4.12 shows the main sectors for which work permits were issued in 2012 and 2013. Work permits issued to non-EU/EFTA citizens under the Labour Migrant Permit scheme and for temporary work likely make up most of the figures shown here. The first set of sectors can be regarded as an approximation to the top sectors, and these sectors do account for large numbers of work permits. Almost 2 500 work permits were issued for research and development alone. Among sectors that likely overlap little with the top sectors, large numbers of work permits were issued for IT development/consulting and for waiters/waitresses.

Figure 4.12. Issued work permits by sector, 2012 and 2013



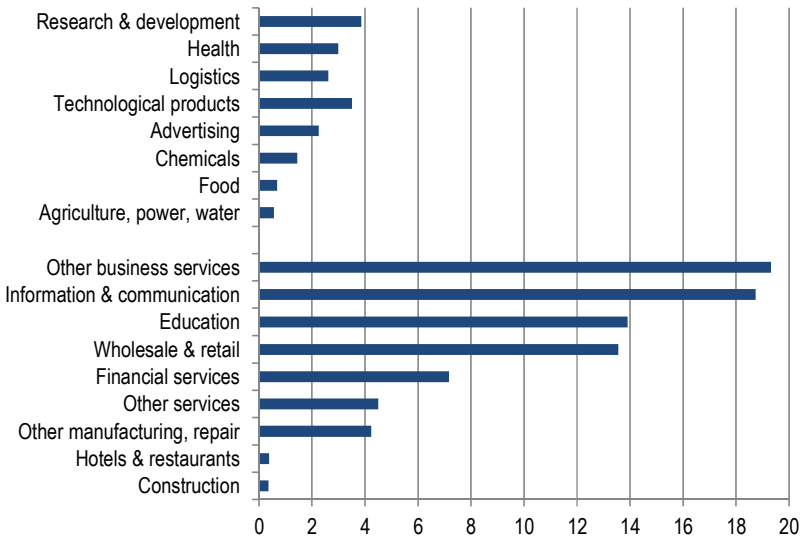
Note: Only sectors that were among the top 15 sectors in both 2012 and 2013 are shown, ordered by whether or not they correspond to top sectors and by the total work permits issued in both years.

Source: UWV Werkbedrijf as quoted in Klaver et al. (2015), "The Dutch SOPEMI Report 2015. Migration Statistics and Migration Policies in the Netherlands" (Table 5.6).

In data on knowledge migrants' sector of employment, sectors roughly corresponding to the top sectors can be identified, given in Figure 4.13 as the first set of sectors (advertising here approximates creative industries). Each of these sectors has attracted less than 4% of the knowledge migrants who came to the Netherlands between 2008 and 2012. In total, these sectors account for only 18% (about 12 000 persons) of all knowledge migrants arriving in these years. In turn, more than four-fifths of all knowledge migrants went to work in other sectors, given in Figure 4.13 as the second set of sectors: knowledge migrants notably took up work in other business services (about 13 000 persons), information & communication (12 000; especially computer consultancy), education (9 000) and wholesale & retail (9 000).

Figure 4.13. Distribution of knowledge migrants over sectors, 2008-12

In percent



Note: Only migrants are included whose first residence permit is a knowledge migrant permit. "Technological products" comprises of computer products, electrical equipment and machinery. "Other manufacturing, retail" refers to manufacturing without food, chemicals, computer products, electrical equipment, and machinery, but including retail, installation and repair. "Other business services" refers to business services without advertising and research & development. "Other services" includes employment agencies.

Source: Calculations by SEO Economisch Onderzoek based on micro data of the Centraal Bureau voor de Statistiek (CBS).

One can therefore conclude that the results generated by the Dutch labour migration policy do not always mirror the emphasis placed on top sectors in Dutch economic policy. The development of the top sectors can benefit from better aligning these two branches of policy making. In practice, a range of measures can be envisaged to ensure that top sectors are more strongly represented in the recruitment of labour migrants from outside the European Union. It is possible that employers in certain top sectors face greater difficulties with the recruitment of knowledge migrants. As average wages can differ greatly between sectors, the salary threshold can be much more restrictive for some sectors than for others (as shown in the previous section). Where a top sector is disadvantaged, exceptions for knowledge migrants going to this sector may be considered. For example, the salary requirement could in these cases be replaced by a requirement on educational attainment. To facilitate filling vacancies in top sectors also at medium levels of skill, migrants with relevant secondary qualifications might also be admitted more readily if they hold a job offer from a top sector employer.

Next, most employers in the top sectors are small or medium-sized enterprises (SMEs): according to CBS data, they make up between 76% (energy) and 99% (agriculture & food, high technology). By consequence, it has to be ensured that regulations on labour migration policy for non-EU migrants do not make it impractical for SMEs to participate. As discussed in Chapter 3, the system of recognised sponsorship might discourage SMEs from using the knowledge migrant scheme. Finally, policies on international students might favour those who, by their choice of subject, will be well-placed to work in a top sector after graduation.

Support for regional development

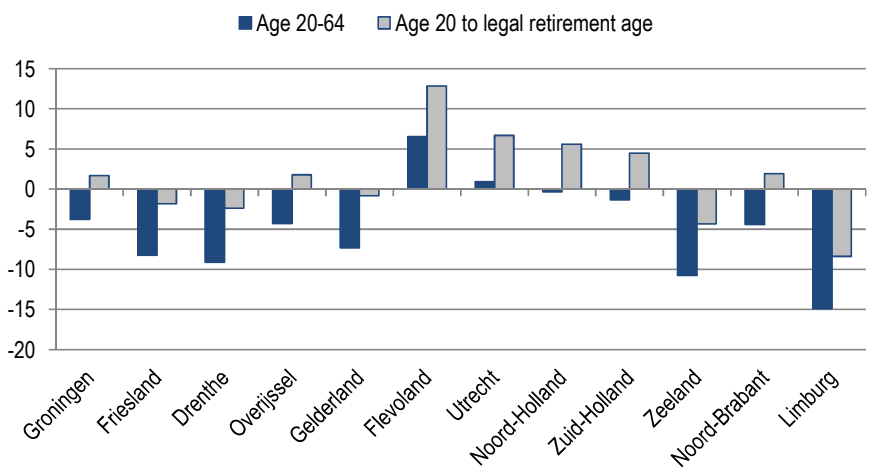
As with sectors, there may be a case to align migration policy with the needs of regions. Reflecting a specific regional situation in labour migration policy might be a response to declining labour supply in rural areas of the Netherlands. It might also seek to alleviate difficulties of top sector employers to recruit highly skilled migrants for positions outside the major cities. This section therefore examines the distribution of labour migrants over regions. Particular attention is given to highly skilled migrants and regional employers in the top sectors.

For the coming years, the population of prime working age (20-64 years) is expected to fall in the periphery of the Netherlands while

remaining stable or even increasing in the centre: Figure 4.14 depicts the expected changes derived from an official forecast. The population aged 20-64 years is forecast to fall throughout the more rural provinces of the Netherlands, by up to 15%. By contrast, it is forecast to rise significantly in Flevoland (albeit from a low level) and to remain stable in the provinces Utrecht, Noord-Holland and Zuid-Holland. Parts of the latter four provinces together form the economic centre of the Netherlands known as Randstad, which includes the urban areas of Amsterdam, Rotterdam, the Hague and Utrecht. The forecast depicted in Figure 4.14 thus suggests that demographic changes will reinforce the divide between centre and periphery in the Netherlands. The same conclusion holds if the forecast accounts for an increasing legal retirement age: the population aged above 20 and below the retirement age is then still expected to fall slightly in the periphery but to increase significantly in the centre.

Figure 4.14. Forecast change in population of prime working age, by province, 2015-30

In percent



Note: The legal retirement age is set to rise from 65 years in 2012 to 67 years in 2021, which is reflected in the forecast for the group aged between 20 and the legal retirement age; the forecast assumes further rises in the legal retirement age after 2021, as a function of life expectancy. Provinces are ordered according to their NUTS-2 code.

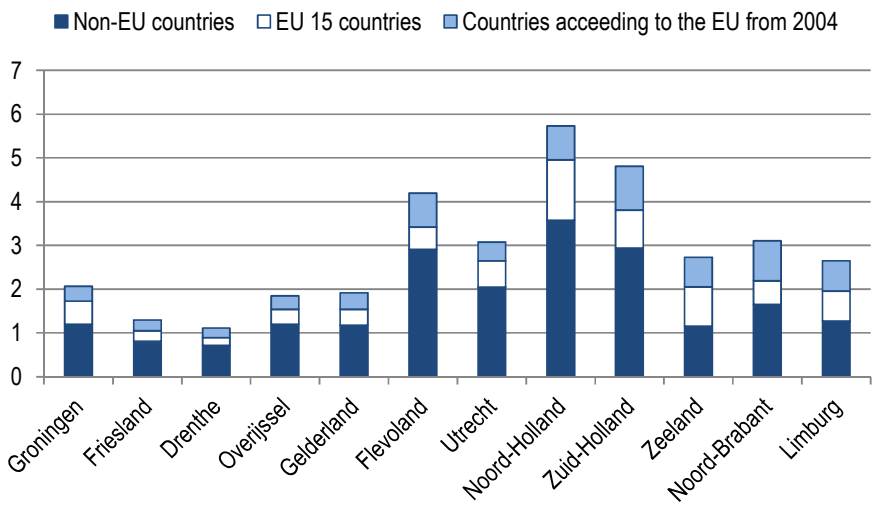
Source: OECD Secretariat calculations based on the regional population and household forecast of 2013 to 2040 of the Planbureau voor de Leefomgeving (PBL) and the Centraal Bureau voor de Statistiek (CBS).

Employed migrants concentrate in urban areas

Thus far, employed migrants are found considerably more frequently in the centre than in the periphery of the Netherlands. Figure 4.15 shows the share of employment that migrants account for in each province. Non-EU migrants account for between 2.0% and 3.6% of employment in the four Randstad provinces, but only for between 0.7% and 1.7% in the other provinces. In all of the latter provinces, their shares thus remain below the average share across the Netherlands (2.1%). According to the same CBS data, some of the largest groups of employed non-EU migrants in 2012 were 6 200 employees in Zuid-Holland born in Turkey, 4 500 employees in Noord-Holland born in Morocco and 4 300 employees in Zuid-Holland born in Suriname. Among peripheral regions, Noord-Brabant counted 2 300 employees born in Turkey and 1 400 employees born in Morocco; another 1 400 employees born in Turkey resided in Gelderland.

Figure 4.15. Share of migrants in regional employment, by origin and province, 2012

Employed migrants aged 15-65 as share of all employed persons aged 15-65, in percent



Note: The region refers to region of residence, not region of employment. Information on region of residence is missing for less than 100 employed migrants. Provinces are ordered according to their NUTS-2 code.

Source: OECD Secretariat calculations based on data from the Centraal Bureau voor de Statistiek (CBS).

Migrants from EU countries are not as strongly clustered in the Randstad provinces as non-EU migrants. While migrants from countries that acceded to the European Union from 2004 represented on average 0.7% of employment in 2012, they accounted for a significantly larger share not only in Zuid-Holland but also in Noord-Brabant (see Figure 4.15), while their share in Utrecht remained much lower. The largest groups were employees born in Poland, reaching 10 900 in Zuid-Holland and 7 900 in Noord-Brabant. But considerable numbers of Polish-born employees could also be found in Gelderland and Limburg (around 2 300 each). Together 1 900 employees born in Hungary resided in Noord- and Zuid-Holland. Migrants from countries that were EU members before 2004 likewise represented 0.7% of employment in 2012, with shares ranging from 0.2% in Friesland and Drenthe to 0.9% in Zeeland and 1.4% in Noord-Holland. About 3 800 employees in Noord-Holland and 2 600 in Zuid-Holland were born in the United Kingdom, followed by employees born in Germany (3 400 in Noord-Holland, 2 800 in Zuid-Holland but also 1 400 in Limburg) and employees born in Italy (together 3 100 in Noord- and Zuid-Holland).

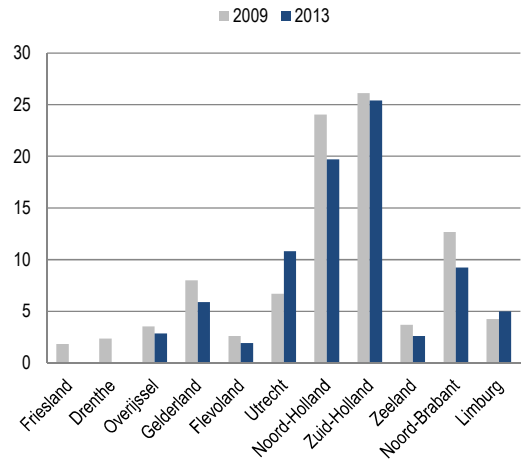
Highly skilled and recent migrants work primarily in Noord- and Zuid-Holland

The tendency for migrants to cluster especially in Noord- and Zuid-Holland – the two provinces that respectively include Amsterdam and Rotterdam – is still more pronounced among employed migrants with a tertiary education, as shown in Figure 4.16. In 2013, just over 50 000 highly educated migrants born in countries outside EU and EFTA worked in Zuid-Holland, as well as another 25 000 migrants born in EU/EFTA countries. About 43 000 highly educated migrants from outside EU and EFTA as well as 20 000 from EU/EFTA countries worked in Noord-Holland. The next highest numbers were found in Utrecht, where 17 000 highly educated migrants from outside EU and EFTA were employed, alongside 11 000 highly educated EU/EFTA migrants. Figure 4.16 indicates that slight falls in the number of highly educated migrants from outside EU and EFTA, occurring across the provinces, have left the dominance of Noord- and Zuid-Holland unaffected. However, their dominance has weakened slightly among highly educated EU/EFTA migrants, as a relatively large fall was observed in Noord-Holland over these years, while levels rose substantially in Utrecht and Limburg.

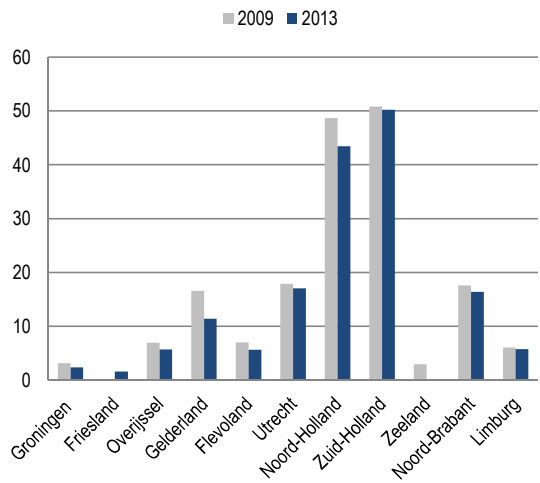
Figure 4.16. Highly skilled migrants in employment, by origin and province, 2009 and 2013

Employed migrants aged 15-64 with tertiary education, in thousands

A. Migrants born in EU/EFTA countries



B. Migrants born in other countries



Note: Figures for EU/EFTA migrants residing in Groningen, Friesland (2013) and Drenthe (2013) are too low to be statistically reliable; the same applies to figures for non-EU/EFTA migrants residing in Friesland (2009) and Zeeland (2013). Provinces are ordered according to their NUTS-2 code.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Changes in employment levels between 2009 and 2013 do not necessarily reflect inflows and outflows of labour migrants, as they could also result from migrants' changing labour force participation, for example. Therefore, changes in levels of recent migrants – those who arrived within the preceding five years – might be a better indicator of developments in flows: inflows affect the stock of recent migrants more strongly than the stock of all migrants, and in so far as recent migrants are more mobile than settled migrants, they also account for much of the outflows.

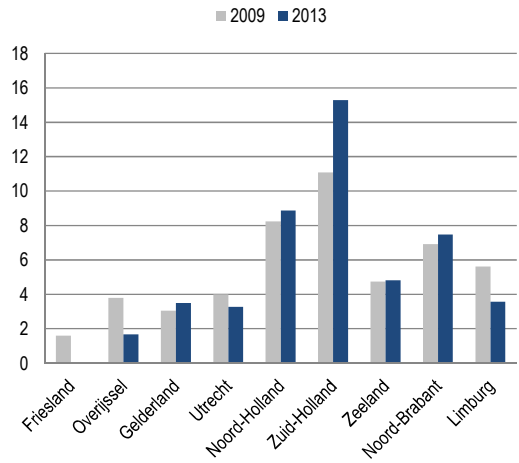
Figure 4.17 depicts the regional levels of recent migrants in 2009 and 2013, separately for those born in EU/EFTA countries and those born in other countries. These levels make it likely that many labour migrants who arrived in the Netherlands between 2009 and 2013 took up residence in Zuid-Holland. In this province, the number of recent migrants from outside EU and EFTA increased from 28 000 in 2009 to 35 000 in 2013, and that of EU/EFTA migrants increased from 11 000 to 15 000. The number of recent migrants from outside EU and EFTA also increased substantially in Limburg (from 3 400 to 8 600). In Overijssel, the number of recent migrants from non-EU/EFTA countries rose from 3 900 to 5 800 while the number of recent EU/EFTA migrants fell from 3 800 to 1 700. The number of recent migrants from either group of origin countries fell in Utrecht and Friesland.

For one particular group of labour migrants, the group of knowledge migrants, the available data allow determining in which province those who arrived between 2005 and 2012 took up residence. This direct evidence confirms the impression that newly arriving labour migrants have primarily come to Noord- and Zuid-Holland (see Figure 4.18): these two provinces alone account for 52 000 knowledge migrants, i.e. 70% of all knowledge migrants arriving between 2005 and 2012. With the exception of Noord-Brabant where 8 400 knowledge migrants took up residence over this period, all other provinces received at most 4 000 knowledge migrants. The provinces Friesland, Drenthe and Zeeland each received less than 500 knowledge migrants. Trends observed during 2010-12 do not point to a shift of knowledge migrants away from the centre to the periphery: the level of knowledge migrants grew at high rates across provinces during these years, and particularly high growth rates in some more peripheral provinces can be explained by their low levels of knowledge migrants.

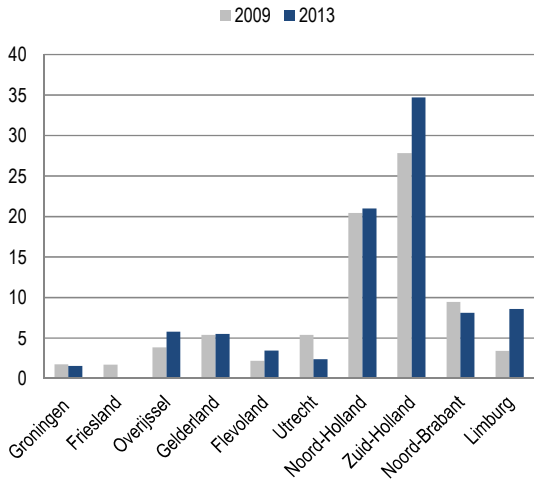
Figure 4.17. Recent migrants by origin and province, 2009 and 2013

Migrants aged 15-64 who arrived within the five preceding years, in thousands

A. Migrants born in EU/EFTA countries



B. Migrants born in other countries

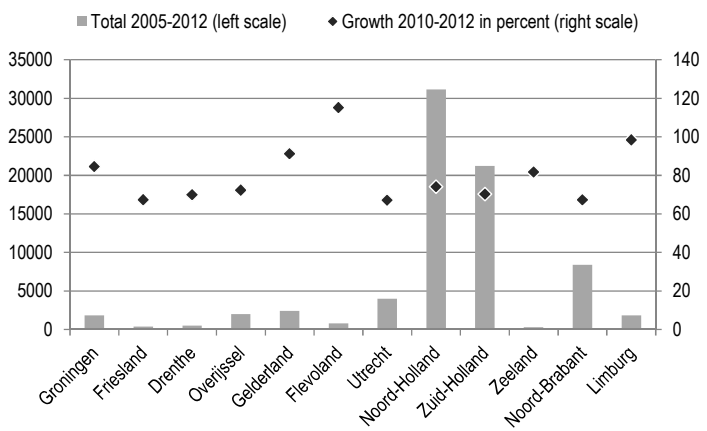


Note: Figures for EU/EFTA migrants residing in Groningen, Friesland (2013), Drenthe and Flevoland are too low to be statistically reliable; the same applies to figures for non-EU/EFTA migrants residing in Friesland (2013), Drenthe and Zeeland. Provinces are ordered according to their NUTS-2 code.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

When compared to Noord- and Zuid-Holland, it thus appears that most of the more peripheral provinces have persistent difficulties attracting knowledge migrants. One reason for the strong concentration of knowledge migrants around Amsterdam and Rotterdam may be that knowledge migrants prefer to live in urban areas. This preference may be stronger than among native-born employees because urban areas are more likely to offer services and social activities for expatriates, possibly even a community of the knowledge migrant's compatriots. As another likely reason, the number and size of firms that would recruit knowledge migrants may be larger in urban areas than in rural ones. Finally, in the light of this chapter's discussion of salary thresholds, it is worth noting that the same salary thresholds can be considerably more restrictive in rural areas where the wage level is lower, not least reflecting lower costs of living. For rural employers in certain sectors, the disadvantages might be compounded: not only is the salary threshold more restrictive in their case because wages in their sector are comparatively low, but also because wages in their region are. In certain cases, efforts to address regional shortages of skilled labour can therefore merit exemptions from the salary threshold, e.g. by way of a region-specific list of shortage occupations. Other labour migration programmes could similarly confer an advantage to applicants who are headed for rural areas. In New Zealand, for example, the points system awards some additional points to applicants who would reside outside of Auckland.

Figure 4.18. Knowledge migrants by region of residence, 2005-12



Note: Provinces are ordered according to their NUTS-2 code.

Source: Calculations by SEO Economisch Onderzoek based on micro data of the Centraal Bureau voor de Statistiek (CBS).

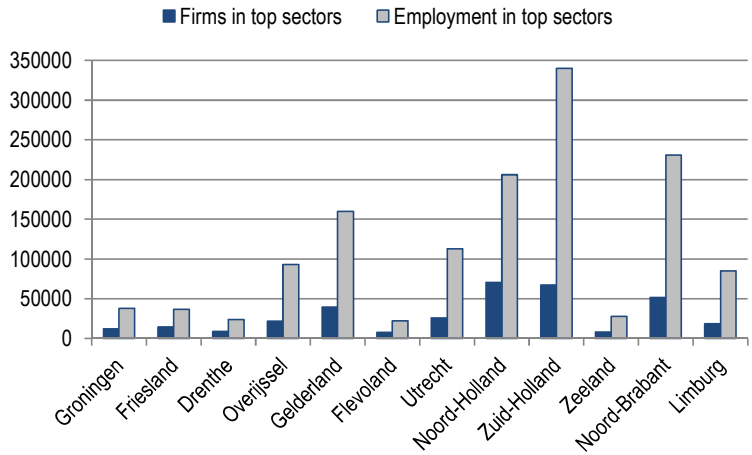
Finally, it is worth noting that some more peripheral provinces attract high numbers of international students. According to figures from DUO, the Education Executive Agency, on students of foreign nationality (as quoted in Table 7.2 in Klaver et al., 2015), no less than 7 200 foreign students were enrolled at Maastricht University in the province Limburg in 2014. Another 3 700 were enrolled at Groningen University (3 700) in the province Groningen, also ahead of universities in the Randstad provinces, notably Erasmus University Rotterdam (3 400 foreign students), Technical University Delft (3 300) and University of Amsterdam (2 900). International students might after graduation become highly educated migrants employed in the province where they studied, but retaining them has proven a challenge, as is discussed in Chapter 5.

Most top sector employers are located outside Noord- and Zuid-Holland

It is possible that the concentration of highly educated migrants in Noord- and Zuid-Holland has an effect on the frequency of highly educated migrants in top sectors: top sector employers located in more peripheral provinces, and especially in rural areas, might find it difficult to recruit them. Indeed, 60% of the top sector firms as well as 60% of employment in the top sectors are located outside Noord- and Zuid-Holland (see Figure 4.19). While the latter two provinces exhibit the highest numbers of top sector firms, employment in the top sectors is higher in Noord-Brabant than in Noord-Holland. High numbers of firms and employees in top sectors are also observed in Gelderland and Utrecht, while only few can be found in Drenthe, Flevoland and Zeeland. Raspe et al. (2012a) offer detailed information on where firms and clusters in each top sector are located, and they document significant dispersion over regions.

In addition to the location as such, the local industry structure in top sectors may matter for the recruitment of highly educated migrants. As a crude measure, one can consider the average number of employees per top sector firm, derived from the information in Figure 4.19. This average is especially low in Friesland (2.6 employees per top sector firm) and Drenthe (2.7), but especially high in Zuid-Holland (5.0) and Limburg (4.6). If a local network of larger firms is more attractive to highly educated migrants than a network of smaller firms, this might help explain their concentration in Zuid-Holland.

Figure 4.19. Firms and employees in top sectors by province, 2013



Note: Provinces are ordered according to their NUTS-2 code.

Source: Centraal Bureau voor de Statistiek (CBS), https://public.tableau.com/profile/centraal.bureau.voor.de.statistiek#!/vizhome/DASHBOARDTOPSECTOREN2015/WELKOM.

Next, highly educated migrants might be particularly attracted to and demanded by highly innovative firms. In this context, it matters that the highly innovative firms in the top sectors appear to be concentrated in Zuid-Holland, Noord-Brabant and Overijssel, according to data on requests for a patent (see Snoei et al., 2013). The electronics firm Philips, mainly based around Eindhoven (Noord-Brabant), alone accounted for about 30% of all patent requests between 2006 and 2011. Among other firms that made a high number of patent requests were NXP and ASML in Noord-Brabant as well as Schlumberger Technology, Shell, TNO and Unilever in Zuid-Holland.

Migrants from non-EU/EFTA countries rarely work in top sectors in the periphery

As one of several factors determining the competitive position of the Dutch top sectors, Raspe et al. (2012b) examine the role played by human capital in science and technology for top sector firms in Noord-Holland, Zuid-Holland and Noord-Brabant. The results suggest that a greater availability of such human capital would improve the competitive positions of several top sectors (agriculture & horticulture,

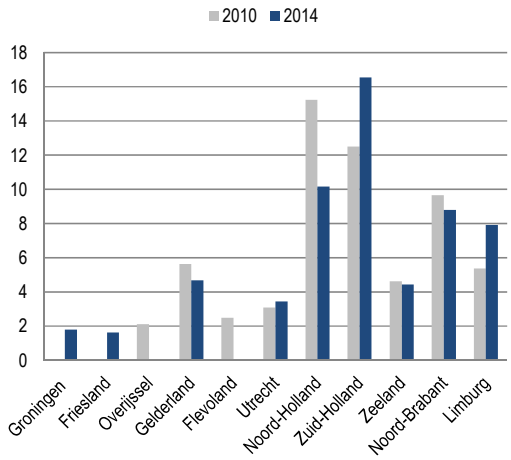
energy and logistics) on export markets. Similarly, more human capital in science and technology would help attract more foreign firms into (high-tech) materials, chemicals, energy and logistics, but especially into the food sector, agriculture & horticulture in Zuid-Holland and energy in Noord-Holland. Overall, the study finds logistics in Noord-Holland, agriculture & horticulture in Zuid-Holland and the food sector in Noord-Brabant to be in a particularly strong competitive position. In order to attract more human capital also to top sectors in particular regions, the National Technology Pact (see Chapter 1) is accompanied by corresponding initiatives for regional labour markets (see OECD, 2014d).

While top sector employers across regions already also draw on migrants to meet their needs for human capital, this affects EU/EFTA migrants and non-EU/EFTA migrants differently. Figure 4.20 shows that the regional distribution of migrants employed in top sectors – for EU/EFTA migrants as well as for migrants from other countries – shares key features with the regional distribution of total employment in top sectors (see Figure 4.19). However, while the distribution of EU/EFTA migrants in 2014 (see Panel A of Figure 4.20) followed quite closely the distribution of total employment in top sectors, non-EU/EFTA migrants appeared much more concentrated in Noord-Holland, Zuid-Holland and Noord-Brabant, where they represented 41 000, 46 000 and 24 000 top sector employees, respectively. By contrast, relatively high numbers of EU/EFTA migrants employed in top sectors were also found in Gelderland, Zeeland and Limburg. But there may be a tendency for the two distributions of migrants to converge over time: the number of non-EU/EFTA migrants in Zuid-Holland decreased substantially from 2010 to 2014, hence contributing to reducing the concentration. Over the same period, the number of EU/EFTA migrants increased in Zuid-Holland, thereby increasing the concentration in the central provinces.

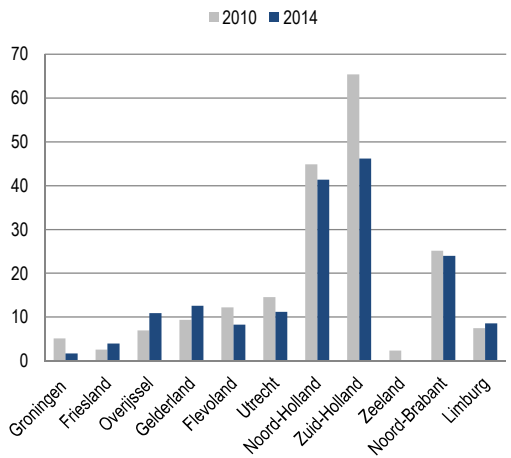
Figure 4.20. Migrants in the so-called top sectors, by origin and province, 2010 and 2014

Migrants (ages 15-64) employed in top sectors, in thousands

A. Migrants born in EU/EFTA countries



B. Migrants born in other countries



Note: Figures for EU/EFTA migrants residing in Groningen (2010), Friesland (2010), Drenthe, Overijssel (2014) and Flevoland (2014) are too low to be statistically reliable; the same applies to figures for non-EU/EFTA migrants residing in Drenthe and Zeeland (2014). See Table 4.A1.1 in the annex for sector definitions. Provinces are ordered according to their NUTS-2 code.

Source: OECD Secretariat calculations based on the EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

To attract in particular a greater number of highly skilled non-EU/EFTA migrants, regions in the periphery of the Netherlands will likely need innovative measures that involve several stakeholders at local or regional levels. A leading example is the so-called Brainport cluster around Eindhoven in Noord-Brabant. Box 5.2 in the following chapter presents some innovative measures already taken in this cluster. The strategic approach in this region can prove useful for regions throughout the Netherlands to promote skilled migration: forms of co-operation between local educational institutions and local employers reflect the existing specialisation of the region. One objective is to attract international students who complete trainings or entire degree programmes that equip them for major local industries and who then find employment locally. A scheme that integrates study with work experience and gives international students a high chance of subsequent employment could not only be very attractive for aspiring migrants from EU and non-EU countries alike, but could also substantially raise the probability that students stay after graduation (see Chapter 5).

However, the set-up of such an integrated scheme needs to address several practical challenges. Educational institutions and local employers' associations, or even major individual employers, would have to develop the scheme together and commit to it. To make the scheme visible to potential migrants, they might have to promote it jointly. In addition, some guidance and basic Dutch language skills will often be necessary before international students can take up internships or part-time work, which creates costs that need to be shared between the stakeholders.

In conclusion, while regions in the periphery of the Netherlands host the majority of top sector employees, they have difficulties attracting their share of labour migrants, especially in the case of highly skilled migrants from non-EU/EFTA countries. Employment of non-EU/EFTA migrants in top sectors appears to have declined in recent years, despite rising employment of native-born persons in the top sectors. The small share of knowledge migrants who work in top sectors highlights the potential gains from better aligning the Dutch labour migration policy with the top sector approach. To this end, lower salary thresholds or other exemptions could be applied to migrants who are recruited for jobs in top sectors; a similar approach can also support regional recruitment efforts. While the different salary thresholds for knowledge migrants below and above 30 years seem to select roughly the same applicants, the same salary threshold can be much stricter for some applicant groups than for others. In particular, women likely find it harder than men to meet the thresholds because women's wages are often lower.

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Annex 4.A1

Sector classification

Table 4.A1.1. Delimitation of the so-called Dutch "top sectors" in the NACE classification

	Sector	CBS definition based on NACE	Chosen definition at NACE 2-digit level	Comment
Top sectors	Agriculture & food	in full: 03, 10, 11, 56; in part: 01, 20, 28, 46, 47, 72	01, 03, 10, 11, 56	Agriculture and horticulture cannot be separated at 2-digit level. Groups 46 and 47 are wholesale and retail trade; here omitted.
	Horticulture	in part: 01, 46, 72, 82		
	Chemicals	19, 20, 22	19, 20, 22	
	Creative industries	in full: 58, 59; in part: 70, 71, 73, 74, 90, 91	58, 59, 73, 74, 90	Group 73 is advertisement, 74 is design, photography and translation.
	Energy	in part: 06, 09, 27, 35, 72	06, 35	
	Water	in full: 36, 37; in part: 09, 30, 33, 38, 42, 71, 72	36, 37, 42	Group 42 includes all underground construction.
	High technology	in full: 24, 26, 27, 28; in part: 22, 25, 29, 30, 32, 33, 62, 71, 72	24, 25, 26, 27, 28, 29, 30, 33	Group 33 includes various kinds of repair and maintenance services.
	Life sciences & health	in full: 21; in part: 26, 32, 72; omitted: 86	21, 86	Group 21 is pharmaceuticals, group 86 is health services.
	Logistics	in full: 52, 53; in part: 49, 50, 51	49, 50, 51, 52, 53	
	Research & development		72	Collecting parts of group 72 spread out over top sectors in the CBS definition.

Note: The CBS definition does not only include the NACE groups shown but also some additions based on further data sources. Sector-specific research & development cannot be identified at the two-digit level of NACE. Therefore, a sector "Research & development" is added to the list of top sectors. This additional sector includes all research & development.

Source: CBS – Centraal Bureau voor de Statistiek (2015), "Monitor topsectoren 2015. Methodebeschrijving en tabellenset", The Hague, and EU Labour Force Survey (Eurostat), http://ec.europa.eu/eurostat/web/lfs/overview.

Chapter 5

Attracting and retaining skilled migrants and international students in the Netherlands

The chapter draws on a number of indicators to gauge the position of the Netherlands in the context of global competition for skilled migrants and talent. Possible issues in the retention of knowledge migrants and international students are highlighted. Econometric analyses estimate the retention rates of highly educated migrants and graduates of Dutch universities and analyse their determinants. Special attention is paid to the effect of partners' employment on the retention of knowledge migrants, and the effect of combining work and studies on the retention of international students.

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.

What makes the Netherlands attractive?

The results of a report by Berkhout et al. (2010) suggest that high income levels, an efficient labour market, an education system of good quality, and straightforward immigration regulation are some of the factors that make the Netherlands attractive to highly skilled migrants. The universities' reputation and a high scientific output also contribute positively, especially from the perspective of researchers.

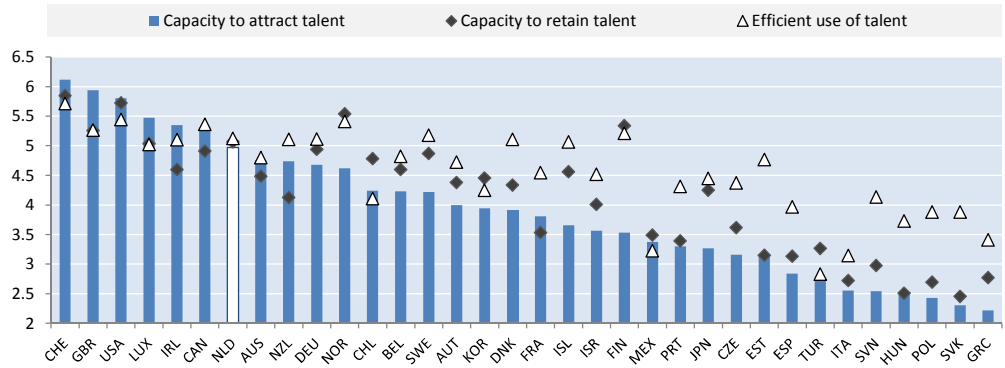
In a survey among 1 200 highly skilled migrants in the Netherlands from outside the EEA (Berkhout et al., 2010), migrants report that their migration decisions are based on salary and career considerations, as well as on the quality of the living environment. By contrast, the immigration regulations appear to play at best a secondary role for their decisions.[1] The Netherlands' main competitors for highly skilled migrants are, according to the survey, the United States, Germany, and the United Kingdom.

The executive opinion survey of the World Economic Forum captures the opinions of business leaders around the world on a broad range of topics for which data sources are scarce for most countries in the word. The global competitiveness index for the Netherlands is 5.5 which places the country 5th in a ranking of 140 countries worldwide. However the rank varies greatly across the different components of the index. In terms of infrastructure as well as higher education and training, the Netherlands is doing particularly well and ranks 3rd, while the ranking is less good when it comes to macroeconomic environment and financial market development (26th and 31st respectively).

Overall, the Netherlands ranks well in terms of its capacity to attract and retain talent (Figure 5.1), according to the Global Competitiveness Index (2015-16). According to the survey, the Netherlands is in the 7th position among OECD countries behind Switzerland, the United Kingdom, the United States, Luxembourg, Ireland and Canada in terms of attracting talent. Likewise, the country appears to be in a good position to retain talent. It ranks 6th among OECD countries, behind Switzerland, the United States, Norway, Finland and the United Kingdom. The Netherlands rank somewhat lower when it comes to the efficient use of talent but according to the survey this capacity has improved over time and the Netherlands moved from position 23 in 2006 to position 10 in 2015.

Figure 5.1. Capacity to attract/retain/use talent of OECD countries, 2015

Index from 0 (lowest) to 10 (highest)



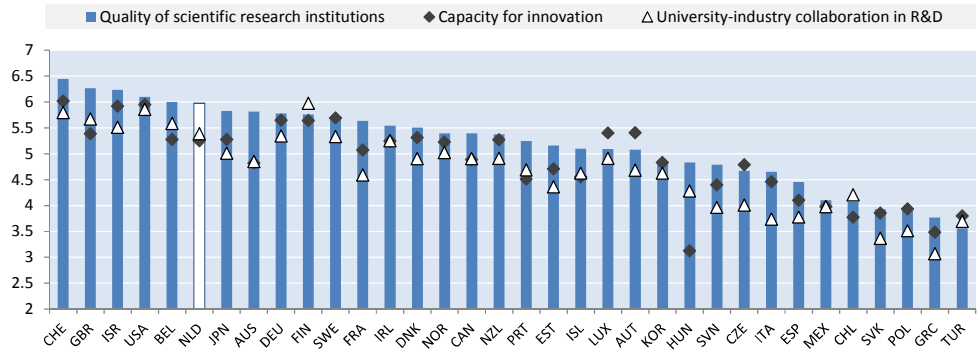
Source: Global Competitiveness Index, 2015-16.

The quality of the country's research institutions and their links with the private sector are strong points of the Netherlands. According to the Global Competitiveness Index, the country ranks 6th in terms of the quality of its research institutions (Figure 5.2) and has also seen improvements over time: the Netherlands moved up to 6th place after ranking 8th in 2012 and 12th in 2006. The country also ranks high when it comes to collaborations between the universities and businesses (9th worldwide) and its score has also increased over time as the Netherlands moved up from position 14 in 2006 to position 9 in 2015 worldwide. Moreover, the Netherlands appears quite competitive when it comes to innovation (8th worldwide according to the Global Competitiveness Index 2015).

The relatively high wages of workers with a high level of education likely adds to the attractiveness of the Netherlands among high-skilled migrants. According to evidence from the OECD Survey of Adult Skills (PIAAC), the wage levels of young tertiary educated persons (aged 20-30) in the Netherlands are high in comparison with many other OECD countries (Figure 5.3). According to these data, the country is in third position, just behind Denmark and Norway, in terms of hourly median wages. The comparative advantage of the Netherlands is higher for highly educated persons aged 36-50. Median wages for this age group of university graduates are highest in the Netherlands among the countries covered in PIAAC, followed closely by those in Ireland, and

then by Norway, Denmark and the United States. Moreover, highly educated persons enjoy substantial wage increases over their careers. University graduates aged 31-40 years earn 25% higher wages than younger ones (22-30), while for those aged 41-50, wages are about 42% higher than those of young graduates.

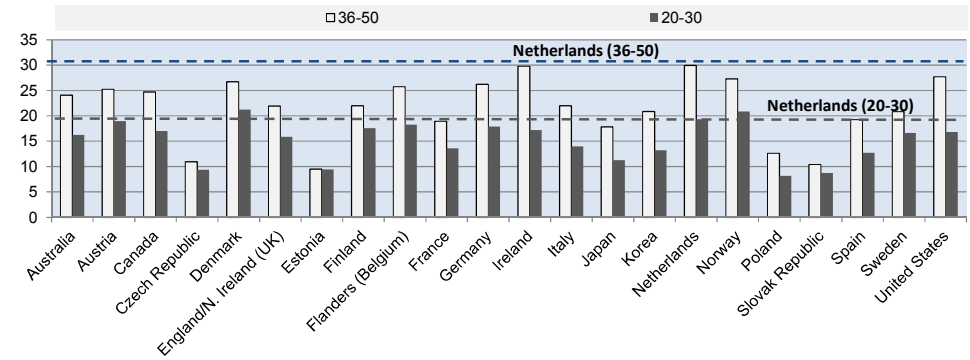
Figure 5.2. Innovation-related competitiveness indices of OECD countries, 2015



Source: Global Competitiveness Index, 2015-16.

Figure 5.3. Hourly median wages of tertiary educated persons, by age group

In euros



Source: Survey of Adult Skills (PIAAC) 2012.

Insufficient information and public attitudes to migration could matter

Given the attractiveness of the Netherlands and the fairly simple and quick labour migration system in place, it is surprising that more highly educated migrants do not come to the country and stay there. Various reasons could possibly explain why the country's attractiveness according to various competitiveness indicators is not reflected by larger flows of highly skilled migrants from EU and non-EU countries.

First, one of the possible factors might be that there is only limited information available to prospective migrants on the labour market opportunities in the Netherlands and the possibilities to enter the country for work. The small size of the country and the limited number of persons speaking its language may contribute to this limited knowledge about the opportunities and quality of work and life the country can offer. The report by Berkhout et al. (2010) points to weak "brand recognition" as one of the factors behind the rather limited inflows of high-skilled migrants. Branding the opportunities the country can offer among prospective high-skilled migrants is a key element in promoting the knowledge economy. According to the Gallup World Poll, only a very small share of persons wishing to move abroad permanently indicate the Netherlands as one of their possible destinations.

The pool of highly skilled labour migrants who already have a notion of the Dutch language is limited, and by consequence, little may be known about life in the Netherlands. It might therefore be worthwhile exploring ways to acquaint the target groups of Dutch labour migration policy with the Netherlands. For professionals in certain occupations or students in certain fields, visits or exchange programmes could be arranged. Campaigns that promote the Netherlands as a destination could include job fairs abroad and subsidised courses of Dutch language and culture. In general, online information on labour migration schemes and job opportunities should be easily available in several languages. Today, there is a number of job agencies which refer to foreign labour[2] while job fairs are organised annually in the Netherlands by Expatica (Expatica's annual International Job Fair) and IAMEXPAT. It would be beneficial if such job fairs were organised by the public authorities in EU and non-EU countries representing possible sources of highly educated potential migrants, especially in sectors and occupations in demand in the Netherlands. This is for example the case of Norway, a small country which aims at disseminating information on the job opportunities

available in the country in order to attract highly qualified immigrants in key sectors.

A second important factor possibly explaining why the Netherlands does not attract many more highly educated migrants could be the public attitudes towards immigration and immigrants. The European Social Survey (ESS) is a survey conducted every two years in many European countries and measures public attitudes, beliefs and behaviour patterns on a broad range of issues, including immigration. A series of questions are asked about the perceived impact of immigration on the economy and the labour market, as well as the fiscal impact of migration and the overall impact in terms of living in the Netherlands. With respect to the contribution of migrants to the economy, the average response in the Netherlands is rather neutral, but overall less positive than in a number of European countries, notably Switzerland, Sweden, Germany, Norway and Finland (Figure 5.A1.1). The perceptions about the impact of immigration on the labour market, the public purse and overall life appear to be less positive in the Netherlands than in some important immigration countries in Europe.

Evidence in OECD/European Union (2015) for the period 2002-12, shows that about 17.5% of foreign-born people with foreign nationality in the Netherlands consider themselves members of a group that is discriminated or has been discriminated against on grounds of ethnicity, nationality or race, a share which is just above the OECD average (16.6%), but still much higher than that in countries such as United Kingdom, Luxembourg, Norway, Sweden, Belgium and Switzerland. Similarly to some of these countries, the share of persons feeling discriminated in the Netherlands is somewhat higher among foreign-born persons who have acquired the Dutch nationality (19%).

Additional information about the attitudes towards more/less immigration from poor countries is compiled from the 2014 special module of the European Social Survey for a number of European countries (Figure 5.A1.2). A clear distinction is made between migrants from EU and non-EU countries and between professional and unskilled labour. On average, people in the Netherlands are in favour of allowing few more immigrants, irrespectively of their origin and skill level. Relatively to some of the countries covered by the survey such as Germany, Sweden, Denmark and Norway, they seem less open to additional immigration.

The attitude towards immigrants could significantly improve with a clear public information service about the recent trends in immigration and the contribution of immigrants to the economic and social life. This requires robust, timely and detailed data on the outcomes of immigrants (notably recent ones) in the Netherlands and high-quality research on the impact of immigration. It also requires a clear communication of these results to highlight the contribution migrants make to all sectors of the economy without minimising the possible challenges and ways to address them.

Are knowledge migrants staying in the Netherlands?

This section derives detailed estimates of the stay (retention) rates of knowledge migrants, the largest group of highly educated migrants in the Netherlands in recent years. The analysis is based on research commissioned by the Ministry of Social Affairs and Employment of the Netherlands for the purposes of this review and was undertaken by SEO Economic Research in Amsterdam. The research is based on the analysis of administrative records of the Dutch labour market between 2005 and 2012. These records of individual data on employees have been merged with municipal registrations of married partners, with emigration records and with registrations of highly skilled migrants from the knowledge migrants scheme. The sample is limited to knowledge migrants whose partner resided in the Netherlands at some point in the observation period. This is needed in order to analyse retention of knowledge migrants as a function of the labour market integration of their partners (see the following section). The resulting population concerns highly skilled migrant couples in the Netherlands between 2005 and 2012.

The length of stay is modelled in a duration model with multiple variables based on the model in Bijwaard et al. (2014). This allows the simultaneous analysis of different effects, notably personal and labour market characteristics (of both the knowledge migrant and the partner), time-varying variables such labour market tightness and the presence of young children in the household, and the length of stay (duration dependence). For all migrant couples who at the end of the observation period are still living in the Netherlands, it is of course still unknown how long they will stay. This unobserved duration is not an issue for duration models which examine the probability of emigration or the probability of stay in several spells. Furthermore, as does the model of Bijwaard et al. (2014), the model allows for administrative removal in

the data. That is the case when migrants leave the Netherlands but do not unregister from the municipal registers. Eventually, they are administratively removed from the municipal registers but the real emigration (or return) date is unknown. The analysis in this chapter also attempts to account for unobserved heterogeneity (see Berkhout et al., 2016 for details).

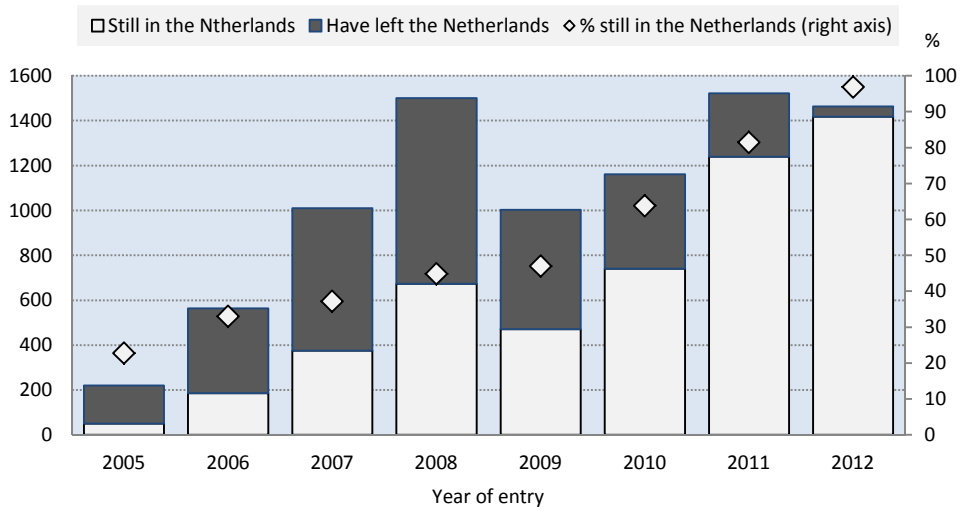
The sample comprises 8 445 knowledge migrants with a partner. Spells are defined on the basis of changes in the variables included in the analysis. This leads to a total of 149 594 spells. The analysis starts on the day knowledge migrants arrive in the Netherlands and ends either in 2012 (last year for which data are available) or when they leave the country if this is prior to 2012. The partner can either live in the Netherlands or abroad. However to be included in the data, the partner should have lived for at least four months in the Netherlands during the observation period, otherwise he/she would not appear in the municipality register. Partners are defined as those in an official relationship or those who live together and have a child while not being in an official relationship. If a couple lives together in the Netherlands for a while before they get married or have a child, then they are seen as partners during their whole stay together.

On average, between 1 200 and 1 600 highly skilled migrant couples are welcomed annually between 2005 and 2012. From the cohort that entered in 2012, around 97% still lived in the Netherlands at the end of that year, while from the 2008 cohort around 51% were still in the Netherlands five years later (Figure 5.4). At the start of the analysis only 64% of the partners lived in the Netherlands and only 9% had a job. Typically, the principal migrant arrives alone, and he/she is later joined by his/her partner. The share of partners living in the Netherlands is 91%, but the share of working partners is quite low, just 18%. About 3% of knowledge migrants have a Dutch partner throughout the observation period.

Berkhout et al. (2016) provide detailed information on the data limitations and the methodology used to estimate the retention rates of knowledge migrants in the Netherlands, as well as the characteristics of knowledge migrants included in the sample. The majority of knowledge migrants in the sample are men (three-quarters) and their share out of all knowledge migrants has been fairly stable through the observation period 2005-12. This is in line with the information based on first permits issued to knowledge migrants, which shows that 77% of them are issued to men (see Chapter 4). In recent years, more and more

knowledge migrants have a permanent contract. In 2012, more than 60% of them had a permanent contract, versus 50% in 2009. It is not surprising that the vast majority of knowledge migrants (close to three-quarters) are employed by large companies with more than 100 employees. Small companies (1-9 employees) employed only 10% of all knowledge migrants in the Netherlands in 2012.

Figure 5.4. Composition of knowledge migrants by year of entry and location, 2012



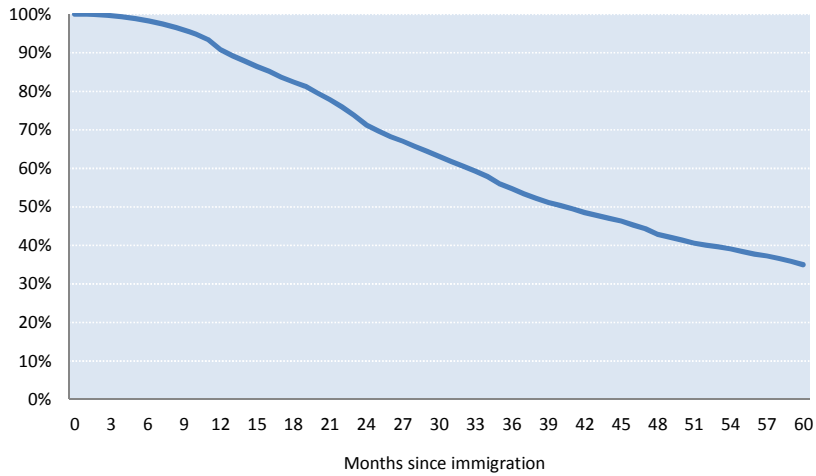
Note. The sample is based on the trajectories of 8 445 knowledge migrants (with partners) who entered the Netherlands between 2005 and 2012. The observation period is 2012.

Source: SEO Economisch Onderzoek (2016) based on CBS data.

One year after immigration, about 90% of migrants are still in the Netherlands, but the retention rate falls quickly to 70% a year later and to 35% five years after the migrant first entered the country (Figure 5.5). This share is higher than that in other European countries with available data. For instance, the stay rate of non-EU migrants in Norway is 22% five years after their first entry (OECD, 2014a), while it is 25% in 2012 for non-EEA labour migrants who entered Germany in 2006 (OECD, 2013a). However, it should be kept in mind that knowledge migrants are a special group of labour migrants for whom prospects in the Dutch labour market are likely to be overall better than for other groups of labour migrants. In addition, the analysis in this section is based on an even more selected sample of knowledge migrants whose partner has

also joined them in the Netherlands. This group of may have higher intentions to stay in the country than those whose partner has never come to the Netherlands. In New Zealand, the share of skilled migrants still residing in the country five years after taking up permanent residence and holding a work visa before is 80% (OECD, 2014b), but these labour migrants have already passed the selection process for permanent residence and thus are not directly comparable either.

Figure 5.5. Retention rates of knowledge migrants by month since immigration



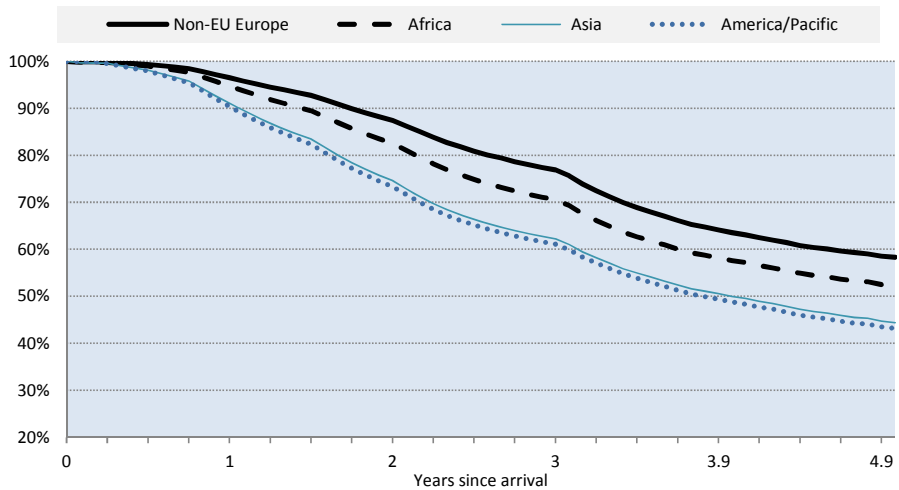
Note: Survival function for the 8 445 knowledge migrants included in the sample (2005-12).

Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Retention rates are lower for knowledge migrants from Africa, followed by those from Asia and the Americas (Figure 5.6). Asian and American knowledge migrants leave relatively early because these nationalities are often intra-company transfers and hence sent to the Netherlands for a pre-defined and rather short period (see Berkhout et al., 2010). Knowledge migrants in business services, wholesale or transport have a relatively higher probability of leaving the Netherlands, while those working in financial services, education, health or other services have a lower probability to leave the country. Retention is overall lower among those working in large companies (100 employees or more) than those in smaller companies. This effect is possibly driven by highly skilled workers in multinational companies, where

intra-company transfers for a limited period of time are quite frequent. However, the available data do not allow a finer analysis of the characteristics of large firms which make high-skilled migrants leave the Netherlands more often than those in smaller companies.

Figure 5.6. Retention rates of knowledge migrants by region of origin



Note: Simulations based on the estimations in Berkhout et al. (2016). The regressions include controls for the characteristics of the job of migrants and their partners (if relevant), personal characteristics and economic circumstances. Duration dependence both in terms of time since migration and the job's length as well as unobserved heterogeneity are also taken into account.

Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Retention is highest in the first three months following immigration while it decreases after that but less steeply every period. Generally, if migrants lose their job they are more likely to leave. The effect of age on the probability of staying in the country takes an inverted U-shape. Young couples have a relatively low probability of staying, while retention is higher among couples between 40 and 44 years old and those above 60. Naturalised migrants are less likely to leave the Netherlands, but their probability to stay goes down if they become unemployed. Gender and the presence of children (or their age) do not seem to influence the probability of staying in the Netherlands. Finally, the analysis finds no statistically significant regional effects nor any significant effects of labour market tightness.

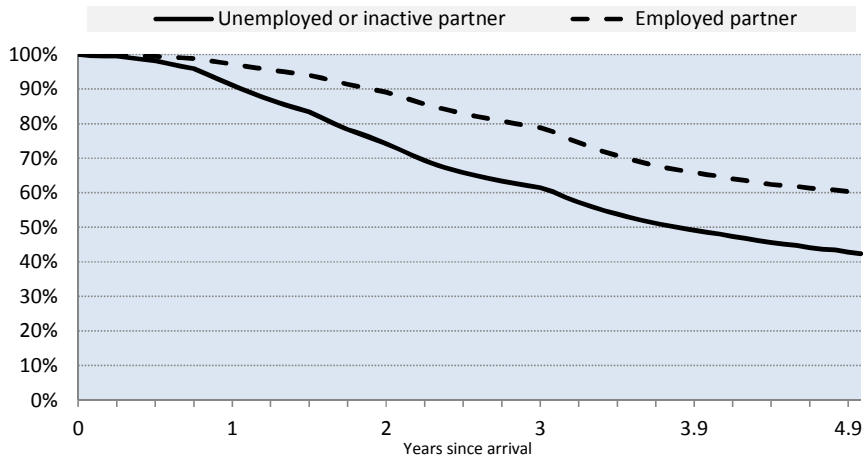
Knowledge migrants stay longer if their partner is employed

Anecdotal evidence suggests that there is a relationship between the likelihood of stay in the Netherlands for knowledge migrants and the situation of their partners in the labour market. There is evidence that the personal and family situation determines to a large extent the decision of international graduates to stay in the Netherlands upon graduation. More than one in five respondents in the survey by Nuffic (2012b) among previous international students in the Netherlands cite personal or family reasons for leaving. However, up to date, there is no evidence from the Netherlands on the extent to which highly skilled migrants leave the country because their spouse cannot find a suitable job in the Netherlands despite the absence of legal restrictions to their labour market access.

This section looks at precisely this issue by expanding the analysis conducted in the previous section to include indicators for the labour market situation of partners of knowledge migrants. Its purpose is to establish the sign and magnitude of the effect by providing statistically reliable estimates of the link between the labour market situation of the spouse and the probability of staying in the Netherlands. In a similar context in Norway, OECD (2014a) finds that labour migrants with an inactive partner are more likely to leave the country than those with an employed partner, irrespectively of the country of origin of the migrant and his/her gender. In addition, this review of labour migration policy of Norway shows that partners of highly skilled migrants represent an unused potential for the country, as they tend to also be highly educated (evidence of assortative mating) but are more often inactive or unemployed than native-born persons.

The results of the econometric model on the probability of staying in the Netherlands as estimated in Berkhout et al. (2016) provide clear evidence that the retention of knowledge migrants is correlated with the labour market integration of their partners. The probability of being in the Netherlands five years after arrival is 18 percentage points higher for knowledge migrants with a partner who is working relative to those with a partner who is unemployed or inactive (Figure 5.7). The estimated effect of the labour market situation of the spouse on retention is higher in the model that does not account for unobserved heterogeneity, suggesting that partners in couples planning to stay in the Netherlands are more likely to enter the labour market than those who consider their stay temporary. Therefore, a correction for unobserved heterogeneity is necessary (see Berkhout et al., 2016 for a detailed discussion of this).

Figure 5.7. Retention rates of knowledge migrants by labour market status of their partner



Note: Simulations based on the estimations in Berkhout et al. (2016). The regressions include controls for the characteristics of the job of migrants and their partners (if relevant), personal characteristics and economic circumstances. Duration dependence both in terms of time since migration and the job's length as well as unobserved heterogeneity are also taken into account. The category "unemployed or inactive partner" also includes the few observations with partners in formal education.

Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

The relationship between the duration of the partners' job and the likelihood of staying in the Netherlands is U-shaped. The probability of staying is higher when the partner has just taken up his/her job, lowest a few months later (6-9 months) and goes up for longer job duration. This evidence suggests that there is a waiting period during which partners evaluate the quality of the job in order to decide whether they stay or not. Once this trial period has passed, couples decide whether to stay or leave.

This section has demonstrated that promoting labour market participation for partners of knowledge migrants could lead to higher retention. By consequence, more should be done to help family members of labour migrants integrate into the labour market, including access to language courses. Other integration measures at the community level would also improve retention. If various local employers co-operate in networks, it is more likely that they can ensure an appropriate job for the – quite often – highly educated partner. The involvement of partners of

highly educated migrants in the services of the Expat Centres in various parts of the country aims at activating them in the labour market and enabling them to acquire knowledge about the way the Dutch labour market operates and to create contacts. Likewise the Spouse Care Programme of Projob aims at helping migrants' partners in finding work and building new social and professional networks.

International students: A growing pool of potential highly educated migrants

As already shown in Chapter 2, the Netherlands are today quite popular among international students. Their number more than doubled between 2005 and 2012, reaching 69 000 by 2013. In addition to students enrolled in academic degrees, more than 10 000 students visited the Netherlands through the Erasmus programme. The growing numbers of international students are also reflected in the share they represent among all students enrolled in Dutch tertiary education. This share increased from 4.7% in 2005 to 7.2% in 2012. More than half of non-EU international students are enrolled in academic degrees (research universities) while this share is somewhat lower for international students from EU countries and substantially lower for Dutch students. Foreign-born persons also represent an important share of PhD students in the Netherlands (Box 5.1).

Box 5.1. Foreign PhD students and PhD graduates

Many highly educated persons choose the Netherlands to obtain a doctorate degree. Close to 45% of the 9 000 PhD students enrolled in Dutch universities are foreign-born and more than half of them (2 100) are from countries outside the European Union. Foreign PhD students choose the Netherlands for various reasons. A first factor is the high quality of Dutch universities and their continuous presence among the top-ranked universities worldwide. In addition, PhD students enjoy a rather privileged position in the Netherlands, relative to other countries. They are considered as employees rather than students, with close to half of them being official university employees and enjoying relatively high salaries and social security benefits. Another 48% are employed outside the universities. In addition, their labour market outcomes upon graduation seem good in relative terms. Evidence suggests that wages for PhD graduates are high in the Netherlands (Auriol et al., 2013). Median gross annual earnings for PhD holders were equivalent to USD 83 000 in 2009, the second highest – after the United States – among 18 countries with available data. More recent data from the 2014 Career of Doctoral Holders Survey (Maas et al., 2014) show that the median gross annual earnings of researchers were EUR 78 000 in 2013, EUR 71 000 for doctorate holders not working as researchers and EUR 49 000 for post-doctoral researchers. According to the same data, 80% of all employed PhD holders declare to be fairly or very satisfied with their salary.

Box 5.1. Foreign PhD students and PhD graduates *(cont.)*

The evidence on the intention to stay among foreign PhD graduates varies greatly across studies. Sonneveld et al. (2010) use survey data for graduates at four universities in the Netherlands (Delft University of Technology, Erasmus University Rotterdam, Utrecht University and Wageningen University) and find that 37% of foreign PhDs were willing to stay in the country. Evidence from the Career of Doctoral Holders Survey 2014 (Maas et al., 2014) shows that only a very small share of foreign and Dutch PhD graduates from Dutch universities are willing to leave the country. A recent report by the Netherlands Bureau for Economic Policy Analysis (CPB, Rud et al., 2015) examines the stay rate of foreign PhD graduates working in a university in the Netherlands ten years after graduation. One in three foreign PhD graduates is still in the Netherlands following graduation, a share which seems low in comparison with the retention rate of PhD students in the United States. Women, PhD graduates in technical fields and those from less developed countries (including Eastern European countries) are more likely to stay in the Netherlands after their graduation. Among the PhD graduates who left the Netherlands between 2003 (first graduation cohort) and 2013 (last observation period) about half returned to their home country. Of those who went to a third country, the majority went to the United States, Germany or the United Kingdom. Overall, Rud et al. (2015) find that retention of PhD graduates is higher among those who arrived in the country well before they started a PhD.

1. According to Finn (2014) among PhD graduates who received their degree in the United States in 2006, 66% were still in the country five years later.

Why do international students choose to come to the Netherlands?

Following the 2011 report of the Netherlands Bureau for Economic Policy Analysis, the approach changed vis-a-vis international students and their attraction and retention gained central stage in the policy debate about immigration and the promotion of the top sectors in the Dutch economy. The rising number of international students suggests that the Netherlands are an increasingly attractive destination for international students, first and foremost for students from other EU countries. One can identify at least three main factors determining the attractiveness of the Netherlands as a country for university studies.

First, the quality of higher education in the country matters. According to the Shanghai index, there are 12 Dutch universities among the top 400 universities in the world, with four of them in the top 100. There is a continuous improvement in the quality of higher education offered in the Netherlands. Back in 2005, only two Dutch universities could be found in the top 100 and 11 in the top 400. Similar evidence is provided by the 2014 Times Higher Education Ranking: all 13 Dutch research universities are included in the top 300 of the world,

while six of them are in the top 100. Especially for PhD students, the quality of research institutions is crucial. According to the World Competitiveness Index in 2015/16, the Netherlands rank very high among all countries in the world in terms of the quality of its scientific research institutions. As noted before, the country is in the 6th position, just behind Switzerland, the United Kingdom, Israel, the United States and Belgium.

A second crucial factor is the large number and variety of courses which are entirely taught in English. The country offers the largest number of English-taught programmes in continental Europe: 282 English-taught Bachelor programmes (or 30% of all undergraduate courses) and 1 172 English-taught Masters programmes which corresponds to more than half of all Masters programmes in the country (Nuffic, 2015a).

A third factor is the quality of life and the possibility to work during one's studies and finally the strong link, in many academic fields, between studying and working at least in some parts of the country such as Eindhoven and hence the high likelihood of finding an appropriate job in the Netherlands or abroad upon graduation.

These factors are reflected in the evidence provided by recent online surveys on the factors that attract international students to the Netherlands and on the study experience these students have had. While all of these studies can offer valuable insights, none of them can rely on a representative sample, so that their results might not generalise to international students in the Netherlands at large. Nuffic (2012b) surveyed more than 7 000 nationals of countries outside the EEA, most of whom graduated between 2002 and 2011. Their primary reasons to come to the Netherlands for study were the expectation that it would help their career (56% of respondents) or their interest in the content of the study programme (35%). The widespread use of English, the teacher-student interaction, a competence-based approach to learning, and the international student body were indicated as the most attractive features of the Dutch higher education system. Close to 95% of respondents were satisfied with the experience of living in the Netherlands and had felt welcome. Accordingly, only 2% had no desire to return to the Netherlands, while the remainder cited the quality of life, the social and living environment, and the reputation of the research environment as points in favour of a return.

The Sachverständigenrat (2012) reports a survey of about 6 200 students from outside the European Union. The results cover students at Masters or PhD level at 25 selected universities located in Germany, France, the Netherlands, and the United Kingdom. Close to 750 respondents were enrolled at a Dutch university. Among the reasons for choosing a particular place to study, the quality and reputation of the university,[3] the particular programme, the cost of study, and the quality of life topped the list across the four countries. However, 40% of respondents at Dutch universities indicated that the Netherlands had not been their first choice, the highest percentage among all four countries. At the same time, the Netherlands also had the highest percentage of students who feel welcome (close to 50%).

The cost of studies can be quite significant for students from non-EU countries

Standard tuition fees in 2015/16 are EUR 1 951 for most courses in Dutch universities. There are some exceptions and private universities are almost always more expensive, as is also the case for the University Colleges. These are never more than double the standard tuition fee and in some cases are only slightly higher – always much less than EUR 10 000 a year. Fees are set by the government and every year they increase in line with inflation. Similarly to the situation in the United Kingdom, fees are significantly higher for students from countries outside the European Union because they are not subsidised. The average tuition fee for non-EU students is between EUR 6 000 and EUR 12 000 per year for a Bachelor degree and between 8 000 and 20 000 for a Masters programme. EUR 25 000 is the maximum amount for non-EU students (Figure 5.8). A small application fee is usually requested, which varies from approximately EUR 50 to over EUR 100 for non-EU students while it is waved for EU students.

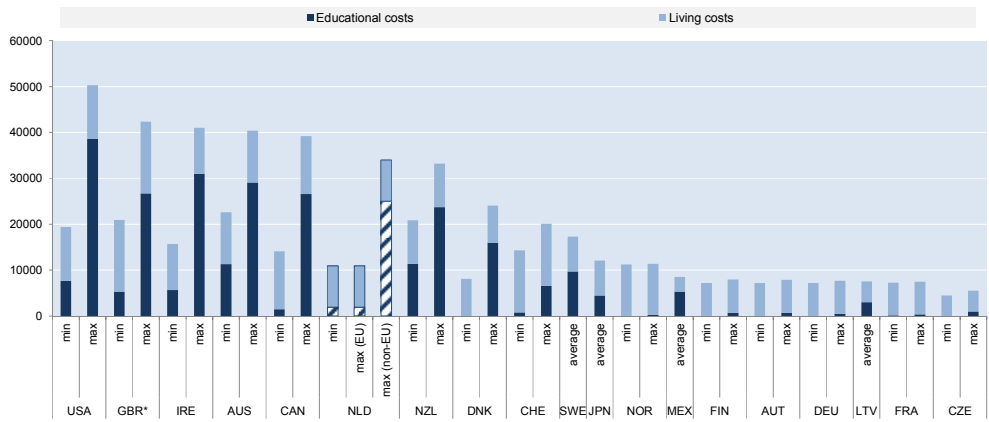
In comparison with other OECD countries, studying in the Netherlands represents a fairly low cost for students from European countries. For this group of students, the cost in the Netherlands is similar – or even lower – than that in many European countries. In contrast, the cost can in some cases be much higher for non-EU students. For this group of students, the cost of studying in the Netherlands can be much higher than in most European countries (except the United Kingdom and Ireland) and slightly higher than that in New Zealand.

The composition of international students in the Netherlands in terms of their origin countries in combination with the rather limited number of persons speaking the Dutch language in the world, can explain the limited knowledge of the language among students, relative to other countries. For example, the majority of international students in France come from French-speaking countries, many of which are outside the European Union. Similarly, the shares of students from English speaking countries are also high in the United Kingdom, the United States, Canada and Australia.

Figure 5.9 shows that, in contrast to other European study destinations with available data, 80% of international students at graduate level in the Netherlands do not advance beyond the most basic level in the local language. As the Sachverständigenrat (2012) suggests, the Netherlands might face a dilemma: an advanced level of Dutch cannot be expected from incoming international students – in contrast to English or French-speaking countries – but knowledge of the local language is, as in other countries, still paramount for a successful job search in the Netherlands.

Figure 5.8. Living costs and educational costs for international students in selected OECD countries, 2012

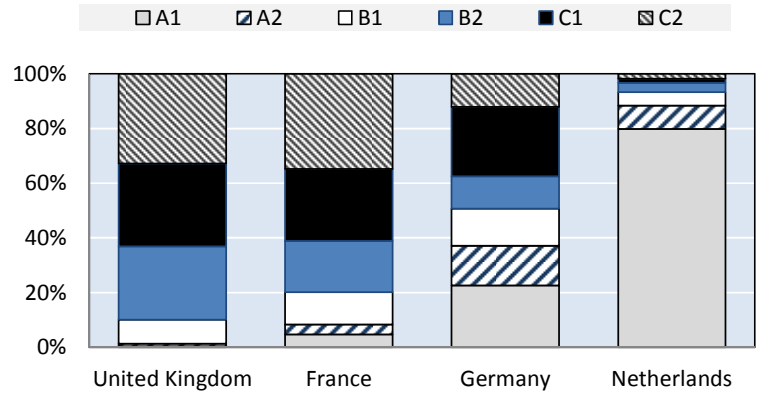
In euros



Note: * Excludes Scotland, min refers to lower bound of educational costs, max refers to an upper bound of educational costs. For the Netherlands the maximum possible fee refers to international students from non-EU countries.

Source: OECD (2013b), *Education at a Glance 2013: OECD Indicators,* OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2013-en; Usher, A. and J. Medow (2010), "Global Higher Education Rankings 2010. Affordability and Accessibility in Comparative Perspective, Higher Education Strategy Associates", Toronto; and national governmental and university websites. For the Netherlands the source is Nuffic.

Figure 5.9. Self-declared ability level of international Masters and PhD students in the local language, 2011



Source: Value Migration Survey 2011, as cited in Sachverständigenrat (2012).

Are international students staying in the Netherlands after their graduation?

Results in Sachverständigenrat (2012) highlight the role that personal and family reasons play in the decision of graduates to stay in the Netherlands or leave the country. These results further suggest that close to two-thirds of the international students at graduate level intend to stay in the Netherlands for some time after their studies.[4] Those wishing to stay tend to be younger, to have spent more time in the Netherlands, and to have held some job there. From respondents' comments, it appears that the students plan to make their first career steps in the Netherlands but to leave eventually. Accordingly, only a fifth of all respondents do not see good chances of finding suitable work in the Netherlands; this percentage is the same for Germany and much higher for the United Kingdom and France.

In another survey among 500 foreign students, SER (2013b) finds more evidence for students' interest in working in the Netherlands. Almost 40% express the wish to stay after graduation, and the reasons given most frequently are the possibility to do interesting work, liking the Netherlands or its culture, better job chances, and the stimulus from Dutch work experience for a career in one's home country. A formal analysis by Bijwaard and Wang (2013) applies the timing-of-events approach to micro data on international students for the period

1999-2007. The results confirm that employment makes foreign students leave later, especially in the case of somewhat older foreign students. Both the individual experience of unemployment and a macroeconomic situation of higher unemployment make them leave sooner. However, only 11% of all respondents surveyed by Nuffic (2012b) were employed in the Netherlands at the time of the survey, and only 7% had found work there immediately after graduation.

The retention rate of international (or foreign) students following their graduation in the Netherlands has been investigated by various researchers and institutions. Several estimates suggest a retention rate of international students ranging between 19% and 27% (see OECD/European Union, 2015). Other estimates put the overall proportion of international students who stay in the Netherlands for five or more years after their studies at around 25% (see Table 2.7 in SER, 2013b). It thus appears that the Netherlands do not benefit as much as possible from international students as a source – at one's doorstep – of highly qualified migrants who, by choosing to study at a Dutch university, have already shown an affinity to the Netherlands.

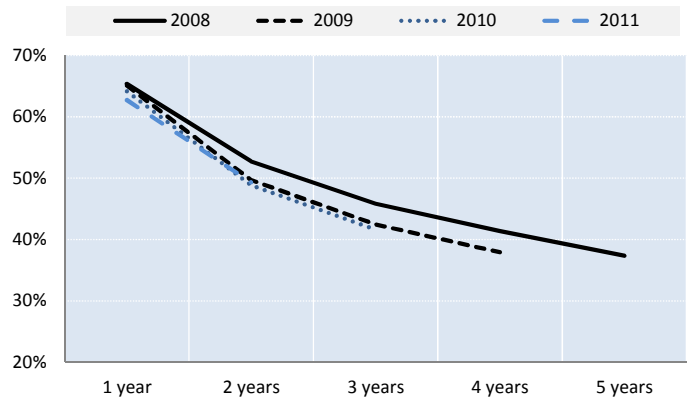
Data from the IND provide information on the programmes used by those international students who need residence permits to stay in the Netherlands. In 2013, the vast majority (84%) of students who changed status to a labour-related permit obtained a permit under the job-search year scheme for graduates or for highly educated persons. An additional 9% transitions directly into the knowledge migrant scheme, while a smaller share of 6% receive a permit as researchers.

A key question regarding the retention of international students in the Netherlands is the characteristics associated with a higher probability that international students stay in the country. Overall, non-EU international graduates show higher stay rates than those from EU countries (Figure 5.10). Women and older graduates have a higher probability to stay in the Netherlands. In terms of origin, EU graduates have the highest probability to leave the country after they graduate. Graduates from Asia and Africa are also more likely to leave the Netherlands than those from the Americas and Eastern European countries. Graduates in the fields of science (Bachelor and Masters) and engineering (Masters) have a high probability to stay, while those who have completed a Masters degree in law are more likely to leave the Netherlands.

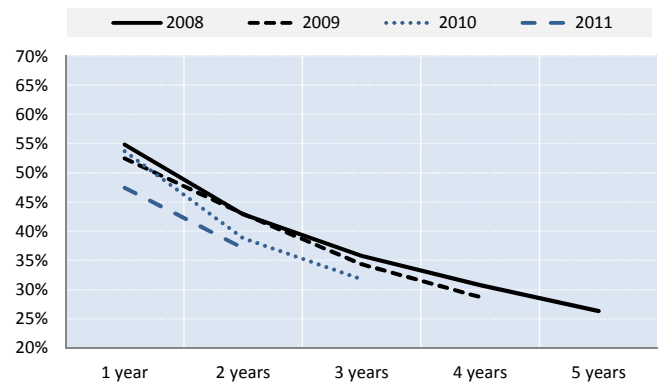
As shown in Figure 5.11, a number of students leave in the months just before or just after graduation, especially those from within the European Union. Most non-EU graduates leave the country one or two months after they graduate and then the likelihood of leaving is quite stable until the 13th and 14th month after their graduation when it rises significantly. This effect is not present for graduates from EU countries, which suggests that the effect is driven by the end of the 12-month job-search period which is binding for non-EU graduates.

Figure 5.10. Stay rates of international students, by time since graduation and year of entry

A. Non-EU international students

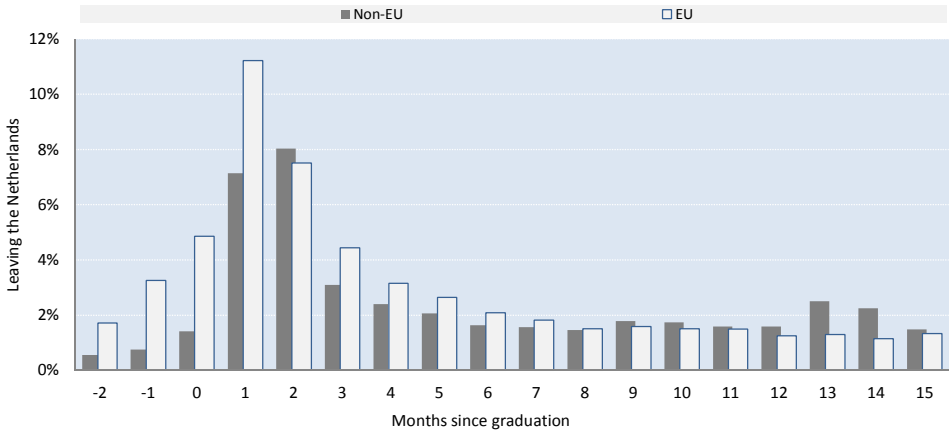


B. EU international students



Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Figure 5.11. Probability of leaving the Netherlands, by months since graduation



Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Gaining (relevant) work experience during studies is associated with higher retention

The analysis in this section focuses on the probability of international students to stay in the Netherlands taking into account their characteristics (age, nationality, level and field of education) and time-varying labour market indicators (tightness, region), while allowing for a duration dependence effect, that is the effect of the duration of stay on the probability that the person remains in the country. More details on the estimation are provided in Berkhout et al. (2016). The sample in the analysis includes all foreign graduates from Dutch tertiary education institutions who were not registered as students the year following their graduation.

The relevance of work experience depends on the observed links between the sector in which work experience is gained and the field of study. The links are based on the analysis of the labour market outcomes of all Dutch graduates from tertiary education in the period 2004-11 who entered the Dutch labour market following their graduation (hence Bachelor graduates who start a Masters just after graduating are not considered). Their sector of work, defined at the NACE 5-digit level, is observed 18 months after their graduation. Nineteen groups of graduates are defined based on their degree level (Bachelor, Masters) and their field of study (nine fields, hence 18 groups in total). For each different

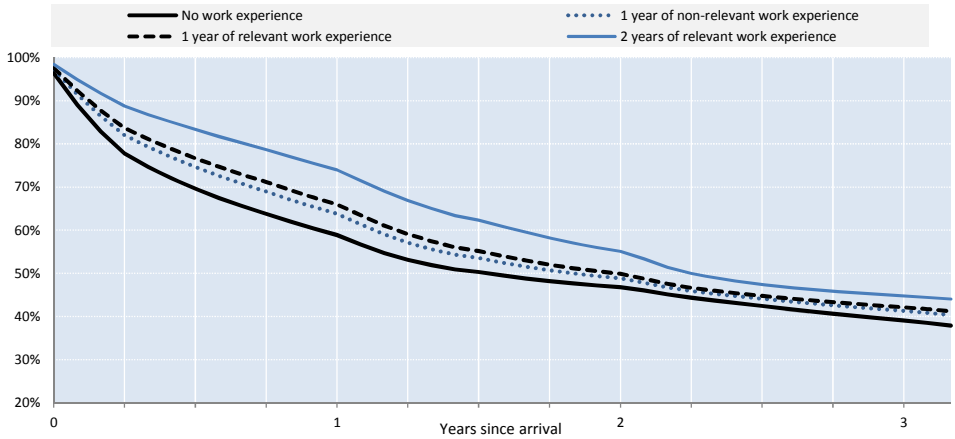
group, the share of graduates in every sector is calculated. The sectors are ranked according to this "graduate penetration rate": the higher the rate, the more relevant this sector is considered to be for a specific field/level of study.

Similarly to Dutch students, work during one's studies is common among international students in the Netherlands. Students do not necessarily have authorisation to work, as they need the approval of their academic institution. The choice of work (sector and occupation) is crucial but international students often work in sectors which are not related to their field of study (again similarly to Dutch students). Internships can be an important avenue to the labour market, as they make the link with potential employers and hence can be considered as highly relevant work experience. The analysis in this section accounts for paid internships, but unpaid internships are not recorded in the data.[5]

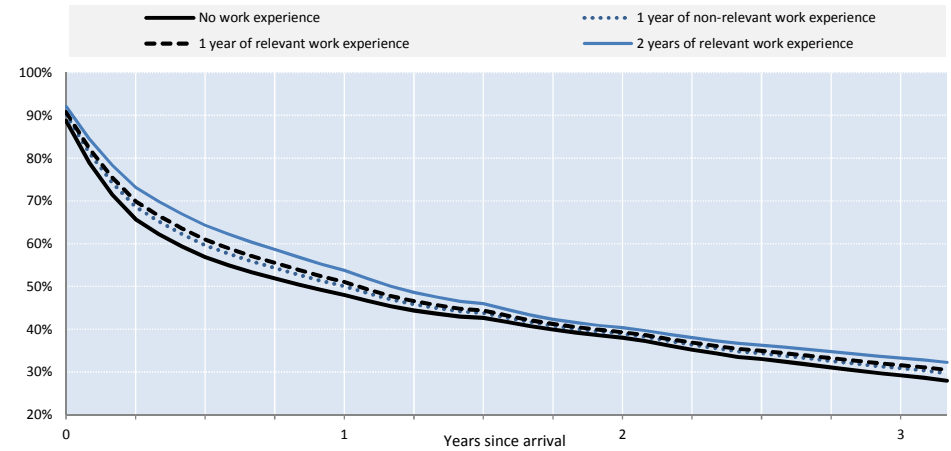
The results are presented in Figure 5.12 in the form of simulations based on a duration model. The share of graduates from non-EU countries who have not had any work experience during their studies and who are still living in the Netherlands one year after graduation is 59% (Panel A), while that for graduates from EU countries is 11 percentage points lower (Panel B of Figure 5.12). One year of general (in a "non-relevant" sector) work experience increases that share by 5 percentage points for graduates from non-EU countries, while the same year in relevant work experience is associated with an additional 7 percentage points likelihood of staying in the Netherlands relative to no work experience.[6] For graduates from EU countries, the effect of work experience is lower, 2 percentage points for non-relevant work experience and 3 percentage points for relevant experience. The results show a positive effect of a second year of relevant work experience, especially for non-EU graduates in the first years following graduation. Paid internships (examined separately) are also associated with a higher probability of staying in the Netherlands both for EU (4 percentage points) and non-EU graduates (3 percentage points).

Figure 5.12. The effect of work experience on the probability of stay in the Netherlands

A. Non-EU international students



B. EU international students



Note: Simulations based on a duration model. For more details on the controls included in the regressions, the data limitation and the methodology used, see Berkhout et al. (2016).

Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

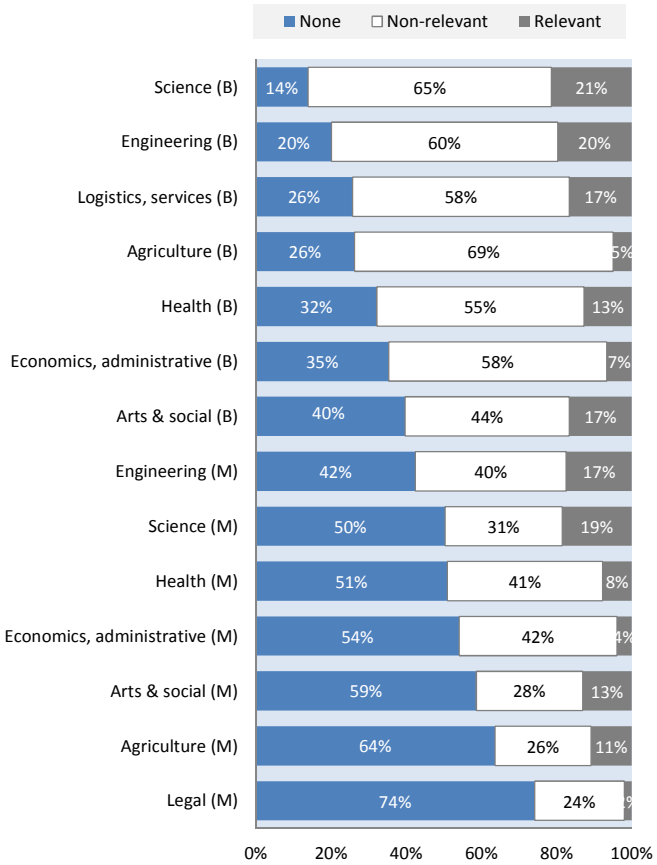
In follow-up analyses, it would be important to link work experience during studies (and the type of work experience) with the visa pathway that successful graduates typically follow in order to stay in the Netherlands. A relevant question is whether students who had the

opportunity to work in jobs related to their field of study during their studies and are able to make contacts in the Dutch labour market become knowledge migrants directly following their graduation without having to spend additional time in the job-search year for graduates in order to find a qualifying job. In addition, it would be important to understand the job-search related factors which lead to stable jobs and allow skilled migrants to stay in the Netherlands.

Students from EU countries are overall more likely to have a job during their studies (Figure 5.A1.3) no matter whether this is a job related to their field of study or not. One out of ten non-EU students has a job for which their studies are relevant, while an additional 40% has non-relevant work experience. Figure 5.13 shows the likelihood of work experience during one's studies by field and level of study. Clearly, international students at Bachelor level are more likely to be working than those studying at Masters level, irrespectively of the field of study.

It is important to understand whether there are specific factors which prevent international students from gaining professional experience during their studies. One key element is that the administrative process can be quite burdensome for foreigners but also companies that wish to employ them. Limited access to information for either employers or students is also important. A third factor has to do with the health insurance coverage. International students are obliged to take out the basic health care insurance when they start a job (even if part-time) or when they start an internship which pays them at least EUR 150 per month or EUR 1 500 per calendar year. The cost of insurance can be higher than students' pay: Dutch basic health care insurance costs around EUR 1 100 a year. While the Dutch Government provides a health care insurance allowance for persons with low incomes, the best and most convenient way to fill in the application form is at the local tax office and is only available in Dutch. However, a translated version exists to guide persons through the version in Dutch. There is a penalty for students who do not have the Dutch basic insurance of around 130% of the nominal premium for each month they worked without insurance.

Figure 5.13. Work experience during studies by level and field of study



Note: The population refers to international students from EU and non-EU countries. (B) refers to Bachelor level and (M) refers to Masters level.

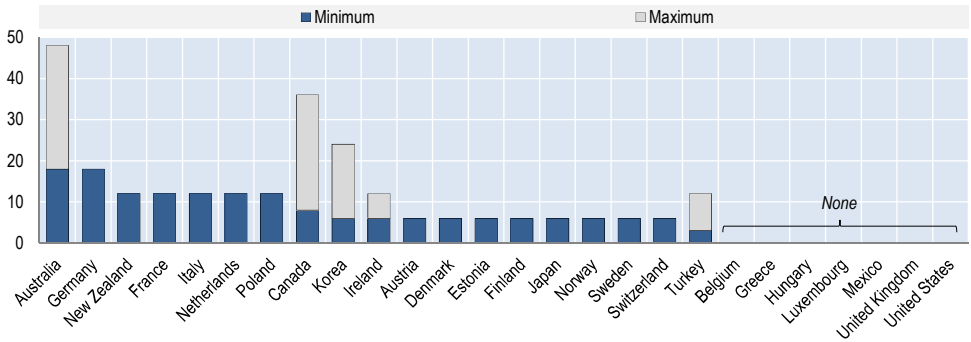
Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

Policies enabling international students to stay in the Netherlands

Foreign graduates in the Netherlands have the possibility to stay in the country for a period of up to 12 months in order to look for a job (see Chapter 3). This job-search visa for international students is not renewable. Certain conditions need to be satisfied for the visa to be issued and the graduate or researcher has the right to work full-time. The duration of job search for recent graduates in the Netherlands is the same

as in many European countries (France, Ireland, Italy and Poland) as well as in New Zealand and Turkey (Figure 5.14). Students in Korea and New Zealand have up to two years and up to three years in Canada. In Australia, they have from 18 months (for graduates with a qualification that relates to an occupation on the "Skilled Occupations List") to up to four years in the case of doctoral students.

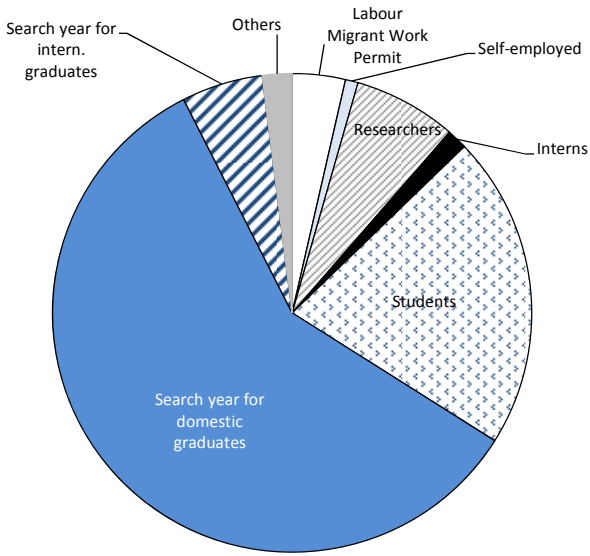
Figure 5.14. Duration of job-search periods for post-graduate schemes in different OECD countries, 2014



Source: OECD Secretariat analysis.

It is difficult to assess whether the 12-month period allowed in the Netherlands is sufficient for graduates to find an appropriate job. Information on permit status changes based on IND data shows that among the 2 083 job-search permits for graduates of Dutch universities (*Zoekjaar afgestudeerde studenten*) issued in 2012, more than one quarter had become knowledge migrants in 2013. This was indeed the main pathway from the search year for domestic graduates into a labour-related permit (81%). An alternative way to evaluate the contribution of the search year for domestic graduates to the knowledge migrant scheme is to examine the previous status of persons switching to a knowledge migrant permit in 2013. Sixty percent of them were indeed graduates of Dutch universities who had gone through the search-year for graduates (Figure 5.15). An additional 21% transited directly from a student permit into a knowledge migrant job, 7% were researchers and just 5% went through the search year for highly educated persons (*Regeling hoogopgeleiden*).

Figure 5.15. Previous status of new knowledge migrants, 2013



Note: In this figure, only status changes into different permits are considered, hence knowledge migrants who get a new permit as skilled migrants because they have changed employers are not included. For 19% of the new knowledge migrant permits, there is no information on prior permit type, hence these observations have been dropped from this figure.

Source: Secretariat analysis based on data provided by the Dutch Immigration and Naturalisation Service (IND).

Take-up has been very different for the two schemes, but is overall considered fairly low: 1 852 permits were issued in 2013 under the job-search year for graduates scheme and 175 permits under the job-search year scheme for highly educated persons (1 852 and 215 persons respectively in 2014). The graduate job-search year was the source of almost 1 000 highly skilled migrants in 2011. Still, these numbers appear low compared to the schemes' target group: international students graduating from Dutch universities, or indeed from highly ranked universities anywhere in the world.

Limited knowledge of these schemes does not seem to explain the low take-up. In Nuffic (2012b), 29% of the more than 7 000 respondents indicate that they were aware of the job-search year for graduates but only three took it up. However, three-quarters would have liked to obtain more information on such possibilities. Close to 40% of the students in

the Netherlands surveyed by the Sachverständigenrat (2012) claimed to be familiar with the legal provisions for taking up work in the Netherlands after graduation, only little less than in the United Kingdom and significantly more than in France and Germany. Likewise, only a fifth of the surveyed students in the Netherlands considered it difficult or very difficult to obtain information on the conditions for residence and work, substantially fewer than in the other three countries.

An evaluation of the first two years of the job-search year for highly educated persons concluded that take-up of the scheme had fallen short of expectations (see IND, 2011): only about 400 applications were received and about 200 residence permits granted under this scheme. One-third of the recipients were attracted from abroad; the others were already resident in the Netherlands, including a number of PhD students to whom the job-search year for graduates did not apply. Finally, while the job-search year of the 2010 cohort was in many cases still running at the time of the evaluation, less than 40% (or 29 individuals) of the 2009 cohort had taken up work as knowledge migrants. Many of this scheme's beneficiaries were graduates of Dutch universities who graduated more than a year ago and hence did not qualify for the job-search year for graduates.

The evaluation of the job-search year for highly educated persons by the IND (2011) suggests some more possible reasons for the relatively low take up. Notably the requirement of a work permit for jobs outside the knowledge migrant programme could turn the job-search year into a financial risk and thereby make it unattractive. In addition, although family reunification was allowed under both schemes, only spouses of the job-search years for graduates had access to the Dutch labour market. In so far as the job-search year for highly educated persons targeted graduates from top-ranked universities worldwide, the scheme's target population might have very good job prospects and therefore little need for a job search year. Instead, in the survey by the SER (2013b), students could suggest what would help make them stay in the Netherlands after graduation. The free provision of Dutch language courses topped the list, followed by internships and assistance with job search. Easier access to a permit and careers fairs specifically for international students also received ample support. Other possible policies to retain foreign students are providing them with better access to affordable housing, easing labour market access for sectors in demand such as ICT and high-technology industries and, for those students with a non-Dutch partner, easing immigration and labour market entry of their spouse.

Branding and promoting studies in the Netherlands

Internationalisation has become an important element in the continuous efforts of the Netherlands to further develop as a knowledge economy and boost its innovative strength and competitiveness (*Vereniging Hogescholen* and VSNU, 2014). In this context, one of the objectives of the authorities is to strengthen education and research with the aim to place the Netherlands in the top five countries worldwide. "Make it in the Netherlands" is an action plan adopted by the Dutch cabinet in 2013, following an advisory report by the Social and Economic Council (SER) with the objective to increase the retention of international students after they graduate, so as to strengthen the knowledge economy (see SER, 2013a).

A primary objective of the action plan is to ensure that students feel welcome and that they know they can work in the Netherlands. Labour market entry should be promoted quite quickly, already during one's studies. As shown in the analysis in this chapter, this early contact with the labour market can be a valuable tool to promote the retention of international students in the Netherlands. A second objective is to build ties with these students who will have spent years working in the Netherlands. Although less than a third of foreign graduates stay in the Netherlands, more than two-thirds of them (70%) say that they would like to do so. The Netherlands have decided to promote not only the quality of higher education, but also the combination of study and career that the country can offer. Other objectives are to strengthen the links between education and industry and to create a network of "Ambassadors" of the country abroad, through persons who have spent time in the Netherlands and have developed ties with it.

To enhance the attractiveness of the Netherlands among prospective international students it is important to identify the strong points of the country and make them well known among the target population in key origin countries. The communication strategy should be clear about the benefits the country can offer to international students wishing to obtain an education (or further education), to work in an education or research institution of top quality or to co-operate with Dutch knowledge institutions. In addition, communication should be provided in English. Special efforts should be made to brand and promote higher education in the Netherlands in selected origin countries which value the qualities of Dutch universities but have not yet had large numbers of their nationals studying or living in the Netherlands.

Nuffic has set up a series of NESOs (Netherlands Education Support Offices) which aim at promoting higher education and foster international co-operation among institutions. Such offices exist currently in 11 countries: Brazil, China, India, Indonesia, Mexico, Russia, South Africa, South Korea, Thailand, Turkey and Viet Nam. NESOs can also serve to maintain contacts with graduates who return to their countries of origin through alumni activities.

The online portals in the different countries offer information in the local language about the education opportunities available in the Netherlands, but also the reasons for which prospective students should consider the country for their studies. Young people are also informed about the opportunities that such a stay in the Netherlands represents to connect with an international and multicultural community, make a good investment for the future and take advantage of high-quality academic institutions. Finally, the quality of life in a safe country is also put forward. The NESO offices serve as a channel for information and provide support and liaison for the academic communities of the Netherlands and of the country they are situated in. They provide information and guidance regarding the choice of an international course or programme of education or training.

The Netherlands have made important steps in branding their institutions of higher education as well as the country as a top destination especially for persons in science-related fields. The region of Eindhoven is an excellent example of how a clear strategy and innovative approach can produce good results in attracting both international students and highly skilled migrants (Box 5.2).

Box 5.2. The innovative approach of the region of Eindhoven

The Eindhoven region in the province Noord-Brabant is an important world player in the area of technology and innovation. The region, located at the South East of the Netherlands, has a population of 730 000 and a workforce of 400 000. Home to a business cluster called Brainport, it is a centre of excellence in the world of technology and industry and in 2011 it received the award for the most intelligent community in the world. It is an area of top technology sectors, where many world-class businesses, knowledge institutes and research institutions are located. The area accounts for a third of all Dutch private R&D expenditure, invests 8% of the GDP on R&D and is one of Europe's top three regions in terms of patent density. The clustering of creative industries is key for the success of the region.

Attracting and retaining foreign talent in IT and innovation is a precondition for Eindhoven to retain its competitiveness vis a vis other key regions and countries in the world. Its strength lies in the strong co-operation among the private sector, research institutions and the public

sector. SER (2014) underlines the local shortage of qualified workers for jobs in high technology or in research and development, especially at the top end of required qualifications. The report recommends closer co-operation between local stakeholders, support for small and medium-sized enterprises and further reducing administrative requirements for highly qualified migrants in order to make the Brainport cluster more attractive for them.

The up-to-date and complete Brainport portal (http://www.brainport.nl/en/study) provides detailed information about study and career opportunities in the region. The objective is to attract international students to the top universities in the region (the Eindhoven University of Technology, the Tilburg University and the University of Maastricht) in key fields relevant for the companies present in Eindhoven. Studies in these institutions are characterised by a strong connection between theory and practice, through strong partnerships between universities and the private sector. This raises the likelihood of a quick and successful integration into the labour market upon (or even prior to) graduation but also that of an exciting career in one's specific field of study. This link between school and the labour market is even more valuable for foreign students who have otherwise limited contacts in the Dutch labour market and may face barriers to enter appropriate jobs also because of lower language skills.

The Brainport talentBOX (http://www.talentbox.nl/), an online career platform, offers access to job opportunities in a large number of IT and technology companies and knowledge institutes in the Netherlands. These companies and institutions have joined forces to attract and retain foreign professionals. The portal offers a series of services, including quick job application procedures, an innovative matching tool between job offers and available candidates and up to date news about the Dutch technology sectors.

Most importantly the region follows a "try and test" approach by designing pilots which are monitored and evaluated before they are implemented on a larger scale. Often programmes are first tested at the regional level and adjustments are made based on performance before the programmes are scaled up. The Connect programme is an example of such the pilot schemes, a joint project by Saxion University of Applied Sciences and the University of Twente which matches international graduates with companies in the Netherlands and offers them training and coaching in order to ensure a good start of their career in the country. Employers thus receive easy access to these graduates, and can offer them an initial position under favourable conditions.

In conclusion, the Netherlands are an attractive destination for high-skilled migrants according to international rankings, but a lack of information about the Netherlands and the public attitudes towards migration might help explain why the number of high-skilled migrants has not been higher. In this context, it is all the more important to retain those high-skilled migrants and international students who come to the Netherlands. The econometric results presented in this chapter show that knowledge migrants are more likely to stay if their partner is also employed in the Netherlands, and international students are more likely to find employment after graduation if they obtained work experience during their studies.

Notes

1. Almost 90% of respondents in the survey by Nuffic (2012b) say to be satisfied or very satisfied with the procedures needed to obtain a MVV.
2. E.g. http://www.togetherabroad.nl/, http://www.iamexpat.nl/career/jobs-netherlands among others.
3. For example, the 2014 edition of the *Times Higher Education World Reputation Rankings* lists four Dutch universities in the top 100 ranks worldwide.
4. Note there are competing numbers in *Education at a Glance* – also for a comparative perspective on stay rates. Apparently lower because they include Bachelor degrees.
5. Unpaid internships are not registered in the data.
6. These results are based on an estimation accounting for unobserved heterogeneity, administrative removal, and censoring.

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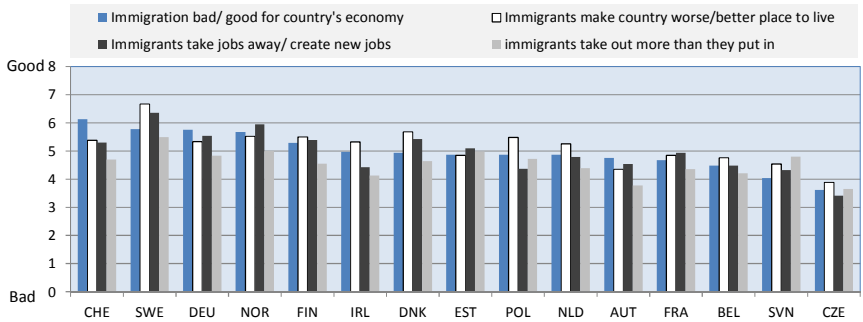
Annex 5.A1

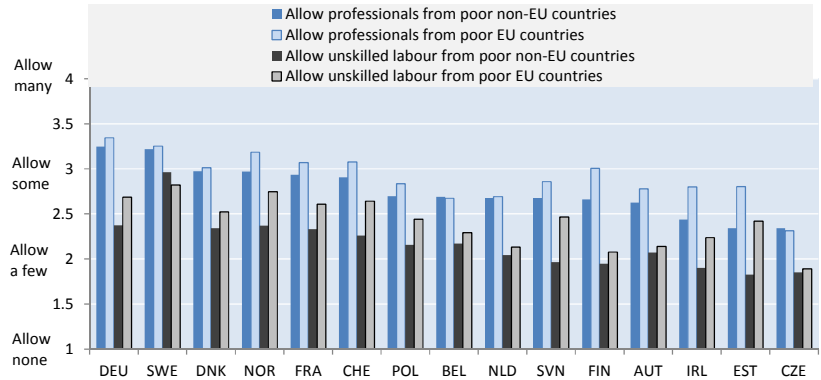
Additional figures

Figure 5.A1.1. Perceptions of the contribution of immigration, 2014



Source: European Social Survey, 2014.

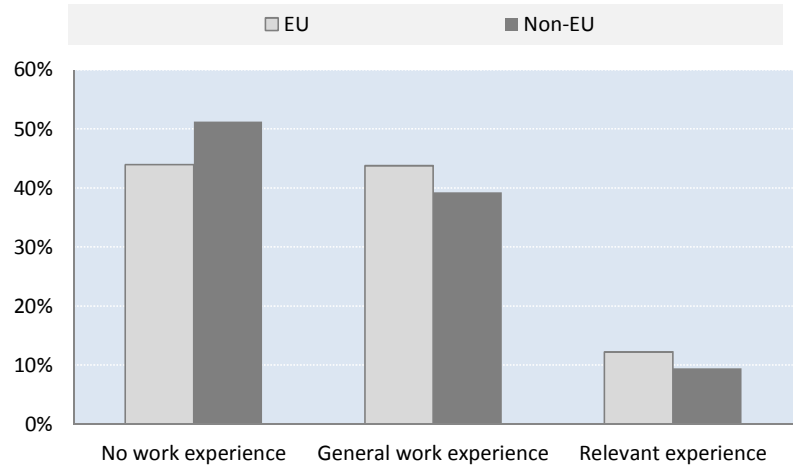
Figure 5.A1.2. Attitudes towards more immigration, 2014



Note: Individuals in each country participating in the survey are provided with examples of poor (and rich) EU and non-EU countries, notably the poor European and non-European countries that provide the largest number of migrants to the specific country. These were defined in turn by data on stocks and recent flows from the specific origin country and the origin country should have a lower Human Development Index than the destination country.

Source: European Social Survey, 2014.

Figure 5.A1.3. Type of work experience among international students, by origin



Source: Berkhout, E. et al. (2016), "Attracting and Retaining Highly Skilled Migrants in the Netherlands", SEO Economisch Onderzoek, Amsterdam; based on CBS data.

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