

# BA 2020 >>

## MOVING FORWARD

Special Edition

### Skilled Workers for Germany

Interim Balance and Forward Projection



**Bundesagentur für Arbeit**  
bringt weiter.

## SKILLED WORKERS FOR GERMANY: MUCH HAS BEEN ACHIEVED THROUGH COLLECTIVE ACTION

With the 2011 position paper “Perspective 2025 – Skilled Workers for Germany”, the Bundesagentur für Arbeit, Germany’s public service provider on the labour market, presented for the first time a comprehensive analysis of the supply of and demand for skilled workers in Germany. The central question posed was: how can a foreseeable skills shortage be successfully averted, in order to maintain growth and prosperity? We set out key levers in ten action fields, through which the skilled worker potential in Germany could be increased. In addition, transparency was created around responsibilities within each field of action.

Five years later we have a positive balance. Our analysis was followed by a constructive dialogue with our partners in the labour market and intensive collaboration at all levels. The issue of securing skilled workers is now firmly established on the political agenda. A series of initiatives has been implemented: for example, the Federal Government’s Demographics Summit, and the Partnership for Skilled Workers, in which the Bundesagentur für Arbeit is engaged, alongside its partners in industry, civic society, and the federal ministries.

In many of the listed action fields, it has been possible to increase the skills potential in many of the listed action fields. Particularly good progress has been made in increasing the labour force participation of women and older people. The number of low-qualified workers has also been reduced. Labour market actors have provided important momentum here. In addition, an increase in net immigration has made a difference to the structure of the labour market.

Taken together, these developments have meant that the predicted reduction in labour-market potential is not as severe as was feared a few years ago. However, it is now also becoming clear that ‘megatrends’ such as digitalisation and globalisation will lead to rapidly increasing global demand for highly skilled workers. If Germany is to survive in an internationally competitive market, it has to find ways of competing for – and obtaining – the most skilled workers. The threat of a skills shortage has not yet been averted. What now needs to be done is to consolidate what has been achieved and to exploit further possibilities for securing skilled workers.

A particular opportunity presents itself in the large number of people who are currently coming to Germany as refugees. Most of them are young and highly motivated. Although many of them do not have formal vocational qualifications, their integration into the labour market can succeed through adequate language training and by facilitating further qualifications.

With this brochure we want to take stock of what has already been achieved, and provide an overview of the challenges that are yet to be overcome. We describe specific measures and approaches which can help to better safeguard Germany's base of skilled workers in the coming decades, so that in future even more people are employed in skilled, secure work. For this purpose, we have extended the horizon of our analysis to the year 2030 and projected the action fields forward accordingly.

Since 2012, we have addressed the megatrend Demographic Change within the framework of our programme "BA 2020 – Answers of the Bundesagentur für Arbeit to Future Questions". This is based on what has already been set out in "Perspective 2025 – Skilled Workers for Germany". The subject of securing skilled workers is of central importance here. In building on "Perspective 2025," we will now embed the securing of skilled workers into our development programme. In this way, we are highlighting the issue as a priority within our organisation, and are concentrating our attention and resources accordingly.

We invite our partners to continue the dialogue and collaboration. All actors must develop concepts that are suitable for them, that interlock and pursue a common goal. The results so far convince us that this can succeed.



Detlef Scheele  
Labour Market Director



Frank-J. Weise  
Chair of the Board



Raimund Becker  
Regions Director





## **PART 1** >>

**SECURING SKILLED  
WORKERS: POTENTIAL  
OPPORTUNITIES**

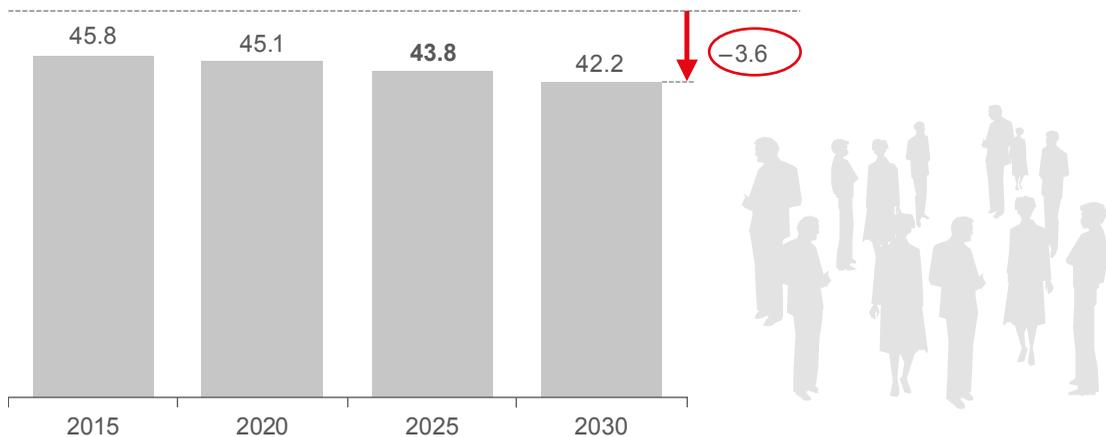
## SECURING SKILLED WORKERS: WHERE WE STAND

Following the aftermath of the global financial and economic crisis, the German economy has stabilised, and the labour market is developing positively. More and more employment opportunities are being created; unemployment is falling steadily. In Autumn 2015, the labour market reached a seminal point: the employment rate (and the low numbers of unemployed) reached a level which hadn't been seen since German reunification in 1990.

At the same time, the global economic climate remains unstable, and the effects of demographic change are intensifying. Not all social groups have profited as yet from the healthy state of the labour market. The exact consequences of the high number of refugees which have arrived in Germany remains uncertain. In conjunction with ever-advancing globalisation and digitalisation, the demand for skilled workers will remain high and increase significantly in specific industries and regions<sup>1</sup>.

Graph 1

BASED ON CURRENT ASSUMPTIONS, THE POTENTIAL LABOUR FORCE WILL FALL BY AROUND 3.6 MILLION PERSONS BY 2030



Potential labour force in millions

ASSUMPTIONS: Migration balance 200,000 annually, increasing activity rates of women and older persons  
SOURCE: IAB, Base Year 2014

<sup>1</sup> cf. Megatrends, "BA 2020 - Answers of the Bundesagentur für Arbeit to Future Questions", p. 11

The potential labour force will continue to reduce even after updated forecasts, but not as dramatically as was predicted in 2010. Here, the most significant factors are the growth in migrants coming to Germany compared to previous years; and the continually increasing labour-force participation of women and older people.

According to forecasts from the Institut für Arbeits- und Berufsforschung (IAB), the institution for employment research of the Bundesagentur für Arbeit, a forward projection of current trends leads to the expectation that there will be a reduction of the potential labour force of about 3.6 million workers by the year 2030. Here, annual net migration of 200,000 persons plus a continued, moderately increasing activity rate of women and older people are assumed. Scenario calculations from other institutions on the potential labour shortage in the year 2030 make similar conclusions.

The trend towards digitalisation will intensify and will generate new dynamics in the IT sector in particular – but also more widely<sup>2</sup>. New forms of work and competency specifications will be created that in turn will impact regional labour requirements. At the same time, digitalisation in industrial production in particular will lead to considerable increases in productivity (key word “Industry 4.0”). These trends could compensate in part for demographic declines in individual sectors. However, this effect cannot currently be accurately quantified. Prognoses from the IAB indicate a shrinking of employment in manufacturing, with parallel growth in the services sector<sup>3</sup>.

Shortages will therefore occur, and they will differ depending on the size of the company, the sector, the occupational field and the region. This means that, in spite of the positive developments of recent years, we cannot afford to reduce our efforts.

## WHERE POTENTIAL CAN STILL BE FOUND

In “Perspective 2025” we showed that the supply of skilled workers can only be increased in the long term with a combination of different control levers. We therefore want to follow two courses of action:

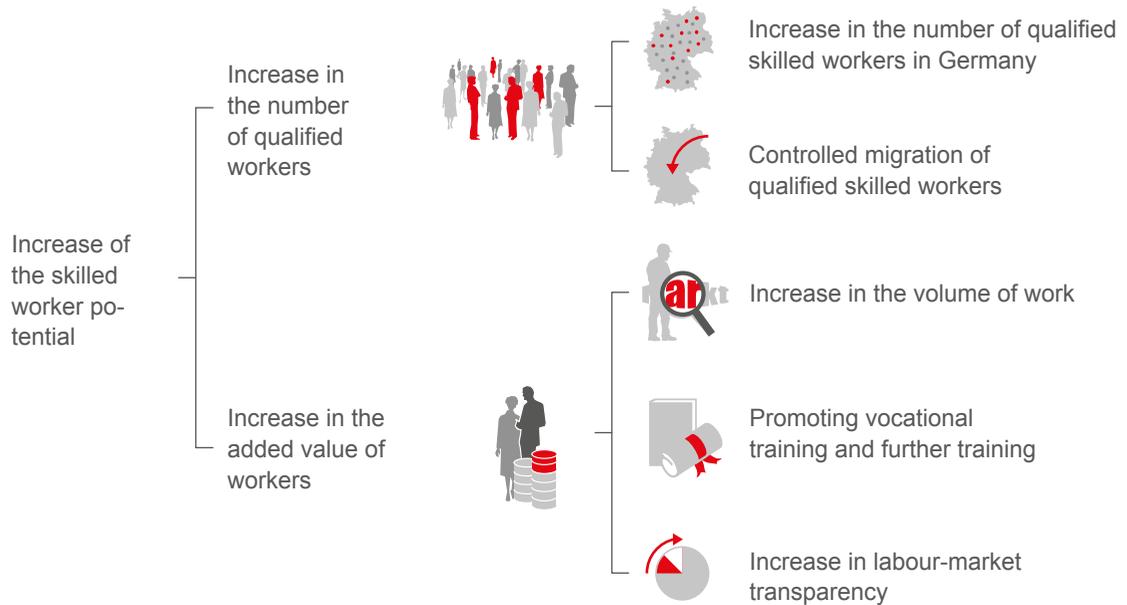
- Firstly, the number of qualified workers available to the German labour market should be increased. This can succeed by increasing both the number of qualified skilled workers within Germany and that of qualified migrants coming to Germany.
- Secondly, the added value provided by workers already active on the German labour market can be increased. This is achieved by people working longer - that is, by increasing the volume of work through “higher value” work (i.e. through well-trained and qualified skilled workers); and by good matching (skilled workers with the right qualifications at the right time in the right place). The more transparent the labour market is for all actors, the more likely this is to succeed.

<sup>2</sup> cf. “BA 2020”, Special Issue 3 “Industry 4.0 /World of Work 4.0”

<sup>3</sup> cf. “BA 2020”, Special Issue 5 “Work 4.0”

Graph 2

THE SUPPLY OF SKILLED WORKERS CAN ONLY BE INCREASED SUSTAINABLY WITH A COMBINATION OF DIFFERENT CONTROL LEVERS

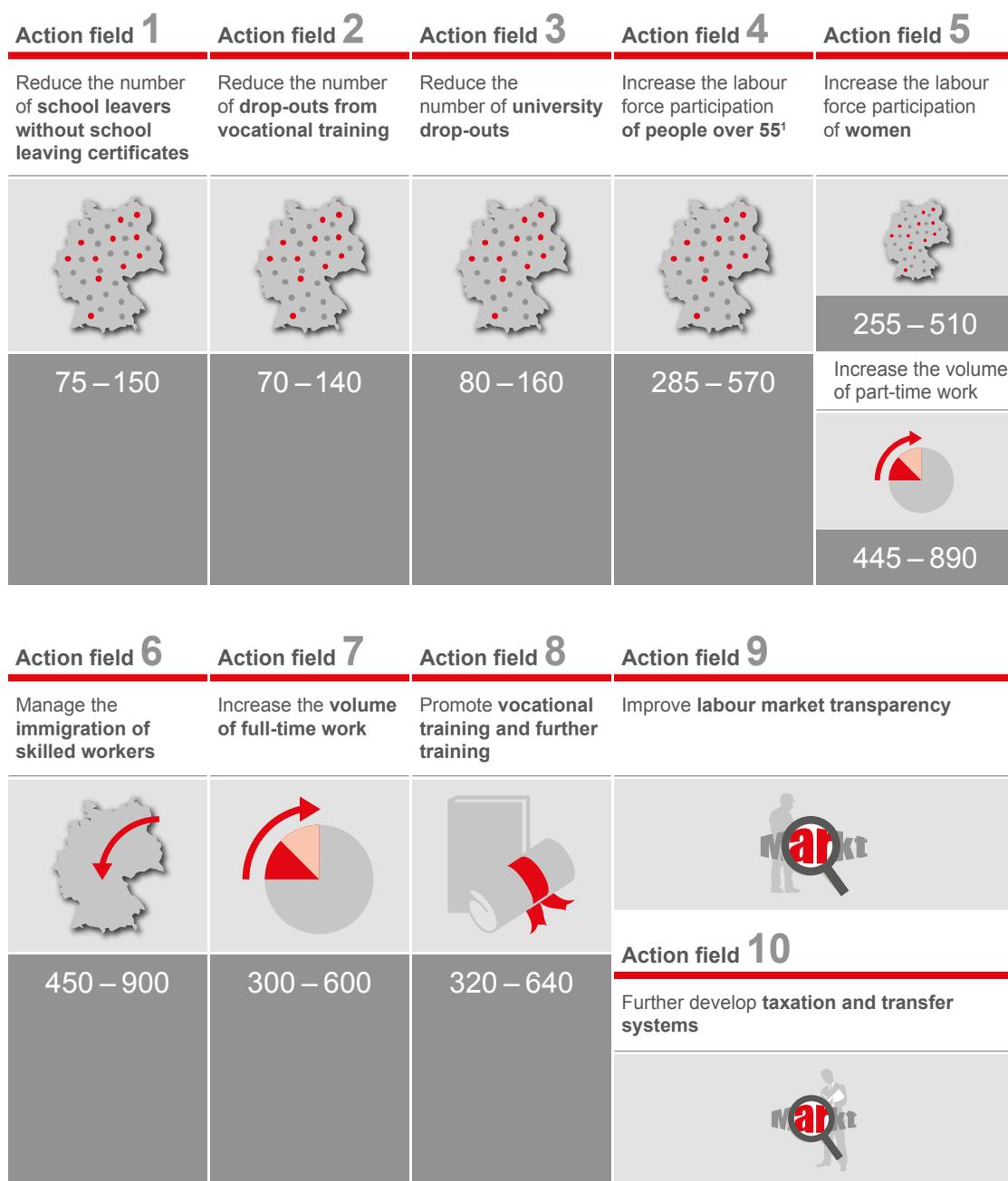


SOURCE: BA: own graphic

In “Perspective 2025” we developed ten action fields based on these levers. They are areas in which we see particularly great potential for acquiring skilled workers. These action fields are still valid. However, we have recalculated their respective potential with a time horizon up to the year 2030. In addition, because it often takes a few years before the measures become effective, the period that we use as a base for calculating their potential starts with the year 2020. We again show each measure’s potential in ranges. In assessing what is achievable, we set our goals – wherever practical – in line with European frontrunners, and envisaged a complete or partial approximation to them. Where this point of reference was not practical, we made assumptions based on developments in recent years and our known framework conditions, which are shown in the description of each action field.

Graph 3

**EFFORTS TO INCREASE THE SUPPLY OF SKILLED WORKERS ARE CONCENTRATED IN TEN ACTION FIELDS**



Potential up to the year 2030 in thousand persons/full-time equivalents (rounded)

<sup>1</sup> Consideration of the employment rate of persons aged 55 to 64 and that of persons aged 65 to 70

NOTE: Details of the calculation are in the text;

IMPLICIT ASSUMPTION: Each additionally acquired skilled worker in AF 1 – 3 and AF 6 corresponds to 1 full-time equivalent

SOURCE: BA, own calculations

## OVERVIEW OF TEN ACTION FIELDS AND THEIR POTENTIAL

### 1. Reduce the number of school leavers without school leaving certificates

The proportion of school leavers without school leaving certificates in Germany was reduced by a fifth to 5.7 % in the period between 2009 and 2013. With a reduction of a further 20-40 % by the year 2030, an additional number of around 75,000 to 150,000 young people with school leaving certificates could be trained as skilled workers.

### 2. Reduce the number of drop-outs from vocational training

One in four new vocational training contracts is terminated prematurely. Furthermore, this figure increased by over one tenth in the years 2009 to 2014. By reversing this trend and reducing the current drop-out rate by 10-20 %, around 70,000 to 140,000 skilled workers could be gained by 2030.

### 3. Reduce the number of university drop-outs

Almost one third of all undergraduates in Germany terminate their studies prematurely. There has been no reduction in the drop-out rate since 2009. A reduction in the drop-out rate of 10–20 % could result in about 80,000 to 160,000 skilled workers by 2030.

### 4. Increase the labour force participation of people over 55

Between 2009 and 2014, the employment rate of people aged 55 to 64 in Germany increased significantly: from 56 % to 66 %. At the same time, the introduction of a retirement age of 63 counteracted this trend, and experienced skilled workers are leaving the labour market prematurely. An additional 490,000 skilled workers could be available to the labour market if Germany achieved the same labour force participation of older people as Sweden, the EU's frontrunner. Even just halving the difference between Germany and Sweden would mean an additional 245,000 skilled workers staying in the labour market.

The employment rate of people aged 65 to 70 has also increased markedly in recent years. If the rate for this cohort could also be increased by an additional 10–20 %, the labour market would have an additional 40,000 to 80,000 experienced older workers in employment.

### 5. Increase women's labour force participation and their volume of hours worked

In recent years, the employment rate of women in Germany has increased by more than four percentage points to 70 %. If Germany were to catch up with Sweden, the EU's frontrunner by 2030, there would be 510,000 additional skilled workers in the labour market. Even if Germany only halved the difference between itself and Sweden, it would correspond to an extra 255,000 skilled workers.

In addition, the weekly working hours of women in part-time employment could be increased. With just over 19 working hours per week, Germany is far behind EU frontrunners where the level reaches almost 24 weekly working hours. A complete approximation to these levels would be equal to about 890,000 additional full-time equivalents. Halving the difference would still achieve a potential of around 445,000 additional skilled workers.

## **6. Manage the immigration of skilled workers**

In the light of the latest refugee figures, forecasts on migratory movements have become much more difficult to make. In spite of this, the migration balance will probably not remain at the present high level up to 2030. Assuming that immigration to 2030 takes place at least on a similar scale as the average value from 2006 to 2014, we can expect net migration of around 200,000 people per year. On the basis of this assumption, a gain of approx. 900,000 skilled workers up to the year 2030 would be possible, if we simultaneously take into account that not all immigrants are trained skilled workers.

With regard to the time horizon 2030, we also assume that the majority of immigrants to Germany will continue to come from within the EU and that about a quarter of them will be skilled workers. Because Germany specifically only recruits skilled workers from third countries, we expect a higher skilled worker rate of 40% within this group. However, this group of persons makes up only about one third of net migration.

In view of the uncertainty surrounding the future development of the migration of refugees, the potential calculated here could expand. However, current data does not permit a more exact forecast.

Nevertheless, if average annual net migration up to 2030 fell significantly up to 2030, e.g. to half the historical value for the period between 2006 and 2014 (100,000 persons per year), this would correspond to around 450,000 additional skilled workers up to the year 2030.

## **7. Increase the working hours of full-time workers**

Average weekly working hours in Germany are in the EU average range. If it were possible to motivate more people to work more hours per week, this could make a further contribution to meeting the economy's needs for skilled labour. If each person in full-time employment in the year 2030 worked on average half an hour longer per week than today, this would equate to an additional output of around 300,000 skilled workers. With one hour more per week, the figure would be 600,000.

## **8. Promote vocational training and further training**

Since 2009, the proportion of less qualified workers among the section of the population aged 25 to 64 has been successfully reduced by 13%. If this rate could be reduced by a further 10-20% by the year 2030, it would be equal to a gain of 320,000–640,000 additional skilled workers.

## **9. Increase labour market transparency**

A transparent, well-organised labour market facilitates successful 'matching', i.e. bringing together employees and employers that meet each other's needs. The time gap up to filling vacancies and the time spent searching for a new job are reduced through effective networking. In this way, the duration of phases of unemployment can also be minimised. A further increase in labour market transparency has considerable positive effects for securing skilled workers. However, it is difficult to quantify the impact.

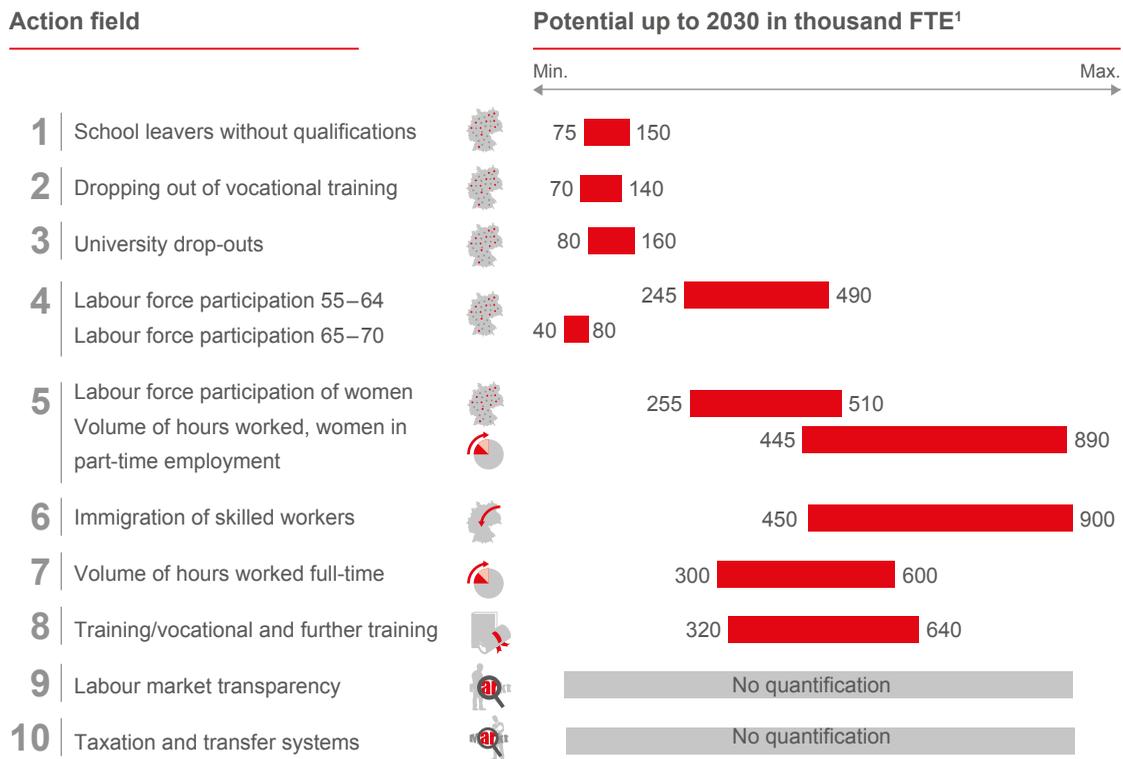
## 10. Further develop taxation and transfer systems

The structure of the taxation and transfer system can either support or hinder attempts to secure a skilled worker base. After interruptions to employment, a prompt return to working life must be facilitated. With this in mind, a balanced distribution of family care responsibilities must be supported, and the work of bringing up children and providing care remunerated appropriately.



Graph 4

OVERVIEW OF THE POTENTIAL WITHIN EACH OF THE TEN ACTION FIELDS



<sup>1</sup>FTE = Full-time equivalents. Rounding deviations possible.

ASSUMPTION: Each additionally acquired skilled worker in AF 1-3 and AF 6 corresponds to 1 full-time equivalent

SOURCE: Own graph





## **PART 2 >>**

IDEAS FOR SECURING  
MORE SKILLED WORKERS

## 1. REDUCE THE NUMBER OF SCHOOL LEAVERS WITHOUT QUALIFICATIONS

### Gaining qualifications in school

The foundations for a career as a skilled worker are laid in school. Young people leaving school without qualifications have poor prospects on the vocational training market. Only about one in five of those who leave school without qualifications find an apprenticeship afterwards. Reducing the numbers of school leavers without qualifications is therefore a major factor in securing skilled workers.

In fact, the proportion of young people in Germany who left general education without qualifications fell to around 6% between 2009 and 2013. This corresponds to a reduction of one fifth. In spite of this, there were still almost 50,000 young people who left school without qualifications in 2013.

#### Graph 5

IN ALL FEDERAL STATES THERE IS STILL A NEED FOR ACTION WITH REGARD TO SCHOOL LEAVERS WITHOUT QUALIFICATIONS

**Germany 2014: 5.8 %**



School leavers without qualifications based on Federal States (2014)

SOURCE: Statistisches Bundesamt, 2014

Pupils with a migration background are particularly at risk of dropping out. The number leaving school without qualifications is almost twice as high as for young people without a migration background. However, the main reason for this is not the migration background as such, but the socio-economic background of many immigrant families in Germany. The parental home plays a significant role here. The better educated the parents, the less likely their children are to leave school without qualifications. This applies to all sections of the population.

Should we succeed in reducing the number of school drop-outs by 20% from 2020, it would pave the way for a total of around 75,000 young people to start a career as a skilled worker by 2030. With a 40% reduction in the drop-out rate, over 150,000 young potential skilled workers would be available.

To achieve this, work must start in (pre-)school. Special attention should be paid to groups that are at particular risk. Parents need to be sensitised at an early stage to the importance of their children's education, and should be given competent advice and support regarding educational issues. The ESF<sup>4</sup> federal programme "Parents' Chance II", run by the Federal Family Ministry, is pursuing this goal. Children and young people with a migration background are given early and intensive language training so that they can catch up with their fellow pupils as quickly as possible. Inclusive support services in regular schools are necessary for young people with disabilities. The federal states are above all responsible for developing this great potential up to the end of attendance at school.

### **Supporting the transition from school to work**

In 2014 there were about a quarter of a million young people in the so-called transition phase – no longer in school, but not yet started in their first vocational training. One in five young people in this group have no qualifications. There are many reasons for long transition phases. They range from poor grades, through a lack of maturity for training, to disadvantages in their social context.

Various actors support young people in their initial occupational orientation. The vocational guidance service of the Bundesagentur für Arbeit offers targeted guidance and individual support for young people regardless of their educational background. In the case of initial vocational education, mentors help pupils where there are indications that they might have difficulties in vocational training; will not manage to finish school with a qualification; and/or that the transition to vocational training will be unsuccessful. Mentoring can continue into the vocational training relationship. Through training measures aimed at preparing the young person for work, the right competencies for entering vocational training are developed (the so-called Berufsbereitende Bildungsmaßnahme); here, it is also possible for the participant to obtain a lower secondary school leaving certificate retrospectively.

Achieving significant progress in the transition from school to work still requires greater collaboration between employers' associations, trade unions, chambers of commerce, the federal government and state governments, and the Bundesagentur für Arbeit. For example, the objective of an alliance that promotes vocational training and further training ("Allianz für Aus- und Weiterbildung") is to link key actors and develop effective measures for strengthening in-house vocational training. The alliance partners aim not only to attract more young high achievers to vocational training but also to enable in-house vocational training for more young people who have had a less favourable start in life<sup>5</sup>.

### Youth employment agencies

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Staff from Jobcenters; from approved local authority bodies; and from the youth welfare service and vocational guidance service of the Bundesagentur für Arbeit work together in 218 so-called 'youth employment agencies' (as of July 2015). Through intensive cooperation and the active integration of additional network partners – in particular schools – official services dealing with the start of work are made considerably more accessible for many young people. For example, discussions are held in joint case-conferences and decisions are made on which assistance young people need most, and on what legal basis. In doing this, youth employment agencies have decentralised decision-making and organizational competence. At present, most youth employment agencies concentrate on young people in need of support. Above all, cooperation in the youth employment agencies has an impact on prevention, when young people are supported through the transition from school to work in a coordinated manner. The intention is to develop youth employment agencies into standard institutions open to all young people.

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<sup>4</sup> European Social Fund

<sup>5</sup> For more detailed information, go to [www.bmwi.de](http://www.bmwi.de) > [allianz-fuer-aus-und-weiterbildung-2015-2018](http://allianz-fuer-aus-und-weiterbildung-2015-2018)

## 2. REDUCE THE VOCATIONAL TRAINING DROP-OUT RATE

In Germany, about 150,000 training contracts are terminated prematurely every year. This affects one in four new contracts. Termination of a contract does not always mean a complete break with vocational training: about half of the young persons involved soon start new training, or a further education qualification, e.g. at university. A change can be the sensible way to correct a wrong decision. However, the other half of this group of young people – what would amount to 75,000 potential skilled workers annually – remain without any vocational qualifications for an initial period after dropping out. All regions in Germany are affected by this problem, as well as by the comparatively high number of school drop-outs. The challenge is particularly large in craft trades: here, one in three contracts is terminated prematurely. The figure for industry and commerce is over one in five training contracts.

If we succeed in lowering the drop-out rate by 10% to the level of 2009, or even by 20%, between 70,000 to 140,000 trained young people could be additionally available in on the labour market.

The best way to prevent drop-outs from vocational training is to have clear perceptions of work. In particular, pupils can obtain a realistic impression of potentially interesting skilled occupations through work experience. This is why it is important to further develop cooperation between schools and industry on practice-oriented careers guidance.

The vocational guidance service of the Bundesagentur für Arbeit guides young people towards choosing an occupation while they are still at school, and, on request, works out individual strategies with them for choosing vocational training or a degree. With a broad presence in all agency districts, vocational guidance officers are the first contact partners for schools regarding questions relating to the transition from school to work. In addition, the vocational guidance service is paying increasing attention to gender-sensitive offers: girls and boys are supported in making a decision on an occupation that matches their individual skills and interests, and which is free from gender clichés.

In order for this guidance service to remain up-to-date, uncomplicated and personalised in future, the existing online range for young people should seamlessly interlock with the offer of personal guidance. Online appointment booking and chat services will make it much easier for users to access the vocational guidance service. The Bundesagentur für Arbeit is currently developing concepts for implementing these offers.

After the start of training, the challenge is to organise overall conditions so that they are favourable for both the trainee and employer, and counteract typical drivers for dropping out. Frequently, conflicts within the company are the trigger for breaking off vocational training. It may be possible to prevent such conflicts through timely guidance for trainees and businesses. Effective measures range from regional and local initiatives offering intensive coaching, to regular coaching for trainers on current topics of conflict management. It is important to further develop these initiatives offered by local organisations, chambers of commerce and trade associations.

A lack of flexibility with regard to working hours also frequently leads to contracts being terminated. Flexible part-time models can be an alternative for young people whose personal circumstances do not permit full-time training, e.g. if the trainee has a young family. To extend the range of part-time vocational training further, closer networking and coordination of regional players – chambers of commerce, employers' associations and vocational schools – is necessary. Young adults with caring responsibilities and employers can obtain support through 'JOBSTARTER', which is a vocational training programme run by the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung).<sup>6</sup>

<sup>6</sup> For more detailed information, go to [www.jobstarter.de](http://www.jobstarter.de) > Fachkräfte gewinnen > Junge Erwachsene mit Familienverantwortung.

Graph 6

ONE IN FOUR TRAINING CONTRACTS IN GERMANY ARE TERMINATED PREMATURELY

Germany 2013: **25 %**

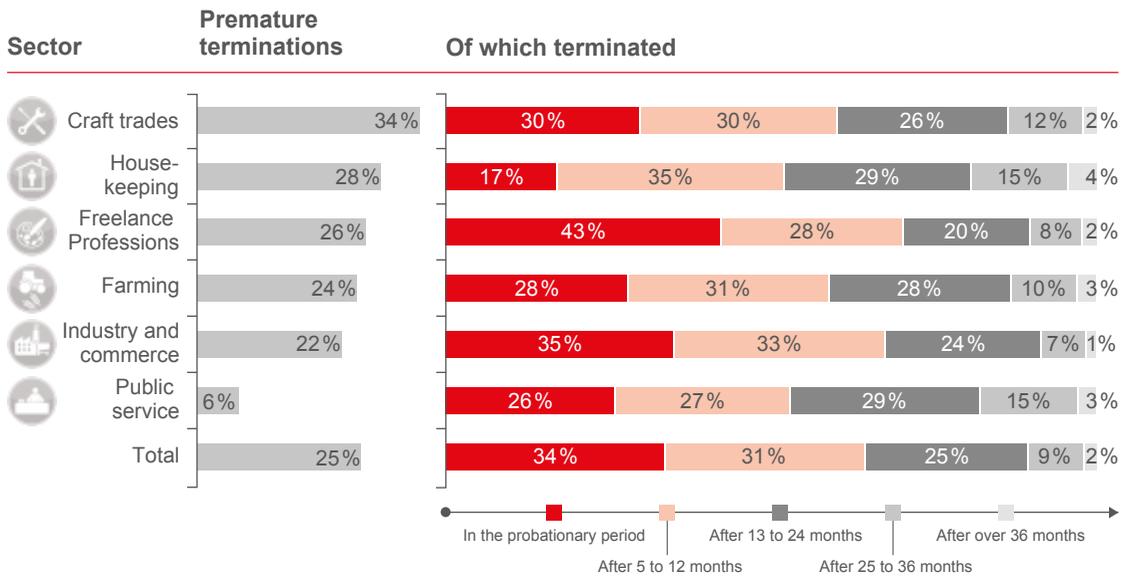
Contracts terminated prematurely as a proportion of the vocational training contracts started in the current year, based on federal states in 2013

SOURCE: Bundesinstitut für Berufsbildung BiBB (the Federal Institute for Vocational Training Affairs). Data report on the Report on Vocational Education and Training 2015; "Trainee database" of the Federal Institute for Vocational Training Affairs based on the vocational training statistics of the federal and state government statistics agencies (survey as of 31 December). Reporting years 2010 to 2013; calculations by the Federal Institute for Vocational Training Affairs



Graph 7

MOST CONTRACTS ARE TERMINATED IN THE FIRST TRAINING YEAR



Premature terminations based on sectors as a proportion of the training contracts started in the current year and based on the time the contract was terminated, nationwide, 2013

SOURCE: Bundesinstitut für Berufsbildung – BiBB (the federal institute for vocational training a. Data Report on Vocational Education and Training 2015, deviations from 100% possible due to rounding

Often, financial problems also lead to participants dropping out of vocational training. Low-paid training professions are particularly heavily affected. Companies can counteract this by offering non-monetary support and intelligent organisational solutions for trainees: for example, travel allowances or accommodation at the training location.

With its guidance services, the Bundesagentur für Arbeit is ready to support not only young people but also employers, especially small and medium-sized enterprises (SMEs). Businesses are also given advice about young people's expectations regarding training and work. In addition, the Bundesagentur für Arbeit offers measures which are aimed at lowering the numbers of contracts terminated prematurely. These include support which runs parallel to vocational training; supported in-house vocational training for severely disabled young people, and, since May 2015, assisted vocational training. Apart from this, an online diagnostic tool ('Praelab'), which is intended to prevent training terminations is in its trial phase. In order to improve training and employment opportunities for young people with severe disabilities, the Bundesagentur für Arbeit is involved in a joint inclusion initiative to promote more in-house vocational training and employment of persons with disabilities.<sup>7</sup>

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#### Assisted Training

Assisted training is intended to improve the opportunities for disadvantaged young people to access on-the-job vocational training and to increase their chances of completing it successfully. Assisted Training is used to help both young people and their training companies intensively and continuously during training. In addition, AsA may comprise a training preparation phase of up to six months.

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#### Praelab

At present, the Bundesagentur für Arbeit is testing the web-based diagnostic tool Praelab. Praelab's aim is to prevent premature training terminations. It is a survey and evaluation tool which enables counsellors from the Bundesagentur für Arbeit and teachers in vocational schools to identify young people who are at risk of dropping out at an early stage; and gives them examples of how to intervene. With this early warning system, young people are reached at a point in their training where a proactive guidance service for preventing terminations can still be effective. Through collaboration with vocational schools, support strategies can thus be identified early, and solutions worked out in advisory interviews with the young person.

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#### Supported on-the-job vocational training (bbA)

Here, a practice-oriented start to working life and a permanent integration into the mainstream labour market is supported by the targeted promotion of in-house vocational training for those young people with a disability who need support, but who are not dependent on an institution. Where necessary, the companies providing this training are supported, so that the training runs smoothly and is successful for participants.

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<sup>7</sup> This initiative was launched by the Federal Ministry of Labour and Social Affairs, leading industrial associations, the German Trade Union Congress, the Bundesagentur für Arbeit, the Deutsche Landkreistag (the central association of Germany's Counties), the Federal Association of Integration Offices and Main Welfare Associations, associations of persons with disabilities and the representative of the Federal Government for the concerns of people with disabilities.

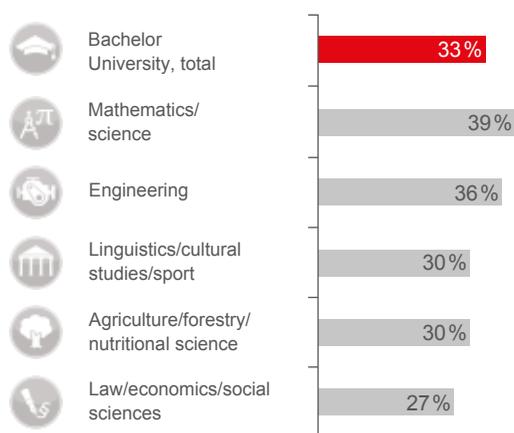
### 3. REDUCE UNIVERSITY DROP-OUT RATES

Every year, approx. 100,000 students still leave university in Germany without a degree. The rate is one in three at generalist universities, and one in four at universities of applied science. There are significant differences in the drop-out rates between bachelor's and master's degree courses, and between subjects. STEM courses (science, technology, engineering and mathematics) have particularly high drop-out rates, and it is exactly in these subjects that skilled workers are urgently needed. Since 2009, the proportion of university drop-outs has remained largely static. Additional efforts are therefore imperative in this action field.

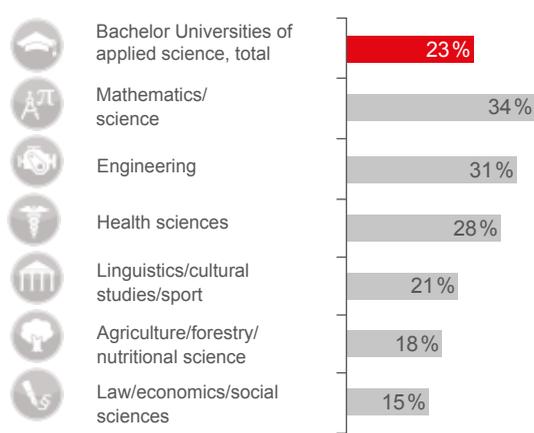
Graph 8

#### THE DROP-OUT RISK IN STEM<sup>1</sup> BACHELOR'S DEGREE COURSES IS PARTICULARLY HIGH

Drop-out rates in bachelor's degree programmes at universities



Drop-out rates in bachelor's degree programmes at universities of applied science



<sup>1</sup> STEM = Science, Technology, Engineering, Mathematics  
Representation of drop-out rates based on subject groups, reference group: graduates 2012  
SOURCE: DZHW-Studienabbruchstudie, 2014

The reasons for dropping out have barely changed in recent years: one third of drop-outs are the result of issues with performance or passing exams, a further third is due to a lack of motivation (e.g. as a result of misconceptions around course content) and due to the desire to change track. In addition, financial problems and unfavourable study conditions are frequently indicated as motives.

If we succeed in reducing the drop-out rate of undergraduates by year 2030 by between 10 % and 20 %, 80,000 to 160,000 additional highly qualified skilled workers could be gained.

The wrong decisions in the run-up to studying can largely be avoided by offering better local information and through better networking between schools, universities and advice centres. Here, it is important to make the most of the opportunities presented by digital information channels. Existing information media for those interested in studying (for example, those of the Bundesagentur für Arbeit at [www.abi.de](http://www.abi.de)) should be supplemented by offers from universities. Positive examples of well-targeted information portals for potential students are North-Rhine Westphalia's portal at [www.studifinder.de](http://www.studifinder.de)<sup>8</sup> and "MINTSTUDIUM.HAMBURG", which informs prospective students about STEM courses in Hamburg and was launched in September 2015.

<sup>8</sup> Joint initiative of the universities in North-Rhine Westphalia and the Ministry for Innovation, Science and Research, Land North-Rhine Westphalia

## 'MINTSTUDIUM.HAMBURG' PORTAL

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With the Internet portal MINTSTUDIUM.HAMBURG, the 'Science and Technology Initiative' has developed an overlapping platform together with Hamburg's universities<sup>9</sup> that presents STEM courses and recruits students for Hamburg. MINTSTUDIUM.HAMBURG is supported by the local authority responsible for science, research and equal opportunities. Along with information on courses and research fields at the participating universities, the portal also introduces students and academics and provides an insight into career opportunities. Amongst other things, the service has an online test for checking users' own abilities. For those who want to deepen their knowledge in a field and prepare for the start of their course, relevant online modules are made available. For more information visit [mintstudium.hamburg/](http://mintstudium.hamburg/)

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In addition, the Bundesagentur für Arbeit offers nationwide vocational information and vocational counselling in schools for those sitting university entrance exams. Students who have doubts, or who drop out, are advised on alternatives, for example, around on-the-job vocational training or college-based training; as well as on dual studies – in some cases directly at the university.

If dropping out appears to be unavoidable or the best option for the student, it is important to develop alternatives as seamlessly as possible with the goal of a successful entry into working life. In view of the fact that there are already shortages in many occupations that will probably intensify further in future, the transition of those who drop out into the dual training system in particular could contribute to securing skilled workers. In many regions, chambers of commerce have initiated programmes that comprise special training offers for students who have dropped out of university into so-called 'dual occupational training' programmes. In some cases, the training can be fast-tracked. Initiatives of this type should be developed further.

In addition, the engagement of regional governments and universities is needed to create better conditions for increasing graduation rates. In the framework of The Higher Education Pact, financial incentives for universities are to be introduced in 2016 to increase the success rates of their students. This is a step in the right direction. Additional efforts are required, in particular to promote university access for young people from the low income groups. Students' financial means – regardless of their parents' income – must be sufficient to guarantee focussed and success-oriented study. Companies could also support future skilled workers by means of grants during internships periods, in order to attract them at an early stage.

## 4. INCREASE THE LABOUR FORCE PARTICIPATION OF PEOPLE OVER 55

The baby-boom generation in Germany is now reaching the 55-64 age group. In addition, the effective retirement age has increased over the last ten years. This was a consequence of various factors: the phased elimination of early retirement, including special rules surrounding unemployment benefit for older workers; and the gradual raising of the retirement age to 67. In 2014, about two thirds of those aged 55 to 64 were employed; in 2009 this figure was only 56%.

The employment rate of those aged 55 to 64 in Germany is now above the OECD average. In the European Union, Germany ranks second behind Sweden and has already achieved the national EU target<sup>10</sup> of reaching a labour force participation rate of 60% for persons aged 55 to 64 by the year 2020.

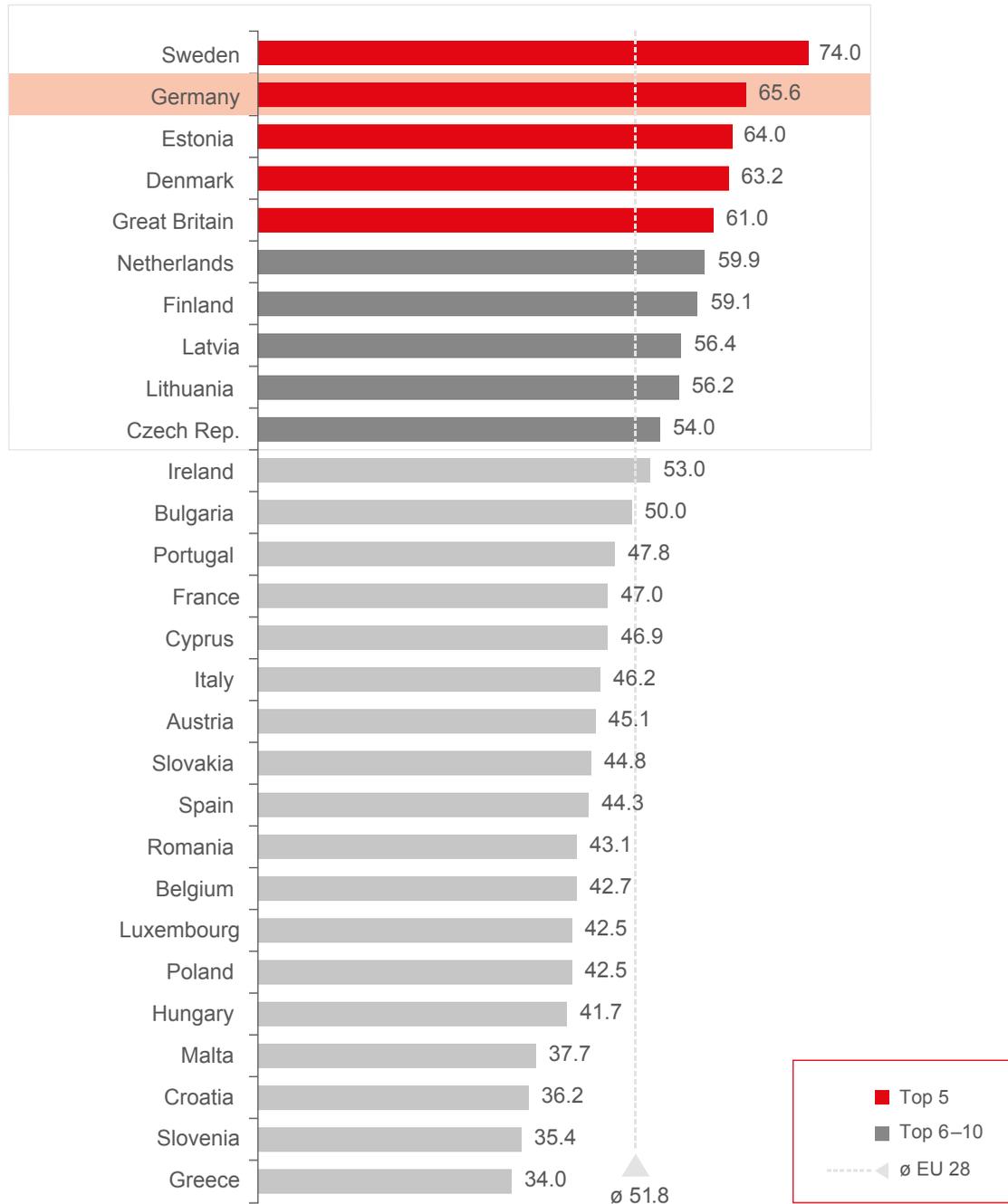
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<sup>9</sup> Hamburg University, Hamburg-Harburg Technical University, Hamburg University of Applied Science, HafenCity University Hamburg and the Helmut Schmidt University.

<sup>10</sup> See as well: BMAS (2011): Fachkräftesicherung – Ziele und Maßnahmen der Bundesregierung, p. 38.

Graph 9

THE LABOUR FORCE PARTICIPATION RATE IN GERMANY OF PERSONS AGED 55-64 RANKS SECOND IN AN EU-28 COMPARISON



Employment rate of persons aged 55 to 64 in a European comparison in the year 2014 in %

SOURCE: Eurostat, 2014

Behind this positive message are 1.2 million additional employees compared to just five years ago; 6.7 million people aged between 55 and 64 are gainfully employed – although about one third of them work part-time.

If we succeed in continuing this trend and raise the employment rate of 55-64 year-olds in Germany to the Swedish level from 2020, about 490,000 additional skilled workers could be gained in the period up to 2030. If the rate achieved were only half that of Sweden's, this would still mean 245,000 additional skilled workers.

Further potential lies in increasing the labour force participation of those aged 65 to 70. An increase of 10–20% would correspond to a rise in the workforce of around 40,000 to 80,000 persons.

To increase the labour force participation of older people, reforms and measures are necessary which reduce the premature withdrawal of older skilled workers from work and which facilitate access to the labour market for older people.

On the employer side, age-sensitive personnel policies are crucial. One lever for this is the creation of age-appropriate working conditions through corporate health management, adequate workplace design, as well as flexible working hours and job locations. In addition, life-phase oriented personnel matching is important.

To enable this to succeed, chambers of commerce and employers' associations must above all encourage SMEs to carry out age-sensitive personnel policies and to intensify their training efforts for older employees. This could be accompanied by learning methods customised specifically for older people. With its marketing campaign "Das bringt mich weiter" (campaign "That takes me forward"), the Bundesagentur für Arbeit is deliberately pushing for further training and training for older age groups ([www.dasbringtmichweiter.de](http://www.dasbringtmichweiter.de)).

Politicians also have a duty to improve the structures and incentives surrounding the employment of older people. Older peoples' premature withdrawal from working life is fostered by early retirement rules. In order to support higher employment in old age, incentives should be created for voluntarily postponing the start of retirement. Employment should be financially attractive for older employees. In addition, incentives could be envisaged for companies that want to distinguish themselves as particularly age-friendly employees. Possibilities of certification for companies (analogous to family-friendly companies, see action field 5) could help here.

Additional employment opportunities must be opened up to facilitate the (re-)entry of older people into employment. This can be achieved if companies can be convinced of the advantages of hiring older employees – such as expertise and experience, social competence and well-established networks. The local offices of the Bundesagentur für Arbeit and Jobcenters provide support here through their advisory services and, where necessary, through financial support for further training. In addition, with the help of integration grants specifically for older employees, their perceived or actual lower productivity can be compensated in the familiarisation phase. Associations and chambers of commerce could support this desired change even with information and awareness-raising.

“WeGebAU” for low-qualified people or older employees

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With its programm “WeGebAU”, the Bundesagentur für Arbeit supports the further in-house training of people with low qualifications or employed older workers. Support is provided for further training which is carried out within the existing employment relationship with the continued payment of wages. Training that employers are statutorily obliged to provide is excluded from this support.

The WeGebAU programme comprises three support pillars that target different groups of employees:

- Pillar 1: Training employees in small and medium-sized enterprises (SMEs) with fewer than 250 employees. Support is provided for course costs if the further training is given outside the company.
- Pillar 2: Further training resulting in a qualification for lower-qualified employees: support for the costs of training courses that lead directly to a recognised vocational qualification (retraining or preparatory courses for external examinations); in addition, support in paying social security contributions.
- Pillar 3: Vocational training resulting in a qualification: support for partial qualifications for lower-qualified employees, if they lead indirectly to a recognised vocational qualification. Along with support for course costs and grants to help with social security contributions, companies can also receive a wage subsidy.

The local offices of the Bundesagentur für Arbeit support companies in determining their specific further training requirement and clarify the prerequisites for support. Further information can be found at [www.arbeitsagentur.de](http://www.arbeitsagentur.de) > Unternehmen > Finanzielle Hilfen > Weiterbildung.

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## 5. INCREASE WOMEN'S LABOUR MARKET PARTICIPATION AND THEIR VOLUME OF WORKING HOURS

Over the last years, the employment rate of women in Germany has been continuously increasing. In 2014, seven out of ten women were in gainful employment – a total of 17.8 million (around 400,000 more than five years before). Germany is now above the OECD average and in third place in EU comparisons.

If Germany succeeds in reaching the level of the EU's frontrunner, Sweden (73.1%), by the year 2030, an additional 510,000 women could be gained on the labour market. Even just halving the difference to Sweden would mean an additional 255,000 skilled workers by 2030.

In order to further increase the skilled worker potential amongst women, employment should match qualifications as far as possible and facilitate an independent livelihood. The increase in the labour force participation of women to date has primarily been due to an increase in part-time employment – including marginal employment. Only around half of employed women work full time. Since 2009, the weekly working hours of women in part-time employment have increased by one hour, but Germany is still one hour below the EU average. In addition, 3.3 million women are employed solely in marginal employment.

If Germany achieved the average weekly working hours of women in the top five EU countries, by 2030 an additional 890,000 skilled workers (in full-time equivalents) would be available. Even just halving the difference would still mean an additional 445,000 female skilled workers by 2030.

The employment patterns of men and women without children differ only slightly, but the establishment of a family leads to large differences in labour force participation, and above all in working hours. Women still take the greater share of childcare and other domestic work. In addition to this, as the number of older people who require long-term care increases, greater numbers of employed people are forced to juggle work with additional caring responsibilities. The majority of this long-term care work is carried out by women. The consequences are the loss of female skilled workers in the labour market, much lower pay on re-entry, and negative effects on career development and pension rights for the women affected.

At the same time, many women would like to start work again or increase their working hours, if they could adapt this better to their family- and caring circumstances. However, a return to the labour market, or an increase in working hours frequently fails because of a lack of support in the re-entry phase; a lack of childcare; and a lack of workplaces which take caring responsibilities into account. Single mothers are particularly affected: many of the 1.4 million single mothers in Germany would like to increase their hours of work, but only 40 % of them work full time.

Women who want to return to working life or to increase their hours of work therefore represent – both quantitatively and qualitatively – one of the most important potentials for closing the skilled worker gap in Germany. Women jobseekers are advised by the local offices of the Bundesagentur für Arbeit and Job-centers and are supported where necessary with training offers. Increasingly, further training modules and measures are available online that can be used anywhere at any time (e.g. blended learning within the online programme for women returnees, called “Perspektive Wiedereinstieg – PWEonline”).

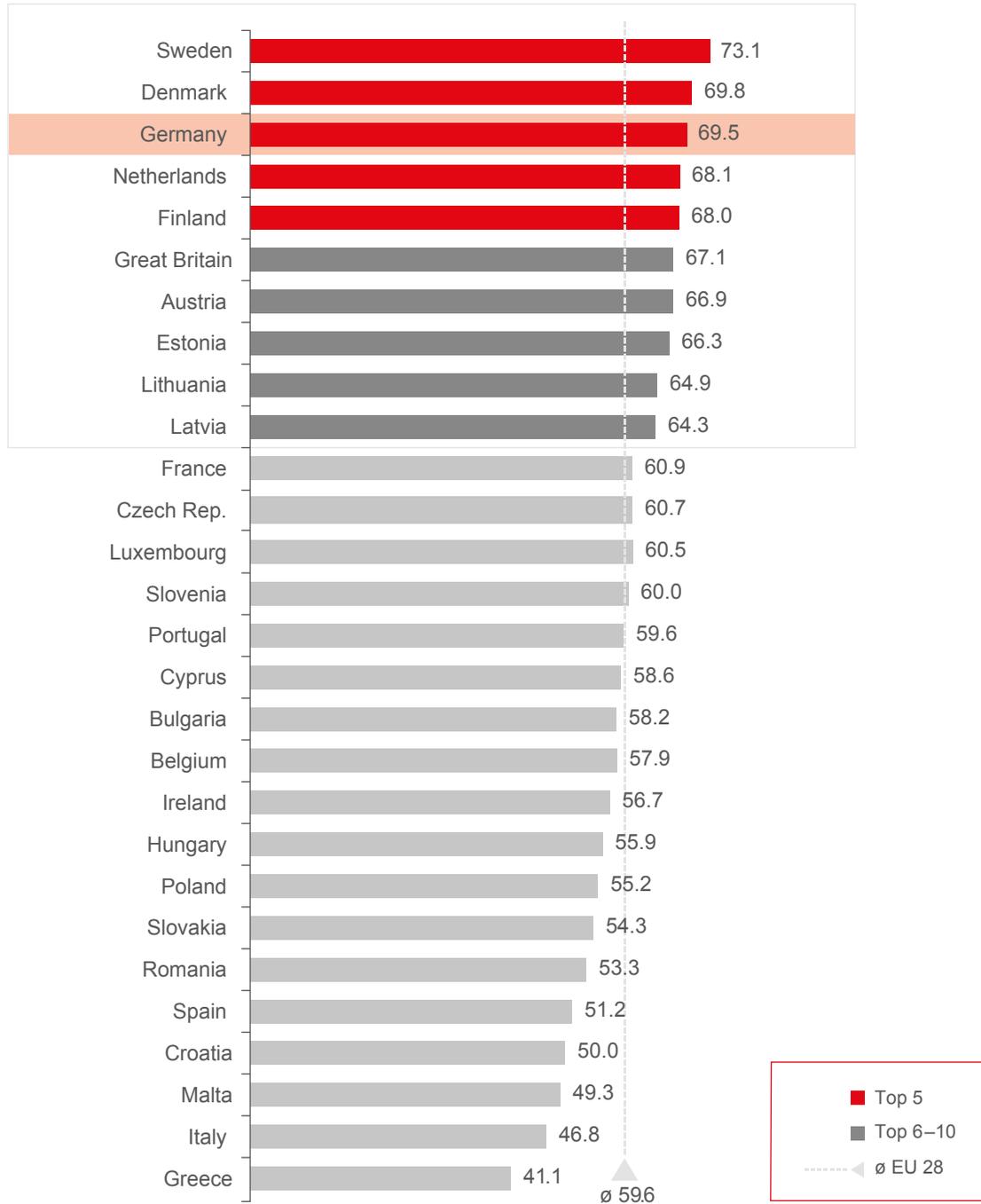
Many companies are already making efforts to create working conditions that are compatible with bringing up a family or providing long-term care – for example with offers for flexible working. In spite of this, one third of men fear career penalties if they make use of these offers. For women, the willingness of husbands and partners to help them with looking after the family and with long-term care plays a significant role in the decision for or against (re-)starting work or extending their employment. Companies cannot therefore make a contribution simply through being family-friendly. They also have to reassure their male employees that they can work in a way which is compatible with family responsibilities, without being afraid of, or suffering, career disadvantages. This is accompanied by the need to develop and realise suitable management models for part-time working or working from home. Leading German industrial associations<sup>11</sup> recommend that companies and universities get certified as family-friendly enterprises in the work and family audit (audit beruf und familie) or the family-friendly university audit (audit familienfreundliche hochschule) ([www.beruf-und-familie.de](http://www.beruf-und-familie.de)).

Suitable childcare is the major factor in influencing the employment of women. By offering the legal right to a childcare place for all children under three, Germany has taken a step in the right direction. But there is still a lack of extensive childcare facilities in the afternoon and outside normal working hours. The Federal Government, the Regional Governments and Local Authorities are all responsible here for creating reliable, high quality, and at the same time affordable, childcare solutions through financial engagement and workable policies. Employers can also make a contribution by supporting the organisation and financing of childcare, or by making in-house childcare facilities available.

<sup>11</sup> Confederation of German Employers' Associations (BDA), Federation of German Industries (BDI), Association of German Chambers of Industry and Commerce (DIHK) and the Central Association of German Craft Trades (ZDH).

Graph 10

GERMANY IS IN THIRD PLACE IN A COMPARISON OF THE LABOUR FORCE PARTICIPATION OF WOMEN IN THE EU-28

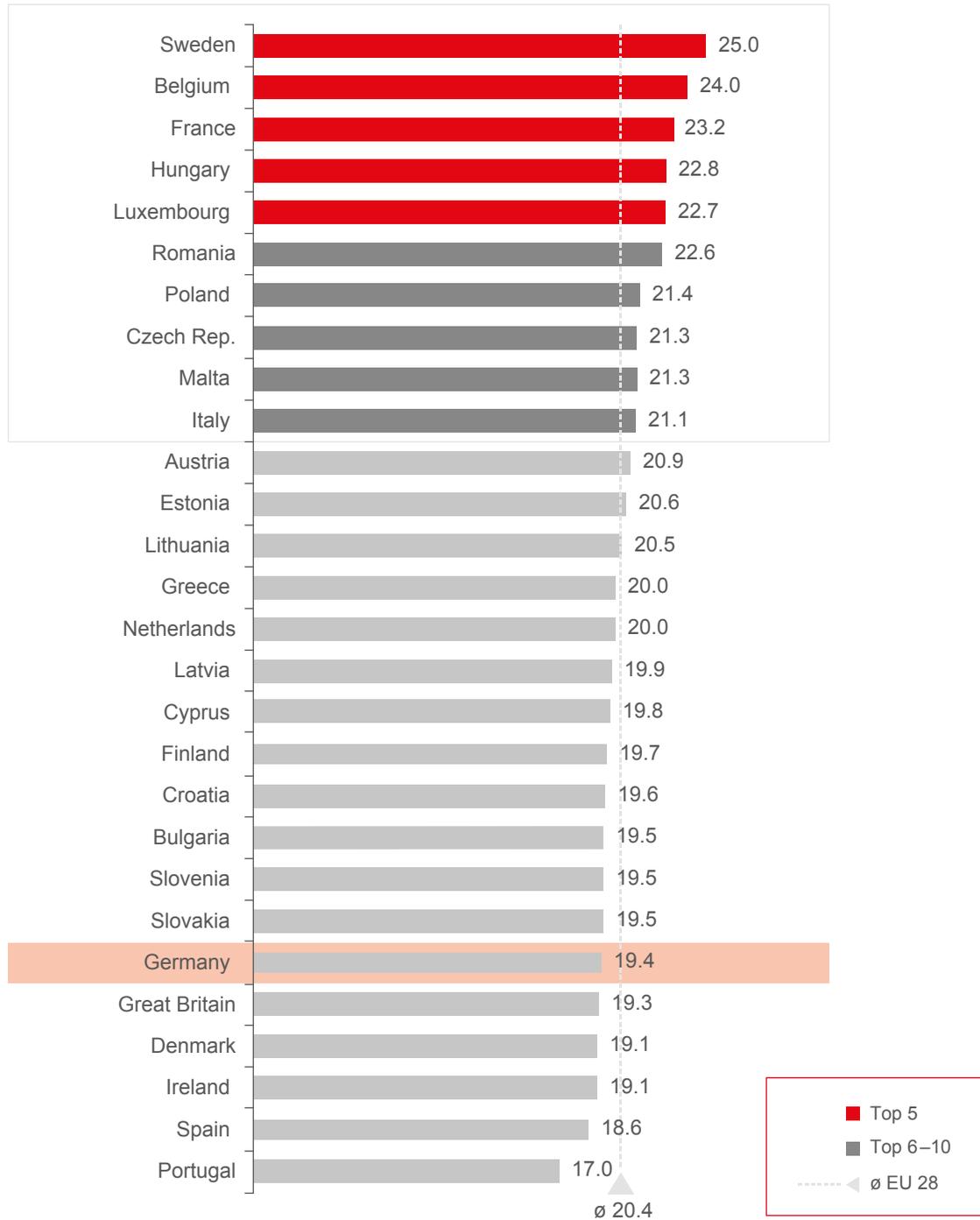


Employment rate of women (ages 15 – 64) in a European comparison in 2014 (in %)

SOURCE: Eurostat, 2014

Graph 11

GERMANY IS IN THE BOTTOM QUARTER WITH REGARD TO WEEKLY HOURS WORKED BY WOMEN IN PART-TIME EMPLOYMENT



Weekly working hours of women in part-time employment in a European comparison in 2014 (in hours)

SOURCE: Eurostat, 2014

Activating hidden reserves: ESF model employment programme, 'Perspektive Wiedereinstieg'.

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The European Social Fund (ESF) helps women and men nationwide to re-enter work through activation, guidance and training measures, as well as with parallel coaching, after a break caused by family obligations. In the current ESF funding period (2014–2020), the focus is on the following areas:

- Re-entry and responsibility for care: Guidance and information on solutions for employers and for people looking to go back to work.
- Employment subject to social security instead of a mini-job: Support for the marginally employed who want to follow a new career path.
- 'Perspektive Wiedereinstieg' online: Flexible learning from anywhere at any time in virtual classrooms and with independent learning modules – the eLearning program, which has already won several awards, is being developed further.
- Partners: Offers that enable all participants to consciously shape their roles when bringing up a family.
- Family support services: Informing and motivating women re-entrants to use family support services as well as activating employment opportunities for re-entrants within personal- and family support services.
- Businesses: Partnerships with companies and business federations, promoting re-entrants as a target group for recruitment.

In addition, the action programme "Perspektive-Wiedereinstieg" offers the following services:

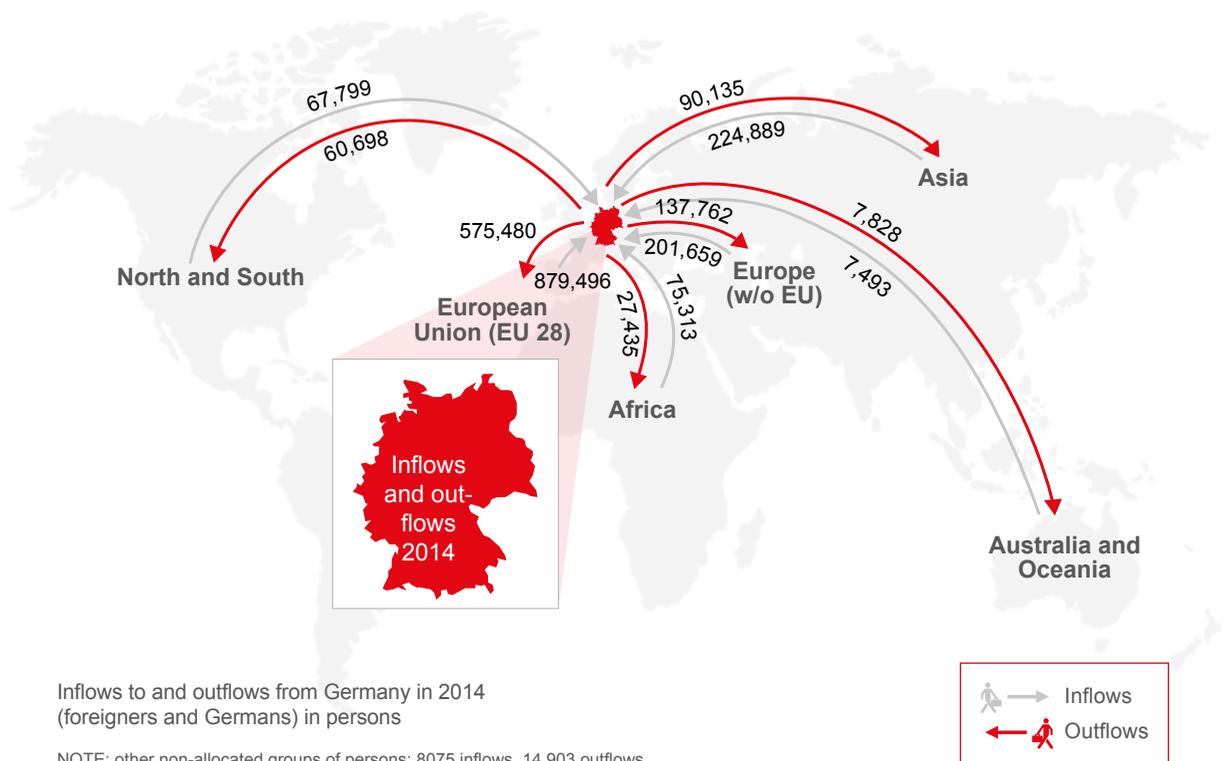
- Advisory portal [www.perspektivewiedereinstieg.de](http://www.perspektivewiedereinstieg.de) with comprehensive information on restarting work.
  - Re-entry calculator: calculates the financial advantages of re-entry into working life: [www.wiedereinstiegsrechner.de](http://www.wiedereinstiegsrechner.de)
  - XING group: "Perspektive-Wiedereinstieg: Klick Dich rein – für neue Wege" provides a forum for discussing re-entry into working life. This is for HR managers as well.
  - Summer school for women with a start-up idea: [www.bpwakademie.de](http://www.bpwakademie.de)
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## 6. MANAGE THE IMMIGRATION OF SKILLED WORKERS

In the last few years, Germany has become one of the most popular destinations for migrants globally. In 2009, the migration balance was still negative, but according to the OECD, by 2014, Germany had developed into the second most popular country of immigration after the USA. Due mainly to migration from other European countries and to the large influx of refugees from crisis-hit countries, around 1.5 million people came to the Germany in 2014, which is about 550,000 more than the number that left the country. In 2015, the number of refugees that arrive in Germany will be much higher than the figures for 2014.

Graph 12

### FLOWS INTO GERMANY OUTWEIGH MOST REGIONS IN THE WORLD

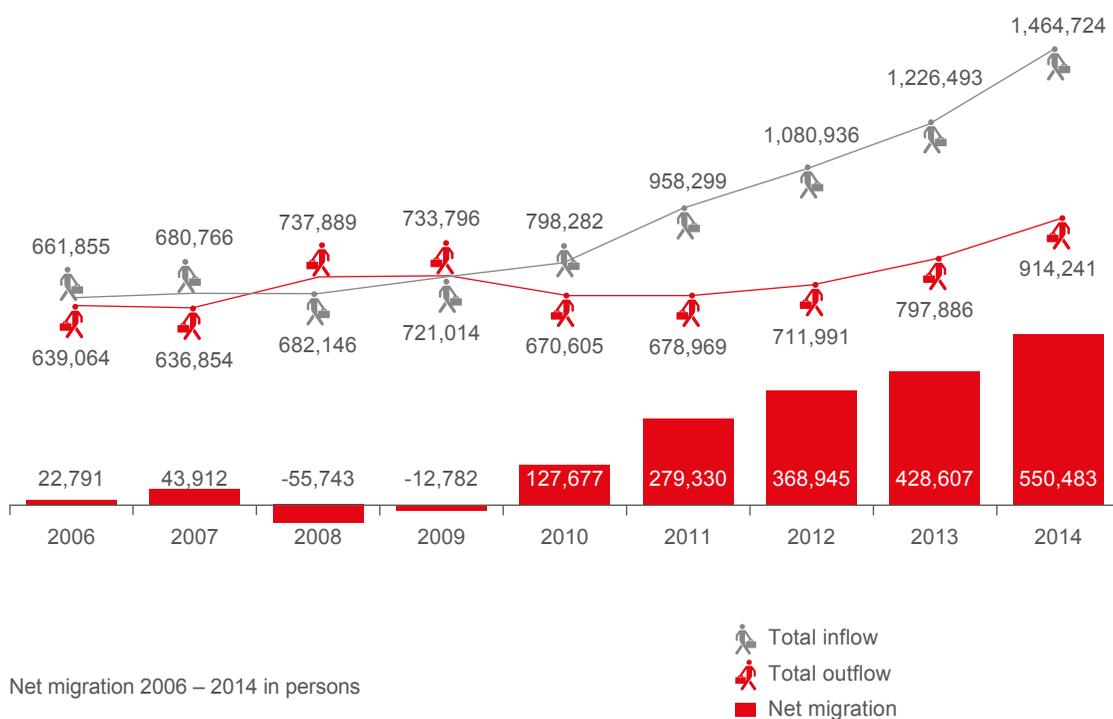


Germany is also an attractive destination for highly qualified workers. According to the Institut für Arbeitsmarkt- und Berufsforschung, in 2014 more than one third of immigrants aged between 25 and 64 were university graduates; and a good quarter had successfully completed vocational training. In comparison: the proportion of graduates amongst Germans without a migration background is only about 20 %.

In contrast, refugees are a highly heterogeneous group with regard to their vocational qualifications, and their corresponding ability to integrate into the labour market. The available data suggest that the vocational qualifications of refugees are on average much lower than other population groups with a migration background. The gap is less marked with regard to school education. The challenge of integrating refugees into the labour market must therefore be differentiated from approaches for integrating economic migrants. It requires particular engagement and effort from across society: targeted measures and supplementary instruments are necessary to deal with this task.

Graph 13

NET MIGRATION TO GERMANY HAS INCREASED CONTINUOUSLY SINCE 2009



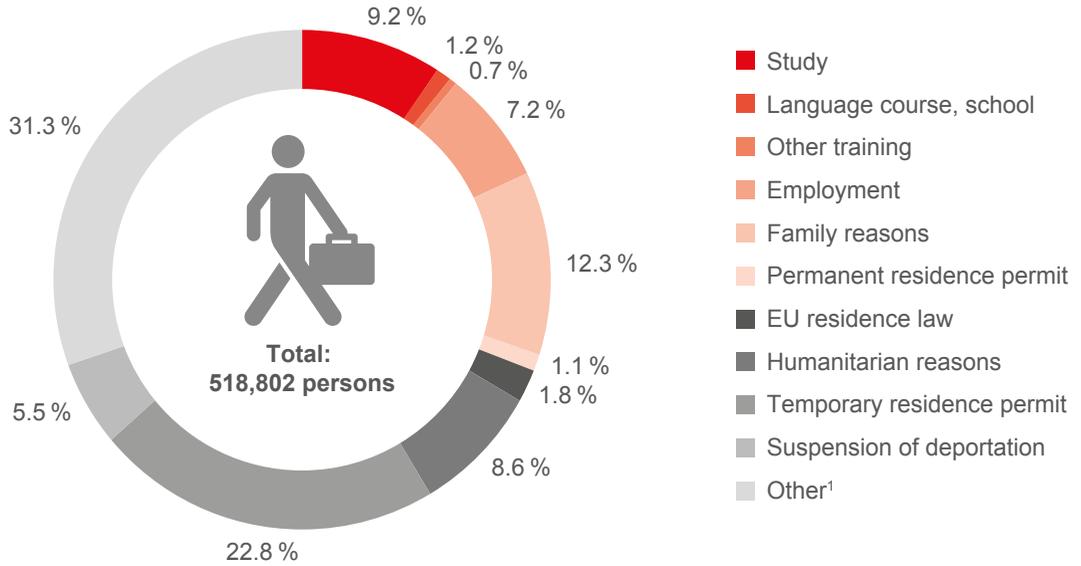
It is practically impossible to forecast how migration dynamics in Germany, which are traditionally characterised by high levels of fluctuation, will develop. On the one hand, it cannot be assumed that the high refugee figures for 2015 will become a permanent feature. On the other hand, net migration could continue to increase in the longer term, e.g. through family reunification.

Thus, in spite of the currently high influx of refugees, our considerations up to the year 2030 are based on the historic net average value since 2006 of 200,000 persons per year. On the basis of previous experience, they will probably include a total of 900,000 skilled workers up to the year 2030. If only half as many arrive, or if only half could be trained as skilled workers, this would still mean an increase of around 450,000 skilled workers in Germany through migration. However, in view of the uncertainty regarding future migration flows, it cannot be ruled out that this estimate will on the whole shift upwards significantly.

The main countries of origin will change considerably – not only through the growing inflow of refugees. At present, about two thirds of immigrants come from the European Union. Inflows in particular from southern and eastern EU countries have increased considerably in recent years. However, demographic developments and the economic catch-up process in many EU countries will lead to a lowering of the mobility of skilled workers in these states, and should lead to some of the EU-citizens who had moved to Germany returning to their home countries. In contrast, economic migration from third countries to Germany remains at minor levels: most third-country immigrants come to Germany either as asylum seekers or due to family reunification.

Graph 14

ONLY A SMALL PROPORTION OF IMMIGRATION FROM THIRD COUNTRIES IS EMPLOYMENT-RELATED

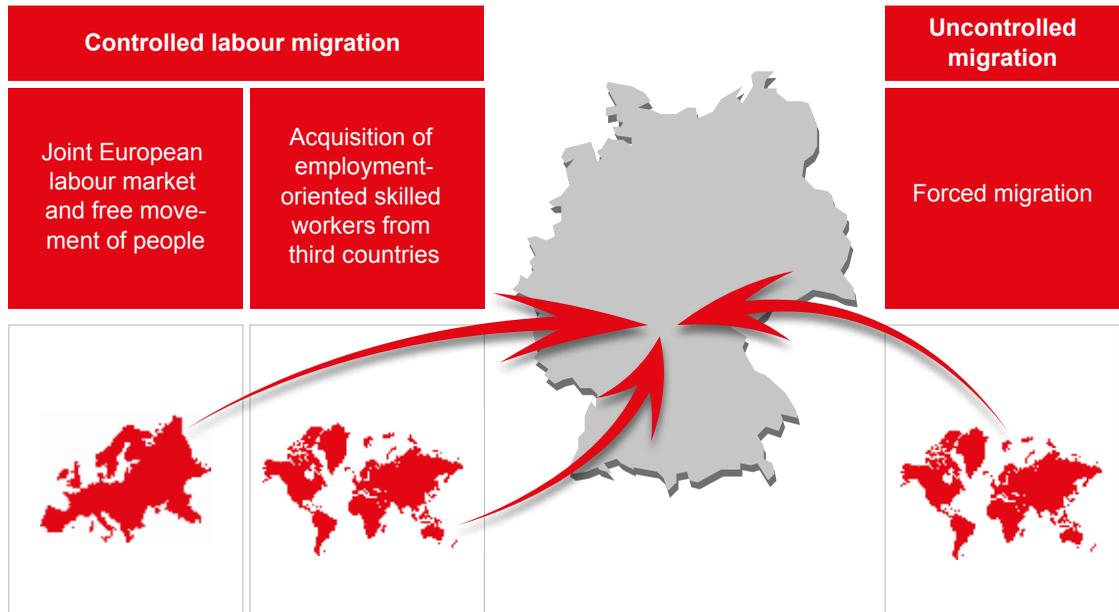


Inflows of persons from third states 2014 based on reasons for residence

<sup>1</sup>This includes among others persons who have applied for a residence permit  
 SOURCE: Statistisches Bundesamt, BAMF migration monitoring, deviations from 100% due to rounding are possible

Graph 15

THREE PILLARS FOR SECURING SKILLED WORKERS THROUGH IMMIGRATION TO GERMANY



SOURCE: Own graph

For this reason, targeted and sustainable securing of a skilled worker base still requires controlled immigration to Germany, which offers career prospects to young and well-trained skilled workers from other EU countries and from third countries. This is why the Bundesagentur für Arbeit concentrates on three pillars as a basis for securing skilled workers: 1. the common European labour market, 2. acquiring employment-oriented skilled workers from third countries, and 3. the integration of refugees. A conceptual difference must be made between controllable migration (pillars 1 and 2) and uncontrolled migration (pillar 3).

### **Managing the immigration of skilled workers**

In order to offer young and well-trained skilled workers from abroad career prospects in Germany, it is important to proactively use the opportunities that arise from the free movement of people in the EU. In addition, there should be a greater focus on foreign graduates in German universities. And, finally, attractive programmes are necessary that address employment-oriented skilled workers from Europe and overseas directly.

For this reason, the Bundesagentur für Arbeit has intensified its policy focus on recruiting international skilled workers and reorganised the Zentrale Auslands und Fachvermittlung (ZAV), Germany's international placement service (cf. "BA 2020", Special Issue 4). Most migration is still organised privately by migrants themselves. Against this background, the ZAV focusses its work on a comprehensive range of information and guidance for immigrants, which is implemented in collaboration with a variety of other institutions. In 2012, for example, with the Internet portal "Make it in Germany" an information platform was jointly created with the Federal Ministry of Labour; and the Ministry for Economic Affairs in the framework of the skilled workers campaign that is directed at both foreign skilled workers and German employers.

In cooperation with the Federal Office for Migration and Refugees (Bundesamt für Migration und Flüchtlinge, BAMF), the ZAV maintains the hotline "Working and living in Germany", through which skilled workers from abroad can obtain information on many topics relevant to migration. The "Virtual Welcome Center" of the Bundesagentur für Arbeit, which was launched in July 2015, offers individualised guidance on working and living in Germany to skilled workers and prospective students or trainees from abroad. In the medium term, the "Virtual Welcome Center" will become the central point of contact for all immigrants who have questions about working and living in Germany.

At present, nursing staff are being recruited from third countries<sup>12</sup> in the framework of project initiatives. For example, one joint initiative with the association with the Gesellschaft für Internationale Zusammenarbeit, a governmental institution supporting German cooperation with other countries, is called "Triple Win"; another collaborative project is being carried out with an association of nursing employers (Arbeitgeberverband Pflege e. V.) and the Federation of German Employers' Associations. Experiences from these projects will, in the medium term, inform the development of initiatives that are equally attractive for employees, employers and the countries of origin. The basis for selecting the third countries in which recruitment initiatives are to be carried out will in future be informed by an indicator-based country analysis. This will take account of the immigration potential of third countries and their affinity with Germany, as well as the possible impact on the countries of origin.

At present, there are about 320,000 foreign students<sup>13</sup> in Germany: they make up about 12% of the total student population. After graduation, less than half of them remain, even though 80% originally intended to do so<sup>14</sup>. Foreign graduates in Germany have a limited residence permit, but they can speak German and have already settled culturally and socially. In addition, with a degree obtained in Germany there are usually no issues with regard to the recognition of qualifications and certificates. Various BA Employment Agencies offer coaching in cooperation with universities, and mediate contact with employers to facilitate foreign graduates' entry into the German labour market.

In recent years, barriers to accessing to the German labour market have been lowered through changes to the Residence Act and Employment Regulations; and through a Recognition Act for the assessment of

<sup>12</sup> Bosnia-Herzegovina, Serbia, Philippines, China.

<sup>13</sup> Foreigners who acquired university entrance qualifications abroad.

<sup>14</sup> Poll by the Expert Council of German Foundations for Integration and Migration.

foreign vocational qualifications. In addition, there are ongoing discussions on the further development of current immigration provisions, or the introduction of a points system.

In order to succeed in the global competition for skilled workers in the long term, access to the labour market must not only be simplified, but a welcome-culture must be established in Germany – both in society and in working life. When looking for employees, employers can make greater use of the potential of immigrants. In companies, for example, they can launch internal mentoring programmes and further training measures on intercultural communication, or support employees with a migration background through profession-specific language lessons. All this serves to create a culture in which skilled immigrant workers feel welcome and supported.

### **Refugees – opening up tomorrow’s opportunities for skilled workers**

At present, the number of refugees who will need to be brought into German society and employment is at an all-time high. It is difficult to assess the medium-term prospects for the integration of refugees into the labour market. There is still little information available on the training level of refugees. There is some indication that their average vocational qualifications are lower than that of Germany’s native population. In addition, qualifications acquired abroad frequently do not conform to German requirements, or are not formally certified in the countries of origin. Furthermore, in most cases there is hardly any knowledge of German, if at all.

On the other hand, the cohort of refugees in Germany has a very favourable demographic structure. About one in four are aged between 16 and 25, and almost 40% are in the age group 25 to 45. They are thus of working age, or are of the right age for vocational training. Many children of refugees and young asylum seekers will grow up speaking German and in future start an apprenticeship or studies and will be trained as skilled workers.

Asylum seekers’ integration into the labour market and society will take time and must be started as early as possible. Soon after arrival, language training should be provided, vocational qualifications and skills assessed and development needs determined. At present, the Bundesagentur für Arbeit is developing and testing new methods for ascertaining competencies so that refugees’ vocational and language needs can be identified more rapidly (“Perspektive für Flüchtlinge – Potenziale identifizieren, Integration ermöglichen” – PerF).

On the legal level, a variety of crucial steps have been taken to simplify the rules surrounding asylum seekers’ entry into training and employment. For example, the waiting period before starting work for asylum seekers and “tolerated” foreigners whose deportation has been suspended has been reduced to three months; the residence obligation has been relaxed; and a priority test<sup>15</sup> for specific groups of people and occupations has been scrapped. Asylum seekers with good prospects of remaining can be enrolled in an integration language course already before they are recognised as refugees. In addition, the Bundesagentur für Arbeit can finance short-term targeted language courses for people with a positive prospect of remaining in order that they can start work as quickly as possible.

However, in spite of all these measures there is still a great need for action. It would be desirable, for example, if refugees were permitted to show their abilities through work trials and internships, alongside providing or obtaining certificated qualifications. Industry associations and chambers of commerce should enable the practical modularisation of training courses, and a recognition of occupational skills which are built up over time. At the same time, training and further training should be accompanied by an appropriate framework, such as the provision of childcare, advice from social workers, integration courses and practical training places.

<sup>15</sup> In priority tests the competent Employment Agency checks whether privileged applicants are available for a specific job. Privileged are: Germans, EU citizens, citizens of EEA countries, Swiss nationals, and nationals of third countries with unrestricted access to the German labour market.

The integration of refugees into the labour market represents a challenge for the whole of society and requires substantial investment. All actors are called upon to make a contribution. If integration is successful, refugees represent one of the greatest opportunities that exist for covering the need for skilled workers in Germany – not immediately, but certainly in the medium to long term.

#### “Early Intervention”

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A pilot project for integrating asylum seekers into work was launched at the beginning of 2014. The project’s partners were the Federal Office for Migration and Refugees (BAMF) and the federal programme “XENOS - labour market support for legal immigrants and refugees”, which is sponsored by the European Social Fund. The objective of the project, which ran until the end of 2015, was to identify refugee skilled workers and to open up the labour market for them more quickly. For this reason, asylum seekers were included in measures for integration into the labour market at an early stage, i.e. already during the asylum process and even before expiry of the period of the three-month ban on employment.

This early intervention principle proved to be effective and has now been drawn up in legislation. The law on accelerating the asylum process ensures that people with good prospects of remaining in Germany can be given early support for integration into the labour market. In addition, a series of qualificatory, procedural and organisational approaches were tried out at the nine model project locations and analysed by scientists. The findings that were acquired here continue to impact on a variety of regional activities and initiatives.

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## 7. INCREASE THE WORKING HOURS OF FULL-TIME WORKERS

In principle, extending the weekly working hours of full-time workers represents a lever for securing skilled workers. If total weekly working hours were increased only moderately to 42 hours from 2020, this would equate in 2030 to around 300,000 additional skilled workers. With an increased working week of 42.5 hours, the figure would increase to 600,000.

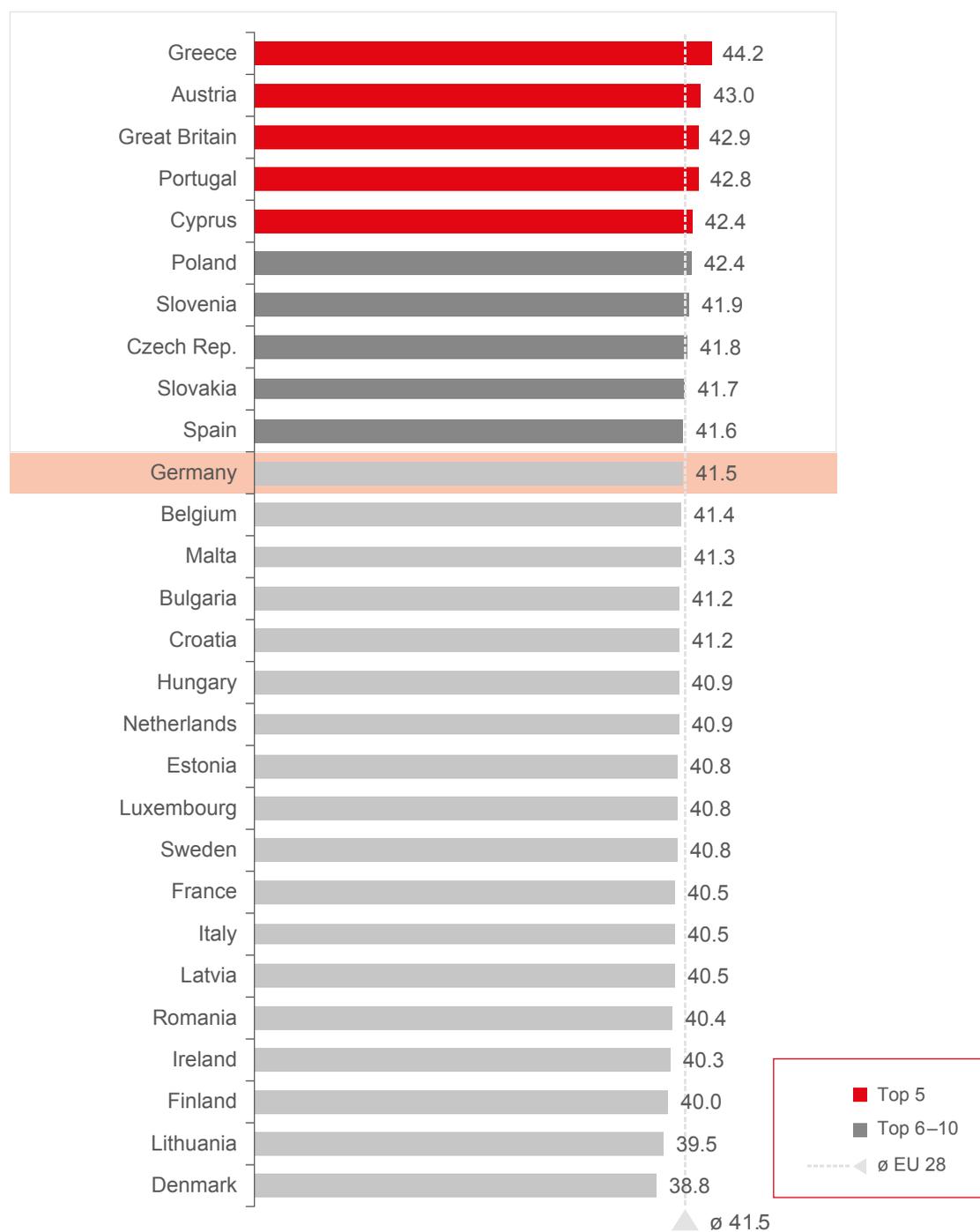
However, since 2009, average weekly working hours (including overtime) have fallen by 0.4 hours to 41.5 hours, and today they are average for the 28 EU countries.

There is no evidence at present that many full-time workers want to work more hours. In particular, generation Y, i.e. those born roughly between 1977 and 1998, tend to prioritise work-life balance: better compatibility of family and work, and more leisure time. For this reason, along with the approaches described in action field 5 (labour force participation of women), an extension of working hours could benefit above all from three levers: financial incentives for extra work, flexibilising workplaces and flexible working hours. Employers and trade unions will play a key role in ensuring implementation here, but also legislators also have a role to play.

For example, Employers and trade unions could extend the scope for overtime further and make more intensive use of suitable incentive systems, such as overtime pay, extra pay for night shifts and week-end work, variable payment systems, or bonus systems.

Graph 16

GERMANY IS AT THE EUROPEAN AVERAGE FOR WEEKLY WORKING HOURS FOR FULL-TIME WORKERS



Weekly working hours of full-time workers in a European comparison 2014 (in hours)

SOURCE: Eurostat, 2014

Flexible working hours will also become increasingly important in future<sup>16</sup>. A more individualised orientation of working hours towards the need of companies and employees is conceivable, in order to open up additional timeframes for work, and to motivate employees to work more hours voluntarily. Training measures can also be integrated more easily into an individually organised working day (see action field 8 as well on this). In this context, the German Federal Government should check whether an adjustment of the statutory framework would help here: for example, in changing from a daily to a weekly upper limit for working hours.

Finally, digitalisation opens up more flexibility regarding workplace location. In the last few years, the trend towards more mobile employment did in fact fall slightly<sup>17</sup>. However, bearing technological developments in mind, further increases in the use of mobile workplaces can be expected. Above all, employees with childcare or long-term care obligations (see action field 5 as well), employees with health restrictions, or people with disabilities, profit from flexibilisation of location. A mobile workplace enables them to work full-time in the first place; to increase their working hours; or to work overtime, in their existing job. Many companies have already begun to adapt to these changes. However, Small and Medium-sized Enterprises (SMEs) require support from their chambers of commerce and associations, in order to be able to transition to location flexibility and benefit from the competitive advantages it offers.

## 8. DRIVE VOCATIONAL TRAINING AND FURTHER TRAINING FORWARD

The proportion of qualified employees in the total potential labour force plays an essential role in the securing of a skilled worker base. Considerable progress has been made in Germany since 2009: the proportion of low-skilled workers amongst those aged between 25 and 64 fell by more than one tenth to around 13%. In spite of this trend, significant efforts are still necessary in this area. It is predominantly better-qualified employees who continue to profit from the strong state of the labour market. This is evidenced by the unemployment rate for low-skilled people, which is now 19% and is therefore around four times as high as the rate for people with who have obtained vocational training. In the case of university graduates, the unemployment rate is just 2.5%. Thus, the prospects of finding the right job are still unfavourable for those who have low or insufficient qualifications. The situation for low-skilled workers could worsen further with the advent of digitalisation, through which the demand for highly qualified workers is further intensifying. Even skilled workers in some sectors are increasingly coming under pressure<sup>18</sup>.

Vocational training and further training – above all of low-skilled people – must therefore be intensified in order to make better use of the skilled worker potential for Germany, to prevent long-term unemployment and to promote social integration. The activities of employers, the Bundesagentur für Arbeit and the regional governments (who are the authorities responsible for schools) must go hand in hand here. If we succeed in reducing the proportion of low-skilled people by a further 10–20% by 2030, it would be the equivalent of the acquisition of an additional 320,000 to 640,000 skilled workers. However, this target can only be achieved through the joint efforts of all players.

With the dual training (or apprenticeship) system, Germany has a solid basis for directly meeting business's demands for skilled workers. This is also a significant competitive advantage in an international context. In order for full use to be made of the potential here, it is important to increase the proportion of training companies and to give even more people – including those with a lower level of education – an opportunity to take part in dual training.

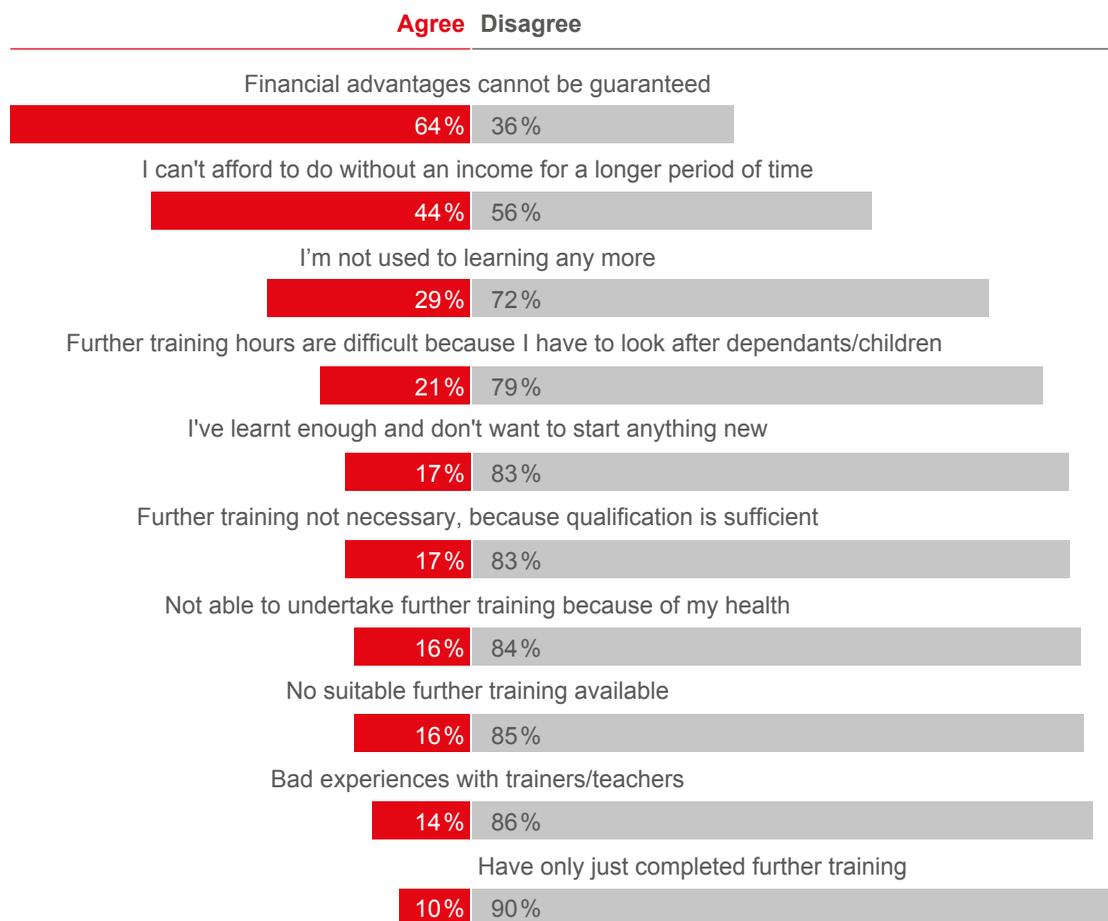
<sup>16</sup> cf. "BA 2020", Special Issue "Work 4.0"

<sup>17</sup> In 1996, the proportion of mobile employees among all employees in Germany was 8.8%; in 2012 it was only 7.7%.

<sup>18</sup> cf. "BA 2020", Special Issue 3 "Industry 4.0/World of Work 4.0" and Special Issue "Work 4.0"

Graph 17

## FINANCIAL CONSIDERATIONS ARE THE MAIN REASONS FOR NOT TAKING PART IN FURTHER TRAINING



Difficulties that unemployed persons see in connection with a further training measure (2013)

Statements from unemployed persons in the survey, multiple answers possible

NOTE: Depending on the obstacle that was named, the number of those polled with a valid statement fluctuates between 3769 and 3956  
SOURCE: IAB, 2013, deviation from 100% possible because of rounding

Training activities must not be neglected, even after initial qualification – in particular against the background of a rapidly changing world of work. It is true that the proportion of businesses offering further training, and of employees who make use of further training offers has increased in recent years, but participation of older and low-skilled employees in further training measures is below average. According to the Institut für Arbeitsmarkt- und Berufsforschung (IAB), participation in work-related training schemes frequently falls through because of financial considerations.

Readiness to take part in further training could therefore be increased by greater transparency with regard to the effects on employability and wage opportunities. With this objective in mind, the career development navigator of the Bundesagentur für Arbeit (“Berufsentwicklungsnavigator” – BEN) makes the appropriate information available.<sup>19</sup>

<sup>19</sup> More information can be found at [ben.arbeitsagentur.de](http://ben.arbeitsagentur.de) > Weiterbildung.

In addition, training and further training offers must have low-threshold access and be affordable. Willingness to participate is also increased when the training measure is suited to peoples' personal circumstances. In order to facilitate training parallel to family or employment obligations it should be offered in modules, and it should be possible to engage on a part-time basis.

Increasing digitalisation brings a new dimension here. The competencies required by employers are evolving, for example: in future, digital expertise will be required in more and more occupations. Accordingly, the content and presentational forms of training must be developed further by companies and training service providers. Older employees in particular should be included more intensively in further training activities, so that they can adapt to changing requirements all the way through to the end of their working lives.

The number of globally accessible online teaching and learning materials is already increasing rapidly. Online further training platforms make it possible to reach all those interested in further training – all that is needed is access to the Internet. Here, a prerequisite for success is a balance between personal contact with the trainer and self-studying – what can be termed 'blended learning'.<sup>20</sup> With its award-winning programme at [www.perspektive-wiedereinstig.de](http://www.perspektive-wiedereinstig.de) for woman returnees (PWE– Online) the Bundesagentur für Arbeit has already achieved first successes (further information on this can be found in action field 5). In order to extend such approaches, quality control is essential, as well an acceptance of digital learning offers as an equally valid form of learning.

With its guidance and support offers for training and further training, the Bundesagentur für Arbeit is one of the central players in this action field. This alignment is accentuated again with the development programme "BA 2020". For example, the Board of Governors of the Bundesagentur für Arbeit has launched the initiative "AusBILDUNG wird was – Spätstarter gesucht" (Training is worth it – late starters wanted) in order to support young adults without vocational training.

#### Vocational training for late starters

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Adults without vocational qualifications who have "grown out" of the usual vocational training age face major obstacles in the certificate-oriented German job market. One in two people in the group aged 25–35 without vocational qualifications are unemployed. Semi-skilled employees are on average paid less, have to change employers more frequently and are more threatened by poverty in old age than skilled workers with vocational training.

However, "late starters" who embark on initial training face completely different challenges than from those of younger trainees. For this reason, full-time and part-time training can be supported by Employment Agencies and Jobcenters, preferably in a registered training organisation. Courses for preparing for an external examination or training that lead to an occupation-specific partial qualification are possible. Companies provide training allowances in the case of internal retraining, while benefit payments from Employment Agencies and Jobcenters usually continue to run. In addition, course costs, travel expenses, costs for accommodation and meals away from home; childcare costs and parallel assistance, such as coaching, can also be covered.

Local offices of the Bundesagentur für Arbeit and Jobcenters advise on individual career prospects and explain the personal preconditions for qualification-oriented training. Further information can be found at [www.arbeitsagentur.de/ErstausbildungArbeitnehmer](http://www.arbeitsagentur.de/ErstausbildungArbeitnehmer) and [www.arbeitsagentur.de/ErstausbildungArbeitgeber](http://www.arbeitsagentur.de/ErstausbildungArbeitgeber).

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<sup>20</sup> Blended learning = "integrated learning", a form of learning that aims for a didactically practical interlinking of classroom teaching and modern forms of eLearning.

With the “WeGebAU” programme the vocational training of lower-qualified and older employees is supported with funds from unemployment insurance. This provides employees with an opportunity to acquire partial qualifications or missing vocational qualifications without having to give up their current job (further information on this can be found in action field 4 as well). Corresponding support is offered to Jobcenter customers, but not through a special programme.

As a provider of occupational rehabilitation, the Bundesagentur für Arbeit also supports people with disabilities (or young people and adults who are threatened by a disability) to participate in working life. The focus is on the initial integration of school leavers with disabilities into vocational training, e.g. through training promotion measures with the goal of a vocational qualification, or through measures for vocational further training suitable for the target group (see action field 2 as well on this).

Along with financial support for training and further training the Bundesagentur für Arbeit is also extending its advisory services around further training and training. Counselling is provided above all for small and medium-sized enterprises (SMEs) and for employees who would be at the greatest risk of being locked out of the labour market without further training. With “further training counselling” the Bundesagentur für Arbeit is currently testing how lifelong learning can be supported by “one-stop guidance”. As a free and neutral service, counselling on further training is intended to extend and interlink the existing service in line with users’ needs.

## 9. INCREASE LABOUR MARKET TRANSPARENCY

It is not – nor will ever be – possible to achieve full transparency regarding the labour market. The aim must therefore be to provide information on regional, occupational and qualification discrepancies between applicants on the one hand, and vacancies on the other, in a way which is easily accessible, and suitable for our target groups. Good data makes it easier to match the right applicants with vacancies; and cover employers’ skills needs. At the same time, well-informed employees are more likely to acquire qualifications which are in demand. Employers can gain a better understanding of the regions in which they can find employees with the right qualifications for them. In addition, greater labour market transparency helps decision-makers to make substantiated forecasts on future developments and to react more specifically and faster to trends in the labour market.

With its counselling and placement services, the Bundesagentur für Arbeit is making a significant contribution to increasing labour market transparency. Employees and companies are offered individual advice on the labour market specific to geographical location and occupational group. Here, information and tools from the Bundesagentur für Arbeit are used in combination with external data.

The JOBBÖRSE of the Bundesagentur für Arbeit is Germany’s most visited online job portal. The JOBBÖRSE is also the source for the range of vacancies on the website “Make it in Germany”, which is targeted at foreign applicants, and provides information on vacancies in Germany which have been released for the international for the international market (see action field 6 as well on this). Furthermore, with BEN, the online career development navigator, the Bundesagentur für Arbeit provides an interactive electronic guidance service with comprehensive information on occupations, further training and employment opportunities that can be customised to individual life situations<sup>21</sup>.

The statistical service of the Bundesagentur für Arbeit compiles up-to-date monthly labour market statistics and reports which are publically available online. Interactive visualisations and apps for mobile devices supplement these services. As an interdisciplinary research institute, the Institut für Arbeitsmarkt- und Berufsforschung publishes its findings on all topics relevant to the labour market and functions as an independent scientific advisor to politicians and practitioners.

<sup>21</sup> cf. “BA 2020”, Service commitment “We rely on innovative and efficient IT solutions“

Graph 18

**BIG DATA AS A LEVER FOR IMPROVING LABOUR MARKET TRANSPARENCY**



SOURCE: Own graphics

The labour market monitor facilitates the analysis of regional structures, opportunities and risks with interactive graphics and tables. Here, the 'skilled worker radar' examines the development of over 400 occupations. The labour market monitor not only makes data available; it also offers users a tool for discussion and cooperation – comparable with discussion forums in social networks (cf. "BA 2020", "We develop new capabilities").

Last but not least, in future big data approaches will open up great opportunities for improving the way in which the right employees are matched with the right companies. However, in order to get the most out of the insights made possible by big data, fundamental prerequisites are required – including a data protection framework, as well as formatting which is appropriate to the target audience. This is particularly relevant for those groups who are most in need of support, such as those

with lower skills, migrants or small and medium-sized enterprises (SMEs). The trend towards the “age of the algorithm” presents both opportunities and risks, which have to be examined and considered carefully. In order to turn the use of large volumes of data into a model for success, the latest technologies and high quality data must be complemented by human experience and judgement, as well as being accompanied by ongoing data protection.

## 10. DEVELOP TAX AND TRANSFER SYSTEMS FURTHER

Increasing skilled worker potential can be promoted, or even hindered, through the structuring of the taxation and transfer system. Tax, family and social policy rules (tax-splitting for married couples, minijobs, co-insurance) have a significant influence on the labour force participation of women. Among OECD countries, Germany is the only one in which households with one wage earner or households with very unequal incomes benefit considerably in comparison with families with two roughly equal earners due to the taxation and transfer system.

The key political challenge is to make family and work compatible, and thus enable genuine freedom of choice for couples and families to pursue their life plans and fulfil their potential. Financial benefits should be structured so that they facilitate a speedy return to work after an interruption of employment; promote a balanced division of family care obligations; and at the same time reward the childcare work of parents in an adequate manner. Here, there have only been relatively minor improvements in recent years.

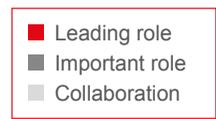
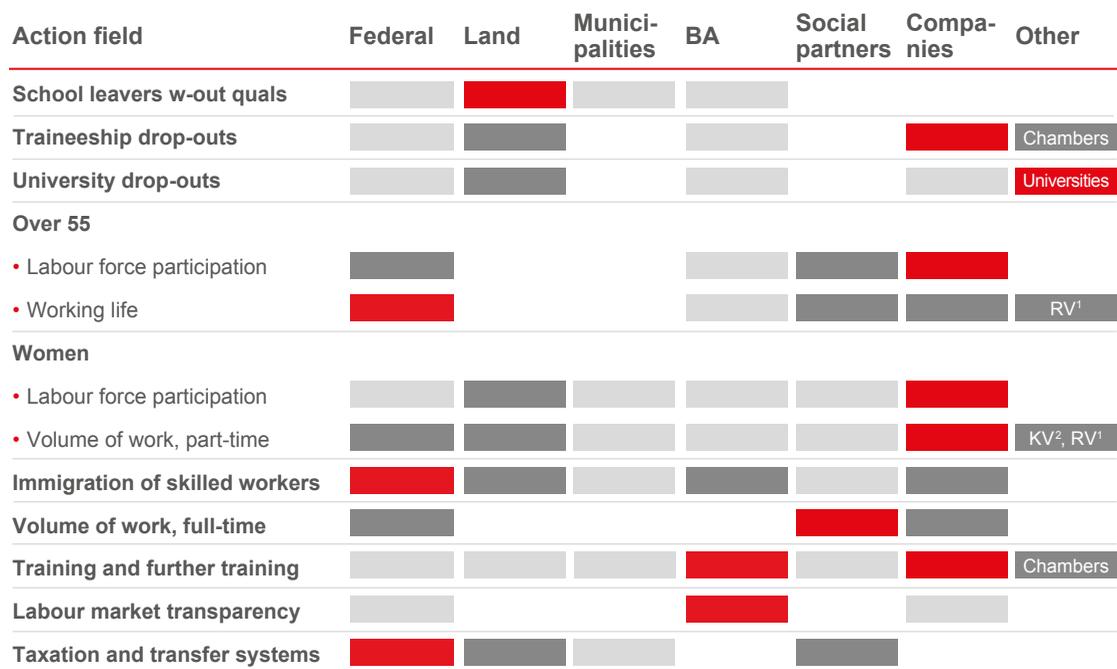
Recent reforms represent a step in the right direction: “Parental benefits II,” alongside a recently passed law<sup>22</sup> intended to further improve the financial security of parents through active and passive financial regulations have improved incentives for both parents to work. Support from the employer can also make a helpful difference: e.g. tax-free services for employees, such as arranging care services. Greater support for household- services such as cleaning could also provide additional assistance for families.

Within the context of digital transformation (“World of Work 4.0”), it will be important in future to adapt the taxation and transfer system more flexibly to the situation of individual employees and their current life situation. The objective must be to create appropriate financial conditions for different working arrangements and transitions between phases of employment, training, family and long-term care. The currently favourable economic climate provides room for manoeuvre here. One conceivable shift – which is currently being discussed by the German Federal Ministry for Families, trade unions and employers’ associations – centres around redefining full-time work for families whereby both parents reduce their working hours moderately. Another possible innovation is the concept of part-time work to accommodate family obligations, financed through taxation or social security contributions.

<sup>22</sup> The so-called „Gesetz zur Anhebung des Grundfreibetrags, des Kinderfreibetrags, des Kindergeldes und des Kinderzuschlags“ was passed in July 2015.

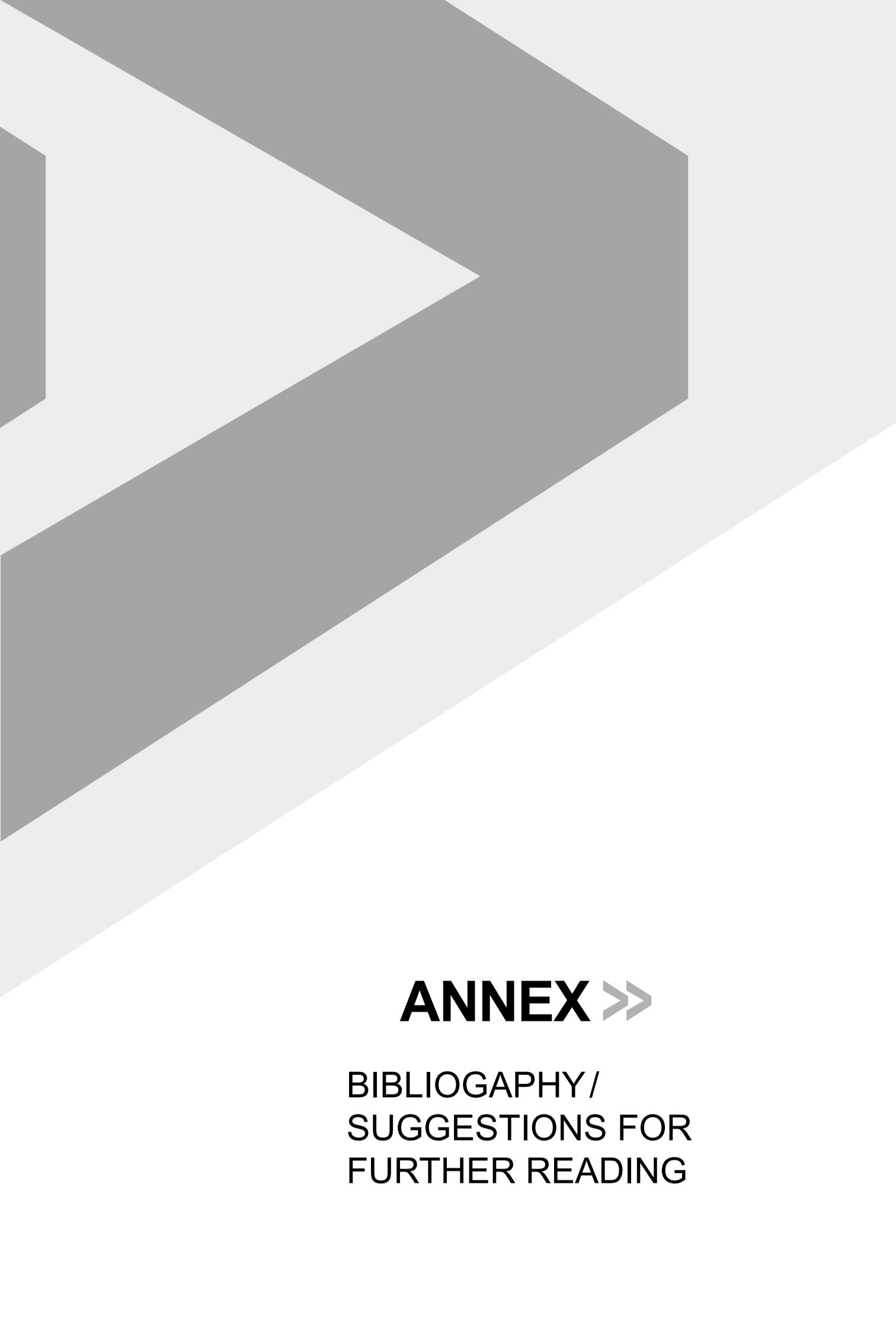
Graph 19

THE SUPPLY OF SKILLED WORKERS CAN ONLY BE INCREASED THROUGH JOINT ACTION BY KEY ACTORS



<sup>1</sup> Pensions insurance funds  
<sup>2</sup> Health insurance funds  
 SOURCE: Own graphics





# **ANNEX** >>

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